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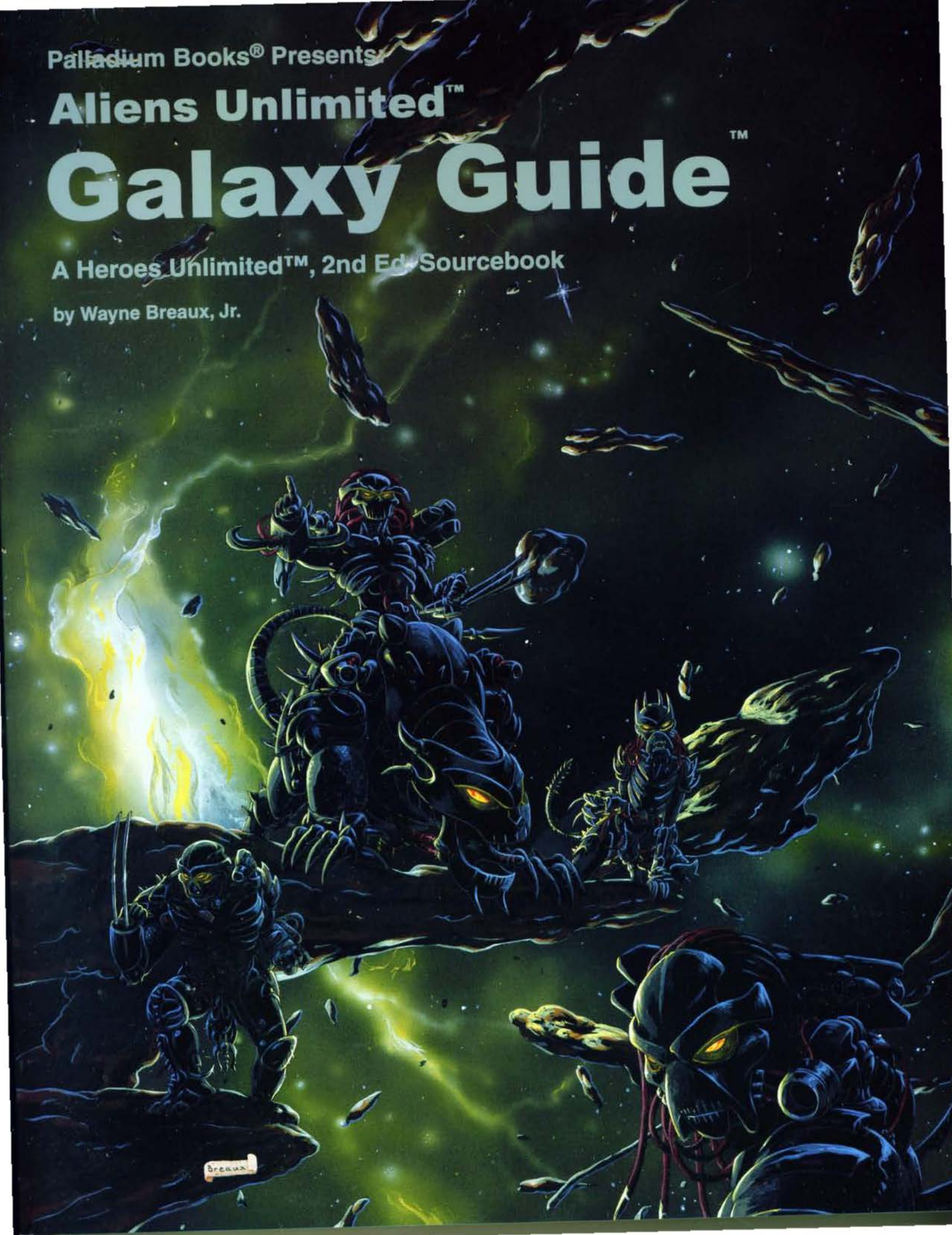
Aliens Unlimited™

Galaxy Guide™

A Heroes Unlimited™, 2nd Ed. Sourcebook

by Wayne Breaux, Jr.



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Dedication

Dedicated to Kevin Siembieda, for his inspiration, support, and encouragement over the years. I probably wouldn't have made it here without him.

Special Thanks to the Palladium staff for making my work into such fine looking books.

– Wayne Breaux, 2001

First Printing — May, 2001

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Aliens Unlimited™ Galaxy Guide — a Heroes Unlimited™, 2nd Edition sourcebook is published by Palladium Books Inc., 12455 Universal Drive, Taylor, MI 48180. Printed in the USA.

Palladium Books® Presents:

The Aliens Unlimited™ Galaxy Guide™

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Special Thanks to Wayne Breaux for a wondrous galaxy of adventure. Bill Coffin for his assistance and reorganizing of this book. To Mike, Freddie, Kent and Wayne for their out of this world artwork. And to Maryann, Alex, Steve, Wayne Smith and all the galactic heroes at Palladium Books.

— Kevin Siembieda, 2001

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Introduction

Every parent loves to watch his or her child grow, and as a writer, that's often how I feel when working on a book. As work proceeds on a manuscript, it naturally grows and develops into something bigger and, hopefully, better. That is what happened with the first **Aliens Unlimited™** book. It began as one idea and evolved into its current published manifestation, but along the way it just continued to grow so much that, before I knew it, there was an entire galaxy of ideas, much more than any one book could hold. It came to a point where I had to begin pulling back and cutting material out, but still the ideas flowed until my child had become an entire brood of children (or at least quintuplets). Kevin just chuckled and said, "Wayne, you have a minor super-ability called *Expansive Writing*, and I fear it's out of control." Hmm, I guess that would explain things.

Anyway, you now have in your hands the second of what has blossomed into a series of **Aliens Unlimited™** sourcebooks for the *Heroes Unlimited RPG, 2nd Edition*. Right now, I envision at least three more books in the series, the next of which will be the *Atorian Empire™* (I'll probably call it **The Guide to Imperial Space**) to be followed by the **Andromeda Galaxy Sourcebook**. Yeesh. I didn't plan on writing scores of books for the space aspect of **Heroes Unlimited™**, but I have a million ideas for other adventure/sourcebooks, so as long as Kevin and the HU2 fans seem to like what I'm doing, I'll just keep them coming.

The Galaxy Guide goes way beyond the general info presented in *Aliens Unlimited™* and really delves into the aspects of "space." I finally present rules for space combat, space travel and building spaceships, as well as a few new super-abilities, Cyberjacking, other new skills, and more detailed information on the various quadrants of the galaxy, key planets and notable races. *The Federation of Allied Races* and the *Niamese Coalition* are both absent from this book because they will be featured in the **Guide to Imperial Space** (it seemed appropriate to spotlight them alongside the Atorian Empire).

All in all, I'm very happy with the end result and think you will be too. I hope the ideas and information help to enliven your **Heroes Unlimited™** (or Rifts,® or Mechanoids®, or whatever space) campaign, as well as sparking ideas of your own. Enjoy and good gaming.

— Wayne Breaux, Jr., 2001

General Notes on the Galactic Setting

The best way to imagine an adventurous, starfaring "galactic campaign" for **Heroes Unlimited, 2nd Ed.** is to think of it in terms of the Old West. Like that brief cowboy era, the galactic setting is one of vast uncharted wilderness, broken up by occasional pockets of civilization linked by well established travel routes.

In the Old West, such settlements ranged from muddy little collections of homesteads, shanty towns (with a handful of buildings run by a skeleton crew) and struggling one-horse communities to boomtowns, cattle ranges and the occasional sprawling city (often dominated by corrupt tycoons, land barons, rail barons and gunfighters) – all, in their own way, representing Meccas of civilization in a wild frontier. Connecting them all was the mighty iron horse — the railroad.

In a galactic setting, those isolated pockets of civilization range from lonely scientific outposts and hopeful colonies to planets of spacefaring people and prowling interstellar empires spanning hundreds of worlds! Still, the sheer vastness of space and the vast distances between worlds, even between galactic empires, create a "frontier" environment. Entire star systems remain out of reach and for every known and inhabited planet, there are a thousand yet to be discovered, explored and settled. And where one does find settlements in the galactic realm, they promise an endless variety of social, political, religious, technical, and alien ways of life. Dozens of different alien life forms interact on key hub worlds before moving along to the next stop on their galactic journey, be it the Atorian Empire, a distant outpost, an unexplored world or a stretch of uncharted space. Everywhere one turns, there is adventure, danger and conflict — empires wage war against each other, hostile natives battle interstellar explorers, and more. Indeed, for the ambitious adventurer or hero, the galactic setting can be another wild, wild West only with high technology instead of a carbine rifle and six-shooter, a spaceship instead of a trusty stead, and a host of alien raiders and monsters threatening the peace. All on a cosmic scale.

In addition to this "frontier" motif, as well as the abundance of source material presented in this sourcebook, **Aliens Unlimited Revised**, and future space books, G.M.s are encouraged to draw inspiration from their favorite sci-fi movies, television shows, books, comic books and their own fertile imaginations. There is a huge constellation (no pun intended) of material to draw from out there, all of which is just chock full of ideas that the enterprising G.M. can use to flesh out and fuel his own particular corner of the galaxy.

This brings up what the players themselves might be used to in their favorite science fiction settings. Some people might observe that there are no transporters or food replicators or similar super-advanced technologies presented in the **Galaxy Guide** or in **Aliens Unlimited**. In fact, the items given here might be considered by some to be only slightly more advanced than the technology of **Heroes Unlimited** Earth. This is done for three major reasons: 1) it leaves the G.M. options for what kind of technology is prevalent within his campaign, allowing him to add items as he sees fit, 2) most of the really advanced and super high-tech stuff is being reserved for the Atorian Empire and will be detailed in the upcoming **Guide to Imperial Space**, and 3) it can be assumed that though many alien civilizations might not be overwhelmingly more advanced than Earth (except in certain notable areas like Faster Than Light/FTL travel), they *will* be more advanced and often *alien* to some degree. For example, most have

taken miniaturization beyond Earth's capabilities and have weapons and equipment that are radically smaller and different in their design. Most spacefaring alien races have also perfected energy weapon technology, and long-range communications – only the super-gadgetry available to select characters like the super-geniuses of **Heroes Unlimited** may be on par (and only these tech-based heroes are likely to be able to figure out and use alien devices and pilot spacecraft). To the aliens, high technology is commonplace, so exoskeletons or particle beam cannons are not the "cutting-edge" devices they are on Earth, but not that far beyond our reach. To a resident of the galactic community, even radically advanced hardware such as Faster Than Light (FTL) propulsion, palmtop giga-computers, and battleship-caliber energy weapons are as unremarkable as a microwave oven.

Ultimately, the degree to which advanced technology should play a role in a galactic campaign is left to the Game Master. If he wants the players to have access to transporters, replicators, M.D.C. weapons, anti-gravity vehicles, and any number of other super-tech items, then by all means, include them in your campaign! The **Heroes Unlimited Guide to Imperial Space** will touch on some of these things, but until then, let your imagination run wild. Oh, feel free to use material in other Palladium game books for ideas, such as technology and aliens from **Phase World®**, **Skraypers®**, **The Mechanoids®**, **Rifts®**, **Systems Failure™** and others.

The Milky Way Galaxy

The Milky Way is a spiral galaxy spanning almost 100,000 light years from end to end. That means traveling at the speed of light, it would take 100,000 years to cross it. To an Earth human, that is an unimaginable distance, but for greatly advanced races with the means to turn light years into mere minutes, the galaxy is much more accessible. The development of *faster than light* (FTL) spacecraft drives and space folding techniques has allowed interaction, commerce, and warfare between the people who possess such capabilities. Thus, a trip spanning several star systems can be like a long international flight on Earth, making the galaxy, despite its size, analogous to our Earth's "global community" when discussing travel and political divisions. While much of the galaxy is linked by frequent interstellar travel, there remain worlds that are considered to be primitive or "backwater" (sometimes exotic) places because they lack this star-spanning technology. For these planets (like Earth), travel between the stars is still uncommon, and interaction with "alien" races a frightening and challenging prospect.

The galaxy is divided into four roughly equal Quadrants. They are **Ilta Quadrant** (where Earth is located), **Titrana Quadrant** (home to the *Toogarth Empire* and the galaxy's highest concentration of *Riathenor*), **Les Iban Quadrant** (dominion of the *Atorian Empire*), and **Liloqua Quadrant** (home to the *Federation of Allied Races*). All of these Quadrants and most of the star systems within them are linked by an extensive system of *gateways* and *gravity wells* (described and explained later), making travel between them quick and convenient. These methods of

travel turn what would otherwise be weeks, months or years of travel into a matter of hours or days. As expansive as this network is, it does not reach every corner of the galaxy, and certain places (like Earth) are considered to be out of the way, remote regions of space. For example, Earth's solar system has little appeal to most space faring people. It is comparatively low-tech, politically divided, socially unstable and has the x-factor of being populated by a number of superhumans. Furthermore, it has no gateways, although it does have a gravity well which may or may not be indicated on the maps of the interstellar community, depending on the source of one's navigation computer. Regardless of the dead zones in the networks, one can usually get to just about anywhere in the Milky Way with relative ease, though certain Quadrants like Titrana have less reliable and less public spaceways than those of Liloqua. The Atorian Empire has the best and most efficient travel network of all the Quadrants.

With the exception of the Les Iban Quadrant, which is dominated by the Atorian Empire, the Quadrants of the Milky Way galaxy are relatively open and free to travelers. This is due, in large part, to the fact that trying to close off such an expansive space border would require a mammoth amount of time, manpower and resources, and would be only minimally effective even if some sort of line of demarcation could be established. Thus, few galactic powers even bother trying to secure their space borders, instead relying on world defenses and space patrols for their security. The Atorians have done the most work in controlling their space borders, but even still, what barriers they have been able to erect on the edges of their Empire are porous at best. Boundaries and borders in the galaxy are more a matter of travel, navigation, trade and diplomacy than they are a physical reality.

Despite the generalizations given in the following descriptions of the various Quadrants, there will be worlds and nations that defy convention. Each planet and people has its own unique flavor, outlook and morals as diverse as the multitude of races that inhabit that Quadrant. This means that one will find pirates, criminals, rebels and wanderers in the otherwise pristine space Quadrant of the Atorian Empire, and gleaming democratic utopias in the heart of the lawless Titrana Quadrant. After all, the galaxy is a very big place, populated by an endless variety of alien people, diverse cultures, forms of government, religions, and factors that shape each world into a unique landscape. While there are large, monolithic empires and nation-states spanning multiple systems, the reality is that *diversity* is the common thread found throughout the Milky Way.

Les Iban Quadrant — The Atorian Empire

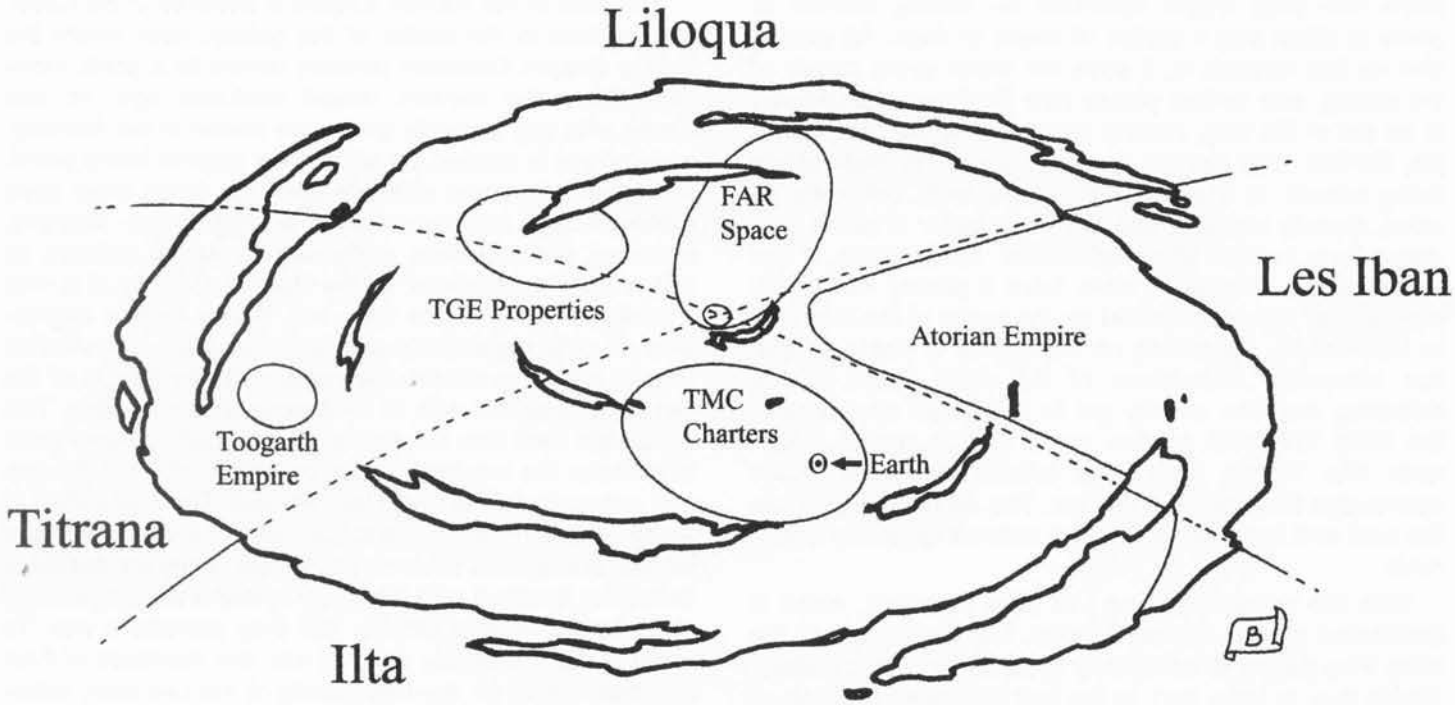
Les Iban is dominated by the notorious **Atorian Empire**. The Empire controls 85% of it, and the last 15% or so might just as well be theirs. Consequently, the secured borders of the Atorian Empire are commonly considered the boundaries of Les Iban, but only for general reference and convenience.

The core of the Atorian Empire is believed to be somewhere close to the center of the galaxy, near where the wedge shaped Quadrant division comes to a point. However, since the borders closed centuries ago, no one knows with any certainty where the center of the Atorians' government is located, let alone their original home world. A number of planets with intelligent life forms have been systematically conquered by the aggressive Atorians. However, some planets, many with advanced cultures, lie within the "free sections" of the Quadrant. Sadly, it is only a matter of time before they, too, fall to Atorian aggression. If past expansions are any indication, the Atorian Empire will soon absorb the remaining free worlds of the Les Iban Quadrant with its next expansion operation. This will be the sixth time the Atorians have made a major push to broaden the reaches of their dominion. Much of the galaxy nervously hopes it will be their last. The *Federation of Allied Races* (FAR) sympathizes with the plight of these worlds, but refuses to come to their aid. They are fearful of becoming involved with planetary systems so dangerously close to the Atorian Empire, lest they provoke a war. To avoid a war it probably can not win, the members of FAR turn their backs on the free worlds of the Les Iban, effectively abandoning them to their own fates.

The Atorian Empire is completely self-sufficient, having thousands upon thousands of planets from which to draw resources. The only transport craft that leave the Imperial borders are bound for military outposts or planets with trade agreements that are close to *Imperial Space* and most such spacecraft will be escorted by some kind of warships, be they fighters or a small battle group. On the flip side, the only spacecraft generally allowed to enter Imperial Space are those used by foreign diplomats, and then, only by invitation. These restrictions are somewhat generalized, for there are trade routes that lead into the Atorian Empire, although limited to the very edges of its space borders where security is the tightest. From those trade routes, imported goods are distributed to the inner portions of the Empire.

Les Iban is the most prosperous and ordered of the Quadrants, but it can also have some of the galaxy's most intense (although brief) fighting as rebel factions continue to battle for the freedom of their planets, and dissidents, smugglers and other enemies of the Empire dare to breach Atorian boundaries to undermine or plunder the Imperial government. The Diatome Pirates and other anti-Empire organizations regularly add spice to the Quadrant by attacking civilian and military vessels, merchant ships and outposts. Most of these conflicts are never openly reported to the rest of the galaxy, however, and small-scale incidents like those involving the Diatome Pirates seldom spread far or last long. Even rare large confrontations and incidents are played down or hidden by the Atorians who control the communications of the Quadrant, or because they quickly quell disturbances before others can join the fray.

Almost all **Imperial space gateways** in the Quadrant use changing Imperial codes. Unless the Empire gives the proper code sequence to a spacecraft or activates the gateway for them, no one can enter or leave Imperial space through them. The only exceptions are gateways



* Perspective distorts some apparent sizes, making the TMC space seem larger than the FAR's.

used for "open" trade routes or diplomatic vessels, but those routes are heavily patrolled by Atorian space stations, battleships, and combat satellites. Diatome Pirates operating on the periphery of Imperial space, regularly steal (or hack) Imperial pass codes from spacecraft they have raided, which is why the codes are randomly changed. All known **gravity wells** within the Empire are guarded by combat satellites. Any spacecraft that emerges from one via Point-to-Point travel without transmitting a viable clearance code is set upon and destroyed.

As mentioned previously, despite their war-like nature and controlled isolation, the Atorian Empire does maintain trade and alliances with beings beyond Imperial space. All of these allied planets are located within a few hundred light years of the Imperial borders. They are not necessarily evil or warmongers like their Atorian trade partners, most are simply struggling to survive and watching out for themselves, regardless of the negative impact their trade relations may have on enemies (and targets) of the Atorians. Those who are not careful, quickly become reliant on the revenues generated by such lucrative trade with the Atorians. In fact, over time, many are likely to become allies to the Empire or even official members of the Atorian Quadrant. A cunning powerhouse, the Atorian Empire regularly uses its economic leverage to manipulate and absorb/conquer other worlds as much as outright war. Note that the relative lack of a military presence (when compared to the deeper areas of the Empire) and trade practices in some areas on the edge of the Empire are the results of ambitious Baronesses and Duchesses seeking to increase their personal power. This is done by unofficially expanding into non-Imperial space where they forge what they hope to be lasting bonds of allegiance or servitude. The higher ranking females frown on the practice and see potential dangers. On the other hand, they encourage the expansionist initiative. So far, nothing disastrous has resulted, so the situation is allowed to continue. **Note:** For extensive details on the Atorian Empire, see the upcoming **Heroes Unlimited™ Guide to Imperial Space**.

Liloqua Quadrant

Liloqua is the second most organized and stable of the four Quadrants. This is due mostly to the presence of the neighboring Atorian Empire and the fear it generates. That atmosphere of anxiety is what brought the advanced races of the Quadrant together in an attempt to oppose or deter the activities of the Empire by forming the **Federation of Allied Races (FAR)**. Besides the FAR itself, the need to band together has forged trade agreements, trade routes, political and military alliances, and an atmosphere of mutual respect and support through nearly all of the inhabited systems of the Quadrant. Indeed, the FAR and its allies can be said to be the heart of the galactic community in the Milky Way. Throughout the Quadrant, particularly around its member planets, are found governmental organizations and structures rivaling those of the Atorian Empire. Cooperation and mutual benefits from achievements are the cornerstones of the Federation of Allied Races, and the strength of Liloqua. Extensive trade and interaction between all of these races provides wealth and prosperity directly attributable to centuries of cooperation, prosperity and relative peace.

In addition to the achievements directly attributable to the Federation of Allied Races, Liloqua Quadrant owes a great deal of its stability and economic success to the **Tagonicans** and their powerhouse conglomerate, the **Tagoniglomerate (TGE)**. The home world of the Tagonicans and galactic headquarters of the TGE are both located within the Quadrant near its border with the neighboring Titrana Quadrant. The TGE is a *commercial* rather than political entity, but it still controls numerous

star systems and patrols nearly a hundred sectors of the Quadrant as part of its security contracts, as well as the policies of their own extensive holdings.

Despite its unity and success, the Liloqua Quadrant has its dark side. The region still has its share of wars, rivalry, political infighting, pirates, criminals, antagonism, and racism. Outside the model core of the Federation and the string of truly peaceful member planets, the rest of Liloqua is far from Utopian. The vast majority of the Quadrant is not patrolled by any organized force and the occasional FAR patrol does little to keep the farther reaches of the Quadrant safe or at peace. These wild and dangerous areas tend to attract and harbor space pirates, smugglers, fugitives, mercenaries, adventurers and troublemakers looking for action or a place to lay low. Such lawless parts of the Quadrant are certainly less extensive than those found in the Ilta and Titrana Quadrants, but they do exist and pose a problem. Without a minimal sense of community to unite them, the star systems of such areas feel all alone, making them easy prey for would-be warlords, villains and skullduggery. Overall, however, the Quadrant is very civilized due to the presence of the FAR at its center, the Empire along one border and the TGE home world on the opposite border.

Likewise, the **Thissera-Micean Cooperative (TMC)**, a powerful freelance law enforcement agency, is rather close to the center of the galaxy where Liloqua and Ilta Quadrants meet, which leaves only the outer reaches of the galaxy in this Quadrant without any kind of organized deterrents for the darker aspects of galactic society. Roughly 25% of Liloqua's territory and star systems can be considered partly explored, uncivilized, and/or dangerous. Again, while there may be peaceful or advanced planets within those systems, their comparatively isolated location or lack of allies makes them vulnerable to the less savory elements of the galaxy. This region still has trouble with pirates, raiders, invaders, wars and crime, and political unrest. In fact, the most civilized worlds clustered toward the center can be thought of as modern cities in which crime exists, but there are laws and law enforcement that control it, while the remote sectors are more like frontier towns or isolated trading centers that have fewer resources and little to no notable measures to protect their citizens and visitors from the crime and dangers all around them (sometimes within the community/outpost/world itself).

If the entire Quadrant could be truly united and emulate the ordered societies found at its center, the Quadrant would become a genuine rival (and alternative) to the Atorian Empire. Sadly, such a development is a long time away. For one thing, the Atorians are likely to undermine such a development in order to keep their exalted position of power. For another, there are just too many diverse and independent worlds, each struggling to stand alone and make their mark in the universe, to ever build a true or lasting unity. While Liloqua might well have the equivalent resources, possible member races, racial interaction, and raw military power of Les Iban/the Atorians, it has nowhere near the level of organization or internal stability. Indeed, most of its resources are spread thin and a large portion of them are in the hands of races not allied to the Federation of Allied Races. Keep in mind that the FAR is the only organization large enough to oppose the Atorian Empire, but it is not the Empire's equal, not by a long shot. Voluntary organization of the type needed to defeat the Atorians is currently impossible, due to the intractable conflicts and differences between the myriad of star systems and civilizations populating the Quadrant. In addition, the Atorians themselves have proven especially effective in subjugating other peoples to their will. Those civilizations or organizations that show promise at uniting the rest of the Quadrant are often plagued by Atorian spies and propagandists who will stop at nothing to sabotage that planet's sociopolitical structure and stop unification with the FAR.

Meanwhile, Liloqua is a safe haven for any refugees or rebels fleeing the Atorian Empire. While this is meant to be an invitation to peace-loving people looking to build a new life out from under the yoke of Imperial oppression, all too often the Quadrant serves as a haven for outcasts, rebels, terrorists and criminals who use the Quadrant as a base of operation from which to launch attacks against the Empire. A fact that constantly puts the FAR and the Atorian Empire at odds. Could that influx of refugees ever be enough to bolster the FAR to a level where it could oppose the Empire? Perhaps, but such determination will be fostered by stirred up emotions and would not last very long. Whether it would be enough to carry through a hastily planned and executed war of retaliation against the Empire would be up to the individual G.M. and his plans for a galactic campaign. **Remember**, the motives and ideals behind the Federation of Allied Races are NOT to fight or destroy the Atorian Empire, but to establish a Quadrant of allied planets strong enough to live free without fear of Imperial invasion and conquest. To that end, they welcome and find a place for refugees who have fled the Empire, provided such individuals seek a life of peace and freedom, not revenge against the Atorians. Still, despite these lofty goals, hate-mongers and enemies of the Atorians gather in the remote parts of the Quadrant, against the FAR's wishes (and often without the FAR's knowledge) to wage their private wars of retribution against the Empire. Worse, there are many within the FAR who so fear and/or hate the Atorians that they would consider actions against the Empire if they thought they could pull it off without endangering their own welfare. Thus, there are many sympathizers who look the other way or turn a blind eye to transgressions against the Atorian Empire (some even provide them assistance).

Ilta Quadrant

Ilta Quadrant is still growing as a part of the galactic community. The influence of the **Thissera-Micean Cooperative (TMC)**, which has been contracted to patrol a substantial number of sectors within the Quadrant, and the growing presence of the Federation of Allied Races (FAR), have done a lot to eliminate rampant war and anarchy in this Quadrant of space. However, Ilta is not a calm or orderly region, especially when compared to Les Iban and Liloqua. One might say that Ilta is in touch with itself, but it is far from organized, united or lawful. The TMC keeps watch over barely 50% of the Ilta Quadrant, and their influ-

ence even in that part of space is limited, enabling pirates, criminals and troublemakers to frequently avoid or evade them. The TMC does its best to keep crime and trouble down in the sectors they patrol, but their presence only has a token effect on unifying their clients in any way. The TMC has some measure of influence and is very highly respected by most societies in the Quadrant, but with no political power itself, the organization is limited to mediating, advising and policing. Loose planetary federations and alliances for trade and cultural exchanges have developed among many of the TMC's clients, but no interstellar political power has arisen to unite any of the worlds in the same way as the Federation of Allied Races. As a result, the Quadrant's interstellar community is made up of independent planets with weak and disjointed associations with one or more other independent worlds. The FAR has member planets on the edge of Ilta where it wedges at the center of the galaxy, but their presence amounts to less than 1% of the worlds in the Quadrant and provides no significant influence.

In many places, Ilta embodies the Old West frontiersman attitudes. Almost half of the Quadrant is largely unexplored and unclaimed. Criminals find these areas attractive, because they can prey upon the wealthier peoples in the civilized sectors and flee to the not too distant safety of the untamed areas not patrolled by the TMC. Adventurers, brigands, explorers and refugees can find places to hide, operate, live or explore away from civilization if they want. Lawlessness and the extremes of personal freedom run rampant, while the influence of independent planets (law abiding or not) seldom extends beyond their own moons. Thus, the Quadrant's galactic society is shaky at best. Interaction and the "spirit" of cooperation may extend to one or a dozen other planets, but extensive trade, exchange of information, trust, and cooperation are not widespread. Furthermore, most do not share or even recognize each other's laws, and there are few extradition treaties in place, so once a criminal leaves a particular world, there is almost no cooperation among the different planets in the Quadrant to bring the villain to justice. The best one can hope for is that the TMC, bounty hunters or adventuring heroes intervene on the behalf of justice. In many areas, power is everything and "might makes right." On some worlds there is no formal authority or even global power, and everyone carries weapons. At other places there is a defined civility and strong sense of morality.

Law and order are making inroads thanks to the TMC, but there is still a long way to go, and although Ilta Quadrant is lawless in many regions, it is not generally as dangerous or deadly as neighboring Titrana Quadrant. In fact, a good half of the Ilta Quadrant is generally peaceable and law abiding (due to the TMC). Races might keep to themselves and rarely volunteer aid and assistance without compensation, but they are decent people with the potential to pull together and make a promising community in the foreseeable future.

Ilta Quadrant is likely to be a common setting for a galactic campaign because of its proximity to Earth, diverse and independent people and open environment. Earth actually falls within one of the patrol sectors of the TMC, but since they have no contracts with the fledgling human civilization, their presence in its solar system is minimal. Unless an intergalactic criminal specifically flees to Earth's solar system, the TMC will not enter the region unless they feel it necessary to capture a fugitive or they need to use the gravity well located just inside Jupiter's orbit. Even then, using the gravity well will not bring the craft near Earth. **Note:** The TMC have only been to our solar system five times; two such occasions brought them to Earth to pursue criminals and one took them to Earth's moon. The reason for this reluctance to visit is because the TMC upholds a galactic law known as *The Covenant*, which basically forbids advanced, star faring civilizations to meddle in the affairs of non-star faring civilizations. Although The Covenant is difficult to enforce, TMC operatives still give it their best try. The incident that led to the downfall of the Earth city *Century Station* is one such example.

Other features that make this Quadrant appealing for a galactic campaign are the presence of the Federation of Allied Races (FAR) near the galaxy's center where Ilta forms a wedge, the Atorian Empire that borders Ilta, and the presence of the TMC. All this provides a wide variety of adventure opportunities and a fun environment with large space stations, advanced civilizations, scores of alien races, social unrest, political intrigue, uncharted worlds to explore, pirates, space travel, and glitzy, high-tech settings. The presence of other comparatively low-tech worlds whose technology ranges from the primitive to industrial (Earth) gives the Game Master plenty of different levels of civilization to play with. For a high fantasy styled science fiction campaign, go to Liloqua, but for just about anything else, especially a law enforcement, bounty hunting, freebooting and exploration setting, Ilta Quadrant fits the bill.

Titrana Quadrant

More than any of the other Quadrants, Titrana is little more than a vast expanse of anarchy. Other than a few dozen sectors patrolled by the TMC or Tagoniglomerate (less than 20% of the Quadrant is patrolled at all, even with both organizations' combined efforts), Titrana has no widespread interstellar government or agency to guide it. Imagine the dark ages of Earth, but without the benefit of organized governments, then throw in despotic criminal overlords and murderous dictators as the primary sources of law and order, and an image of Titrana begins to come into focus. No one is sure how the sector fell into its present vile state of corruption, evil and villainy. There are a few planets that are reasonably friendly and "normal", but the majority of the Quadrant, almost 60% of it, has no redeemable areas from which any normal or stable elements could rise. Most simply write it off as demographics, pointing to the concentrations of order and civility in Les Iban and Liloqua and noting Titrana as the counterpoint to them.

Titrana Quadrant is a haven for pirates, thieves, warlords, outlaws and fugitives of all kinds. The lack of a widespread policing authority makes nearly any planet an ideal hideaway or place on which to lay low, adventure or plunder. This is especially true of the low-tech planets whose terrestrial authorities, military or champions are

likely to pose little or no threat to the advanced equipment and technology of a space faring visitor. Titrana's safety for criminals has spawned the growth of entire **thieves' planets** where criminals can go to find refuge among a nest of fellow crooks and cutthroats. These thieves' planets are run by powerful baronies of organized criminals that function as the ruling power (See *Plesus Euphia* in the Crime and Criminals section for examples of these kinds of planets). These large bands of criminal lords control several planetary systems and have constantly changing leadership due to scheming and backstabbing. **The Kixkit Empire** (the largest concentration of *Photin* outside the Atorian Empire, spanning more than 30 planets in five star systems and the **Toogarth Empire** (as detailed in **Villains Unlimited™**) are the only other notable interstellar powers established in the Quadrant. (**Note:** While the Riathenor are disturbingly plentiful, they do not lay claim or dominate any *known* worlds in the Quadrant.) All three exude some small measure of influence over the Quadrant, however, each controls no more than 1% of the sectors in the Titrana Quadrant. That having been said, even one percent is impressive considering what they are up against. The Thieves' Baronies rely on cunning, trade and sheer numbers, while the Photin and Toogarth use intimidation and brute strength to maintain power. Of the three, only the Toogarth Empire continues to grow at a regular pace. This is reason for concern, because if the Toogarth continue to expand at their current rate, over the next hundred or two hundred years, the reptilian aliens are likely to seize control of 200 or 300 star systems in nearly 100 sectors (or about 10% of the Quadrant), making them a force to be reckoned with. The *Toogarth Empire*, a regime founded on cruelty, conquest and extermination, makes even a small number dangerous. Left unchecked, they might, some eon, build a bloody Empire to rival the Atorians.

Of equal concern is the large number of *Riathenor* found in the Titrana Quadrant. The region appears to house the galaxy's largest concentration of the dreaded *Riathenor*, a mysterious and mystical race of aggressive aliens believed to herald from another dimension. Why the Riathenor find the Titrana Quadrant so appealing is unknown. Some wonder if there might be a dimensional portal that links our dimension to theirs. On the other hand, many believe the Titrana Quadrant is cursed or simply a place of evil. Rumors of evil alien intelligences and dark gods living in the Quadrant also abound. Why such violent and often supernatural beings seem to crop up in Titrana remains a mystery yet to be solved. Some believe that an evil energy, or perhaps one or more of the dark gods rumored to inhabit that region of space, attracts other like-minded creatures. Hence the concentration of Riathenor, Toogarth, criminals and other violent, evil beings, from ordinary space pirates to supernatural monstrosities. The *Timneh* and members of the Raiding Clans point to ancient legends among their people that tell of "a darkness" that swept the galaxy more than seven thousand years ago. It is said to have wiped out many of the advanced races of that time. No one knows where this evil came from, nor how it was stopped, but some believe it has left a lasting mark upon the Titrana Quadrant. Some Timneh claim that whatever it was, a part of it remains hidden in the Quadrant waiting — perhaps in slumber, perhaps while it gathers its strength and/or other dark forces to join it — to reappear when the time is ripe, to again wreak havoc upon the galaxy.

Travel in the Milky Way

The distances in space are mind boggling by terrestrial Earth standards, but other races are far more advanced in their technologies and able to cross those distances as easily as we cross the oceans of Earth. This section will discuss some of the most common ways to travel the vast reaches of outer space. Full details on spacecraft, propulsion types, and travel speeds are given in the **Spacecraft Construction** section of this book.

Despite the enormous distances involved, getting around the galaxy is not all that different from getting around on Earth. The major difference is the scale and the fact that instead of roads and cars, one uses charted routes, gravity wells and Faster Than Light (FTL) travel via spacecraft or magic.

Just as one might get in a car on Earth and drive to the grocery store or across the country, private travel is also possible in space. Basically, those individuals fortunate enough to own a spacecraft can simply go where they like. Like ground travel, there are effectively highways or "space lanes" to follow to avoid getting lost or to travel by the most direct means available. This also means there may be "fees" or "charges" to pay that go toward maintaining those space lanes (i.e. police to offer protection from pirates and salvage crews to clear debris fields, fees to pay for space ports and docks, service stations, etc.), as well as "tolls" to use gateways and dimensional rifts, docks or trade routes. In some cases, one may be required to become a member of a guild or organization and pay annual dues in order to access gateways and travel routes (such is the case with the Atorian Empire once one travels a certain distance into it). Still, private space travel is relatively cheap in the long run, and has the least hassles, but its drawbacks include possible isolation (there may be no one to provide assistance if the ship breaks down in a deserted area), danger (if attacked by pirates or monsters, there usually is no support), limited resources (travelers only have their skills or those of a select crew to rely upon) and possibly limited equipment and resources (only what is on hand or stored on board; finite cash).

Returning to Earthly analogies, the easiest and most economical way to travel across the galaxy is to "book passage" just like Earthlings take a bus, train, airplane or ocean cruiser to reach a destination. The basic idea behind any transit service is to gather a number of people with a common destination and allow them to purchase "seats" on a communal mode of transportation, usually provided by a travel specialist, in this case, a space port. In a galactic setting, this can be a spacecraft, device or magic spell depending on the civilization, technology and

point of departure (the various modes of space travel available will differ widely from place to place). On Earth, there are a number of differing levels and modes of transportation ranging from the equivalent of a crime-ridden subway or rickety old airplane, to the most posh luxury liners or supersonic aircraft. The same is fundamentally true of interstellar and intergalactic space travel. As usual, safety and comfort all cost money. The high cost of building and maintaining an interstellar spaceship, fuel, advanced engines and drivers, a capable crew, and the overall risk of space travel itself are all factored into the cost for a seat on a spaceship. One also pays a premium for *speed*. The faster one wants to travel, the more a space trip from A to Z will cost. A trip across the galaxy on the dilapidated spaceship nicknamed the *Cockroach Express* might only cost 5,000 credits, but the captain will warn the traveler that the trip requires time spent in suspended animation and takes 125 years! On the other hand, the luxury liner *Nova Starr* or the small, elite space warping transport known as the *Blue Comet* can carry a passenger the same distance in two weeks, but cost about 50,000 credits. The choice is the traveler's.

Most interstellar transit operations are corporate owned and use established (and commonly patrolled) space lanes and travel routes. These operations are the galactic equivalent of Earth *airlines.* Just as on Earth, where owning an airplane is prohibitively expensive for the average person, so is owning a reliable interstellar spaceship. However, booking passage for a seat on a commercial airplane, or in this case, an interstellar "spacecraft," is comparatively affordable and relatively inexpensive, especially when making "short jumps" from one planet to another in the same solar system. Thus, the majority of space travel by common folk in the intergalactic community is done on "commercial spacecraft" and "star carriers."

The typical intergalactic, commercial space port offers a variety of spacecraft differing in size and space faring capabilities. These vessels travel at predetermined times to other known space ports to form a network of available travel destinations linking planets, civilizations, space stations, merchants, outposts, governments, military bases, resorts and places of interests. The majority of these space ports use established and reasonably secure space routes, most of which are patrolled by organizations like the TMC, planetary governments, or the company itself. Especially large operations, like the TGE-owned *Levartera Modu cruise line*, heavily patrol their routes and provide each passenger spacecraft a fighter escort. The Atorian Empire has its own travel companies, but all of them operate within the sealed borders of the Empire, along heavily patrolled routes with fighter support close at hand (rarely outside the passenger ship's passive sensor range). Larger companies will also have armed security personnel on board for maintaining the peace and safety of the passengers, especially if the craft should happen to be attacked by pirates or other boarders. Unfortunately, this means booking passage to out of the way places away from civilization and known space lanes may be difficult and will certainly cost much more to arrange a "charter" excursion to dangerous or uncharted territory. Commercial travel has its disadvantages and limits, such as having to adhere to schedules, making flight arrangements, standing in lines, lack of privacy, annoying or unruly other passengers, and other hassles, but there is little chance of isolation (both socially and in emergency situations), danger is reduced (the equipment is generally reliable and security or support is commonly available should trouble arise), resources are more diverse (the company will generally have a pool of personnel to draw from for quality and a variety of skills) and equipment is plentiful (especially for a company with a fleet of spacecraft that can transfer passengers to another craft entirely, should the current one develop large-scale problems).

Smaller and less reputable travel, touring, and cargo companies may take short-cuts, use isolated or unknown routes, and are often willing to take chances that the larger operations would never consider. While these fly-by-night businesses offer greater flexibility in arranging trips to exotic and remote locations, travelers to even well known, civilized places will be exposed to a greater degree of danger. This may be due to negligence or corruption, but more likely than not, simply to the small size of the operation and lack of sufficient resources. These small, independent businesses are what most smugglers, criminals, fugitives, spies, bounty hunters, mercenaries and adventurers use. In fact, some of these companies (or the pilots working for them) *specialize* in transporting people and cargo illegally, smuggling just about anything if the price is right (and the price may be less than one might think). Likewise, many are daredevils or so desperate to make ends meet, that they are willing to take huge risks and travel to or through dangerous regions of space for the money or the challenge. Accommodations on such illegal or low-end transportation can range from luxurious (at least for the passengers) to the most stark or abysmal of conditions, such as cryogenically freezing the passengers and stacking them in a hold, or presenting passengers with a cot and a bucket seat in a filthy, old cargo bay retooled to accommodate (sort of) passengers instead of crates. Heck, if being "smuggled" somewhere, accommodations might very well be the inside of a crate! On these flights, if pirates or other trouble should arise, the passengers may be handed a weapon and told to repel boarders or expected to fend for themselves! The most unreliable or cowardly pilots may jettison the passengers (or contraband), or turn them over to the raiders without resistance in exchange for letting the vessel and crew go.

Travel Beyond the Milky Way

Travel to other galaxies is a little different than traveling across our galaxy. First of all, it is only practical using Cruise Mode travel (See *Advanced Travel Methods* for more details), and the spacecraft can not be attacked unless it drops out of Cruise Mode. Thus, it can go from one galaxy to the other without fear of attack. The real risk manifests itself if the vessel develops problems and has to drop out of Cruise Mode. If that happens and its cruise drives can not be repaired, it is likely to never make it to its intended destination or home again. A spacecraft in cruise mode travels farther in a day than the fastest vessel can travel in 20 years, so getting stranded several hundred light years from home is often a death sentence, since

most ships lack the resources for indefinite life support. Moreover, dropping out of a space warp or Cruise Mode dumps the vessel in uncharted and alien (no pun intended) space, where the nearest (known) civilization may be many light years away. Of course, even Cruise Mode with its barely comprehensible speeds, can take 25 years to cross from one edge of the local galactic cluster to the far edge. Even half that time is a long and undesirable trip. As a result, very few races or organizations have contact with even the closest of galaxies, but some of them, most notably the TGE and the Atorians, do have footholds outside the Milky Way. Of course, communicating with these outposts is virtually impossible, so there is no telling what fate has befallen them. Travel to farther galaxies can take centuries and no races are known to have undertaken such a feat with any success.

The local galactic cluster, which includes thirty other galaxies (five of them as large as our own) grouped in close proximity to the Milky Way, is approximately 4-6 million light years across. Even in Cruise Mode, it would take 25 years to cross that distance, but getting to the closest of the large galaxies, Andromeda, takes only 8-12, still a bit much. Luckily, Space Gateways, gravity wells and dimensional rifts are able to warp or leap over these vast distances. Their locations have been noted and mapped in the larger galaxies and a handful of the smaller ones too, allowing rapid travel times between locations that would otherwise take years to reach.

The risks involved with trans-light travel are so great that there are not many travel routes between even the local galaxies, just enough to get by. Instead of using mapped out routes, most space travelers rely on less risky advanced travel methods. Here is how it works. Once one craft makes it to the target galaxy (by using Cruise Mode), it only needs to map a single gravity well or deploy a Gateway structure, and it can use it to fold or warp space to get home in a fraction of the time. Afterwards, any spacecraft with the right knowledge, equipment and coordinates can get back to the other galaxy because a "destination point" is now known.

Andromeda is the only galaxy in the local cluster that has a few known travel routes. There are certainly gravity wells mapped there and some gateways, but other than brief scouting and exploratory missions, no one has been able to establish any lasting colonies or outposts. The TGE gave up on Andromeda long ago, and it is rumored that even the Atorians have stopped trying. Entire outposts and colonies have been destroyed, as have most of the spacecraft which attempts to lay gateways or map the Andromeda galaxy. Even large groups of military vessels have vanished with little or no clue to the identity of the cause (many presume an unknown aggressor). Whoever or whatever is responsible must be swift and have significant firepower to destroy a TGE escort group.

The other galaxies in the local cluster can be considered to be much like the Milky Way. From space, most planets and other phenomena look very much alike. Reaching the galaxies is a simple trip through a mapped gravity well. Some contact and trade with life forms from galaxies beyond the Milky Way exists, but it is limited to specific races or regions and not the galactic communities in their entirety. Though the routes to these galaxies are charted and the use of gravity wells and the occasional gateway makes travel very fast (2-4 weeks instead of years), there are not many of them, especially when compared to the size of a galaxy. The majority of these routes are not even known to the public.

Planets

One might think of planets as islands in a vast, lifeless ocean. Although they make up an infinitesimal portion of the total galactic mass (stars and dust clouds comprise most galactic matter), they are the pillars on which all galactic society is rooted. Advanced civilizations could (and sometimes do) build vast orbital habitats or great colony

ships that are worlds unto themselves, but most people much prefer life on solid ground, with soil under their feet and a sky overhead. Planetary settlements still dominate galactic civilization, and as long as that is the case, planets, in general, will remain hot real estate, as well as the birthplace of most life forms.

As a spacecraft arrives in the local "space" around a planet, it will have to slow down and approach with some caution. Traveling at light speed within 50,000 miles of most small, Earth-sized planets (the outer edge of the planet's gravity field) will tear a ship apart as it passes, regardless of its type or quality of construction. Moving through a gravity field that fast puts stress upon a ship's hull that no technology has yet been able to counteract. Likewise, moving that fast that close to a planet usually causes localized disturbances in the world's weather patterns for 4D6 hours and may cause advanced civilizations to take action against the reckless pilot.

In general, spaceships are made to move through solar systems at light speed only when they have strayed terribly off course, they are willing to try anything to escape a pursuer, the pilot is drunk, or the crew has a death wish. Most ships have some means of automatically slowing down as they approach a star system. Other ships simply rely on the expertise of their pilots to guide the vessel at a safe distance and velocity. **Note:** When a pilot is flying at light speed and gets too close to a planet, he must make a Pilot skill roll. A successful roll means the spacecraft merely crashes into the planet, but the ship and crew survived. A failed roll means the craft crashes into the planet at light speed, which usually means complete destruction and the end of the crew. A crash also causes considerable havoc on the planet's surface. To see the results of both kinds of crashes, consult the regular- and light-speed crash landing tables in the *FTL Piloting Rules* section of this sourcebook.

Once a ship is close to a planet, it has three options: Orbit the planet, dock with a space station, or enter the atmosphere and land on the surface. **Orbiting the planet** is only useful if the spacecraft has trans-atmospheric shuttles (that is, they are streamlined so they can fly in an atmosphere; many large spacecraft can not), or there is a space station to visit. If the civilization is advanced enough to have a space station, docking with it and shuttling down to the planet is likely to be routine and hassle free. Unless there are extenuating circumstances like an old or very small space station or a large field of orbiting debris blocking the way, orbiting and docking maneuvers are so routine that they can be considered *automatically successful* and do not require Pilot skill rolls. That is, if the ship is being flown by an experienced pilot. Low level characters (under 6th) roll as normal, while characters with NO expertise in piloting a spacecraft have only a 10% chance of safely orbiting or docking. A failed roll results in some kind of crash.

Crews passing through a space station will be subject to customs searches and the laws of the planet. Local laws often restrict one's conduct and actions, and weapons and certain types of equipment (sometimes certain types of people) will have to be left on the ship or station, and/or temporarily confiscated. For example, many planets do NOT allow visiting aliens to carry weapons, and some prohibit the use of super abilities, shape-changing, psionics or magic. Well outfitted stations and space ports will have local law enforcement policies transmitted into the onboard computers. Experienced captains will contact the space station prior to docking to request permission to dock and exactly what are the local laws and policies of the civilization. It is the mark of a novice space traveler to get arrested upon arrival to an alien world and lose a prized item to seizure laws. **Note:** All of this assumes the civilization is used to space visitors. Those who are not are likely to get spooked by the appearance of unknown extraterrestrials, regardless of how polite, honest and well intentioned these visitors might be. Such inexperienced, primitive or hostile civilizations may allow the "aliens" to dock, only to capture and interrogate them or attack outright. Such are the perils of traversing uncharted regions of space.

Landing on a planet directly has some advantages and disadvantages. Planet-fall is much more tricky than orbiting or docking with a space station, and almost always requires a Piloting skill roll. Fail the roll, and a crash will result.

Skill modifiers for planet-fall landings under certain conditions:

No penalty if landing a spacecraft on a planet with no atmosphere or low-gravity, except for pilots from high gravity worlds who are -10%.

No penalty if the planet's gravity and atmospheric conditions are the same as, or very similar to, that of the pilot's home world, the piloting roll is standard with no modifiers.

-5% for pilots attempting to land on planets with gravity 30% or more different than their home world and/or with a toxic atmosphere, or high radiation. The same penalty applies to landing underwater on water worlds completely covered by oceans (unless one comes from such an environment, in which case, no penalty applies).

-15% for difficult landings on worlds with dense vegetation, heavy mist/fog (poor visibility), twilight conditions, or frozen surfaces.

-20% when pitted against the demanding conditions of a high gravity world or the turbulence of a thermal world.

-30% penalty when buffeted by violent storms and abrasive atmospheres.

Note: If there is a crash, the planet may not have the resources to repair the craft (such is the case with many aliens in a traditional **Heroes Unlimited™**, Earth setting). Remember, only about 1 in 20 planets and 1 in 100 moons are habitable in the first place. Even fewer will have advanced life forms unless there is a space faring empire that established many off-world colonies and employ terra forming techniques to create habitable worlds. (Habitable for their race, that is, which may be very different than the needs of the space travelers.)

Offsetting the danger of direct landings is the speed and convenience of direct takeoffs, which can be a life-saving means of escape in times of trouble. In less critical circumstances, direct takeoffs obviate the need for a shuttle flight or pricey commercial transportation to return to one's ship.

Secret visits to other worlds

When landing on a planet, the spacecraft should get permission from the local authorities to do so, but sneaking onto a planet without permission can also be done. In order to avoid customs and the local authorities, a covert landing requires the pilot to sneak through any security nets and tracking systems that may be in place. If the captain makes a successful Piloting skill roll, he will land undetected. For modifiers on landing undetected on a planet, consult the table below.

Stealth Landings Modifiers

Note that more than one modifier may apply; G.M.'s discretion.

Landing in a remote wilderness area: +20%
Landing environment where the visitor's technology greatly exceeds that of the locals: +20%
Landing in a lightly settled area (outpost or village nearby): -10%
Landing in a moderately settled area (town): -20%
Landing in a heavily settled area (city/21st Century Earth): -30%
Landing at a space port or heavily populated and/or advanced civilization: -60%
Landing area has light security (FAR civilian world): -20%
Landing area has moderate security (Pirate or warlord world): -30%
Landing area has heavy security (Atorian world): -40%

Adventuring in Unearthly Environments

Having finally made it to the planet, what can one expect? Just about anything, really. The only thing more diverse than the different life forms in the galaxy are the various kinds of planets they might inhabit! Depending on the characteristics of an alien's home world, adventuring in other environments can range from challenging to downright deadly. The following information covers all the planet types presented in **Heroes Unlimited™ Second Edition (HU2)** and lists penalties or bonuses for aliens from other environments when they should find themselves in an alien setting. Of course, these penalties do not apply if the alien is on his home world or a very similar environment. However, keep in mind that all planets will have some variation in climate, atmospheric composition, pollution, and other factors based on their position from the sun, the rotation and angle on their axis, the attitudes of their inhabitants (i.e. environmentally conscious or not) and scores of other factors. This means that a thermal alien from the temperate latitudes of his planet who finds himself in the arctic area of another thermal world will suffer from exposure in the cold temperatures even though he's visiting a familiar (but different) thermal planet. On the up side, elsewhere on the planet, he will not need the heavy protection that non-thermal aliens will require and he should feel right at home. Also remember that the aliens receive bonuses on Earth (i.e. those that are listed) because it differs from their native environment. When these aliens return to their native environment, they do not receive any of the listed penalties, bonuses or powers they may have had on Earth (S.D.C. bonuses remain). On their home world or similar environment, they become "normal" (unless one possesses super abilities). Note that most advanced civilizations will have hotels and "visitor stations" with environments designed to accommodate people from other worlds (i.e. Earth-like living environments, among others). Of course, such accommodations are usually limited to the needs of the races who most frequently visit that world, all others will have to make do the best they can and sleep or reside on the spacecraft they arrived in.

High Gravity: The heavy pull of the gravity on these planets has some debilitating effects on characters not native to it. Apply the following adjustments to all characters except low-gravity home world aliens: -6 to P.S. and lower their Speed by one third. Additionally, such characters are -2 to strike, parry, and dodge for the first 24 hours they are in the heavy gravity (unless native to it, in which case there are no combat penalties).

Aliens originating in a low-gravity environment are severely hindered by what is, to them, very powerful gravity. They are -12 to P.S. and lower their Speed by two thirds. The extreme effect of high gravity on low-gravity aliens also makes them -4 to strike, parry, and dodge. All penalties apply for the duration that a character is within the gravity's strong pull and persist for 1D4 minutes for each hour spent in the gravity after they leave it. If either Speed or P.S. is lowered below one, including fractions, the character is unable to move and will have trouble breathing (-10 to strike, parry, and dodge) without some sort of support and assistance. Such badly affected aliens must make a saving throw vs lethal poison every six hours or collapse and fall into a coma.

Advanced civilizations on high-gravity planets will usually have light exoskeletons and other equipment available for rent or purchase by tourists who find the heavy gravity uncomfortable or debilitating. These units come in light models for aliens from normal gravity worlds and full environment support models for aliens from low-gravity worlds which have breathing aids in addition to the strength augmentation. Such exoskeletons reduce the P.S. and Spd. penalties dramatically, allowing visitors to function close to normal (penalties reduced to -1 or -2 to strike, parry and dodge, and speed reduced to only 10% less than usual). *Anti-gravity* suits, medallions, discs, and devices can be used to effectively nullify the strains and penalties of gravity on an individual, allowing them to feel and function normally in the heavier gravity. Unfortunately, the price of anti-gravity systems prohibits their availability to the general public even among the most advanced civilization, and visitors will probably have to supply/bring their own to benefit from this technology. **Note:** Renting exoskeletons costs 100-200 credits per day.

Low-gravity: The light pull of this gravity is strange, but not as debilitating or discomforting as that of high gravity. Again, note that a low-gravity alien returning to his native environment will have his bonuses from physiology negated (he's a normal Joe in this environment), while those from worlds with heavier gravity will temporarily gain the bonuses as if they were born on a high-gravity world.

Humans and most aliens are -2 to their P.P. (including aliens from low-gravity worlds) but double their normal speed attribute and can leap distances two or three times farther and higher than they can on their home world.

High-gravity aliens will be at -4 P.P., but their Spd. attribute will be quadrupled and they can leap 10 times farther and higher than normal. They are also at -3 to strike, parry, and dodge because of the extreme clumsiness and lack of control they feel in such light gravity. (Ever try to use a computer mouse after its trackball sensitivity has been dramatically increased? Now imagine if one's entire body behaved that way, and the plight of a high-gravity alien in a low-gravity world comes into focus.) The combat penalties are reduced after 48 hours, but high-gravity aliens will always remain -1 to strike, parry, and dodge in the very low-gravity.

Aliens from worlds without gravity will be at -2 P.P., and their Spd. will be cut in half.

Like high-gravity planets, advanced civilizations on most low-gravity worlds sell and rent exoskeletons (sometimes anti-gravity systems) that will correct the aliens' movements and negate whatever penalties they face in this unfamiliar environment.

High Radiation: Any aliens visiting a high radiation planet must wear an environmental suit with radiation shielding. Such suits will commonly be available for rent or loan on advanced planets and those with regular tourist traffic (cost ranges from 20-80 credits per day). Most standard "spacesuits" and environmental body armors comes with (or can be fitted with) radiation shielding (prices can be found in the **Aliens Unlimited™** sourcebook).

Those who find themselves without such protection must roll percentile dice each minute to see if they contract radiation poisoning/sickness. On a roll of 01-30%, the character has radiation poisoning. The symptoms and effects of radiation poisoning are identical to those given in the **HU2** rule book under the major super ability, *Control Radiation*. The penalties apply as long as the person is sick. Immediate treatment will see recovery in 3D4 days, but add three days to the recovery time for every one day the treatment was delayed or the character remained in the deadly environment. The average superhuman recovers twice as quickly.

Frozen World: Any alien not originally from a frozen home world without an insulated and heated survival suit will suffer from exposure identical to that described under the Frozen World description on page 94 of **HU2**. All effects are applied 10+1D10 minutes after the unprotected character is exposed to the conditions. The bitter cold reduces P.S. and P.P. by two (2) points, lowers speed by one third, and takes away eight S.D.C. (and after S.D.C. are gone, Hit Points) for every 10 hours of unprotected exposure. These penalties are applied cumulatively.

If unprotected or their environmental suit cannot handle the temperature drop, aliens from thermal home worlds are hit extremely hard by this deadly, cold environment. They suffer the same cumulative penalties, but apply them every *two hours* instead of every ten. If the thermal world character's heated environmental suit can not handle the temperature and breaks down and shuts off, treat the alien as a normal unprotected character and apply modifiers every two hours.

Frozen environments do not affect only living things with their extreme temperatures. Delicate equipment, including optics systems (especially thermal and other electronic types), computers, vehicle engines, energy weapons and most electronic equipment that is not insulated against the temperatures will begin to jam, shut down and malfunction. Generally, each time a non-insu-

lated item is activated, there is a 01-35% non-cumulative chance it will not work fully, properly, or at all. Spacecraft and equipment originating from a frozen world are adequately designed and insulated against such extreme cold. G.M.s can apply thermolate prices to any other items of equipment that a character wishes to "winterize." On advanced worlds, heated survival suits can often be rented for 30-120 credits per day. Most undamaged, environmental body armor will function under arctic conditions for at least 72 hours without risk of breaking down.

Thermal World: Thermal environments produce exposure the same way as frozen worlds, but on the opposite end of the temperature scale. Characters not from these hot environments suffer exposure as detailed in the Thermo-World description on page 94 of **HU2**. Frozen world aliens suffer accelerated effects if exposed as detailed for the thermal aliens above (i.e. every two hours instead of ten). Delicate equipment, including optics systems (especially thermal and other electronic types), computers, vehicle engines, energy weapons and most electronic equipment that is not insulated against high temperatures are also affected by the heat and will begin to malfunction. Generally, each time an item is activated, there is a 01-35% non-cumulative chance it will not work fully, properly, or at all. Again, spacecraft and equipment that originate from a thermal world are adequately insulated against such heat. In this case, thermolate costs can also be used for any equipment that needs to be shielded from the heat. Survival suits can often be rented from civilized planets that have regular visitors from outside worlds for 30-120 credits per day.

Vegetation Planet: The environment of this planet will have numerous vines and branches for travel and access to the higher reaches of the foliage. Characters who do not have the climbing and the gymnastics or acrobatics skills to move about the world are -2 on initiative, see all combat bonuses reduced by half (except when engaged in close-range, hand to hand combat) and their normal speed reduced by 30%. Certain mutations (prehensile tail, etc.), alien appearances (ape, monkey, snake, etc.) and animal powers *may* reduce these penalties by half or even negate them completely (a rarity) at the G.M.'s discretion. Even characters with the natural power of flight will be hampered by the dense tangle of foliage and see their speed reduced by 25%. Likewise, most visitors generally feel out of their element and off balance. Furthermore, characters without detect concealment or detect ambush, or those not trained in noticing details are -1 to strike and dodge from long-range and surprise attacks, as the thick foliage and vines obscure their vision and keep them off balance.

Toxic Atmosphere: If the character is unprotected in this deadly environment, he must save vs lethal poison every minute of exposure! For each minute that the character fails a saving throw, he suffers 4D6 points of damage. Even if the character manages to save, he feels sick or dizzy and suffers penalties of -1 on initiative, and -2 to strike, parry, and dodge from chemical irritation and must continue to save each minute until he finds some means of protection or dies. The constant toxic environment also prevents most forms of natural regeneration, though magical and psionic healing will function normally, as will characters with the super abilities of *Healing Factor* and *Adapt to Environment*. Characters with *Invulnerability* take one third the normal damage and suffer the penalties, but will last much longer due to their immense amount of S.D.C. and power related bonuses.

Note that a toxic atmosphere requires more than a simple breathing apparatus to be protected, because the poisons will affect the character's entire body if it isn't properly protected. Thankfully, a simple spacesuit or decontamination suit with an internal air recycling system or independent air supply will do the job. Only characters who can *Alter their Physical Structure*, turn *Intangible* or create *Bio-Armor* can protect their bodies (but not their lungs) and can get by with a simple breathing apparatus. If the environment is airless or super-toxic, characters without a breathing apparatus will suffocate in a matter of minutes. As usual, civilizations used to receiving extraterrestrial visitors will have protective suits and air systems available for rent at 30-90 credits per 24 hours.

Abrasive Atmosphere: The abrasive atmosphere is one of the most hostile, attacking *everything* within its grasp and often wreaking havoc on people, vehicles, electronics and other delicate gear. It's like living in a cloud of acid rain or dust storm (depending on the exact nature of the environment), so any soft materials suffer 2D6 damage per 12 hours, including unarmored survival suits and human flesh. Hard plastics, metals, and armors suffer little or no damage (2D6 damage per week), but electronics and motors, including vehicle engines, are easily disturbed by sand/dust accumulation and/or corrosive vapors. Carburetors and intake valves will clog, engines will choke, hoses disintegrate, circuits and wires corrode, and sensors and communications are disrupted. In any case, it is likely that equipment of any kind not designed for use in an abrasive/corrosive atmosphere will be adversely affected by it. Each time a piece of equipment is activated there is a 01-40% chance it will not work, and the range of sensors and communication systems are reduced by half even when working fine. A thorough cleaning has a 01-85% chance of fixing the problem temporarily (i.e. it will work this time, but has a 40% chance of not working next time, unless one leaves the harsh environment).

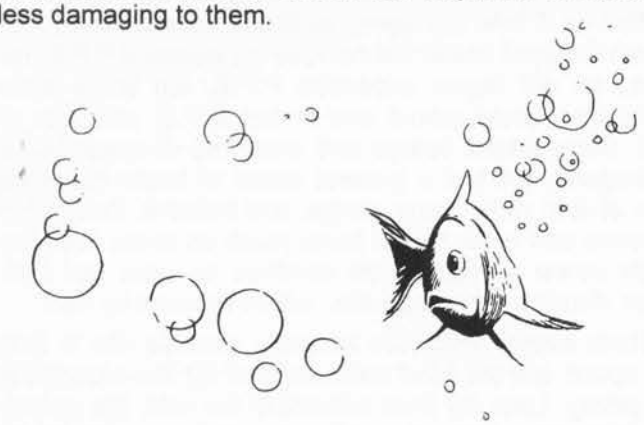
If a character should find himself on a planet with an abrasive atmosphere, there are three sets of modifiers based on the level of protection he has from the chaotic environment.

1. Characters fully exposed to an abrasive atmosphere that do not have a natural A.R. of 10 or higher, are -6 to strike, parry, and dodge because of the blinding, stinging environment (the use of a helmet will reduce the penalty to -3), and speed is reduced by 30%. In addition to this penalty, the exposed character will suffer 2D6 points of damage per hour that he is exposed to the harsh atmosphere.

2. Those in non-armored survival suits also suffer the -6 penalties (or -3 with a helmet) and speed is reduced by 20%, but the hostile environment will slowly eat and pound away at the suit. The abrasive atmosphere will do 2D6 damage per twelve hours of exposure to the suit. Once the suit is destroyed, the character falls into the fully exposed category detailed previously.

3. Characters in any kind of armored survival suit with an A.R. of 9 or higher, only suffer a -2 penalty to strike, parry, and dodge (most armored suits will have helmets and other means of protection and optics), and speed is reduced only by 5% (Apply the -6 penalties if no helmet is used or if the armor is destroyed). These well protected individuals take no damage unless some of their body is exposed (i.e. no helmet, large holes in the suit from damage, etc.).

Worlds accustomed to visiting off-worlders will offer armored protective suits and exoskeletons for 100-200 credits a day, as well as special habitats (i.e. environmentally prepared hotels) where visitors can stay in an environment less damaging to them.



Aquatic World: These worlds are covered with water, and have minimal to no land masses. Unless a suitable landing area can be found on the surface, visiting spacecraft must submerge and settle on the bottom or at sea ports (spacecraft are considered to be full environmental vehicles). Naturally, aliens who can not breathe underwater must procure some kind of SCUBA or rebreather apparatus to avoid drowning. (A standard rule of thumb is a character can hold his breath for one melee round per point of P.E., after which he will quickly lose consciousness and drown.)

Characters unable to swim will face a -6 penalty to their P.P. and move through the water a number of yards/meters per minute equal to their P.S. Aquatic aliens and those with underwater powers will be at the greatest advantage, able to move with impressive speed, comfort and agility. Depth and pressure is another problem underwater. Normal humans and most other surface dwellers can not survive depths greater than 150 feet (46 m), which means they need some sort of special vehicle, environmental suit/power armor or exoskeleton to survive greater depths. As usual, advanced civilizations used to receiving extraterrestrial visitors will have protective suits and vehicles available for rent at 100-200 credits per 24 hours and environmental body armor/exoskeletons for 150-300 credits a day, as well as special habitats where they can stay.

Many surface weapons will not function unless they have been specifically designed for use underwater. Even then, all ranges are reduced by 25%. Lasers' range is reduced by 50% unless they are blue lasers, in which case their range is unaffected. Sonic weapons do +10 points of damage underwater and they also have twice their normal range. Many weapons are waterproof, but not pressure proof and will suffer from exposure to great depths. Each day a weapon not designed for use underwater is submerged, there is a 01-45% chance it will be damaged and not function. Melee weapons are unaffected and Vibro-weapons are +2 to damage in the water.

Twilight World: As the name states, these planets are very dim places to totally dark. Unless some form of optical enhancement or natural night vision is used, visitors will be at -4 to strike, parry, and dodge in twilight and -8 in total darkness. Also, remember the height difference rules as stated on page 95 of **HU2**, as twilight aliens can be rather tall. Twilight worlds are famous for having complex ecosystems chock full of creatures especially well adapted to low-light environments. Alien explorers on twilight worlds would do well to take special precautions, lest they become prey in the dark. That said, bright lights or ambient light amplification systems, alone, work well in compensating for the darkness. Powerful flashlights, searchlights, and flood lamps can help visitors navigate the darkness and frighten away native wildlife and predators. On the other hand, such simplistic measures shine forth like a beacon to boldly announce their presence to the planet's inhabitants, as well as dazzle and blind entire crowds of natives — an incident that may awe and frighten primitive people into fleeing or attacking. Of course, on worlds where technology is not advanced enough for the natives to create and use light-modulating eyewear, such crude use of "light" can be devastating against them. Advanced civilizations are likely to have laws prohibiting the use of invasive and damaging light, as well as protection and countermeasures for it.

Planetary Environments and Magic

The different planet types and environments have no effect on the ambient levels of magic one will find there. How or why magic flourishes on specific planets is the providence of universal positioning, time, alignments of energy fields (including the gravitational fields of planets) and pure coincidence. Thus, we get the universal peak activities of ley lines during certain planetary alignments, as well as dozens of other physical and supernatural influences. What this means to the interstellar traveler is that any given planet may or may not have a certain level of magical energy. Some planets can have magic levels greater than even that of **Rifts® Earth** (although super-rare), while others will have even less magical traces than those found in the Earth of **Beyond the Supernatural™**. Luckily for the planet-hopping practitioner of magic, the ambient level of magic on any given planet can usually be sensed from orbit, thus warning a magic user in advance of extraordinarily high or low levels of magic on the planets he intends to visit. Moreover, as living batteries of magical energy, most wizards and magical characters possess a personal reserve of magic energy (P.P.E.) that enables them to use magic on at least a basic level.

Mystical characters that travel the galaxy should do their best to know about the planets they will be visiting beforehand. A mage visiting a world very low in magical energies should be prepared for his spells to do half their

normal damage or cost twice the normal P.P.E. In such cases, being prepared can often mean the difference between life and death. Likewise, planets with high levels of magic have their benefits and drawbacks (the latter includes a higher than usual presence of supernatural beings, demons and spell-casting beings, not to mention possible dimensional gateways and powerful magic-wielding civilizations). Certainly the practitioner of magic will be more powerful than he normally is, but any such adventurer worth their salt will realize that such an environment will spawn native creatures that are also more powerful than the norm.

When deciding on the ambient magical nature of a planet, the G.M. can roll on the table below to randomly determine it, or he can select one that fits with his adventure plans or the player group. To keep things easy, each planet is given an overall magical rating as compared to the Earth of **Heroes Unlimited™**. This rating determines how effective and easy it is to manipulate magical energies in a natural state. This natural state can be enhanced by ley lines and nexus points, and it can fluctuate, just as it does on Earth, with the alignment of planets, astronomical events, and times of day. To figure the effects, just add the multiplier to spell effects, damage and durations as well as the total P.P.E. of the wizard or magical item drawing upon the energy. Do just the opposite for low magic worlds. The same system works for ley lines and the amount of extra P.P.E. they can be tapped for. G.M.s can complicate or add details to this as they see fit.

Planetary Magic Levels

01-15%: Very low magical levels; virtually nonexistent. *Reduce* all aspects of magic (range, damage, duration, etc.) by half. If the G.M. deems it appropriate, the cost to cast a spell is double the normal P.P.E.

16-30%: Low magic levels. *Reduce* all aspects of magic by 25%.

31-60%: Average magic levels with no modifiers. Fundamentally the same as the Earth of Heroes Unlimited™.

61-75%: Slightly higher than normal levels. Multiply all aspects by 1.25

76-85%: Higher than normal magical levels. Multiply all aspects by 1.5

86-95%: Significantly higher magic levels. Multiply all aspects by 1.75.

96-00%: Exceptionally high magic levels. Multiply all aspects by 2.

Though planetary bodies may fluctuate in their respective levels of magical energies, the vast reaches of space that surround them will always have a general level of magical energies equivalent to the normal levels for a given game setting. In this case, galactic space would have the normal levels of magic that are found on the Earth of **Heroes Unlimited™**. Space can also have ley lines and nexus points. Ley lines in space are usually most plentiful around planets, where they trail off of the ambient magical energies of the planet itself, directly corresponding in strength to the magical levels of the planet, but other lines can be found in open space. These lines are admittedly few and far between, but those that exist are gigantic and can span hundreds of miles in height and a light year in length. Despite their size, such lines are rarely more powerful than typical terrestrial ley lines, except during astronomical events when the normal amount of heightened P.P.E. is doubled. Even rarer than open space ley lines are voids and those ley lines that are significantly more powerful than the run-of-the-mill ley line.

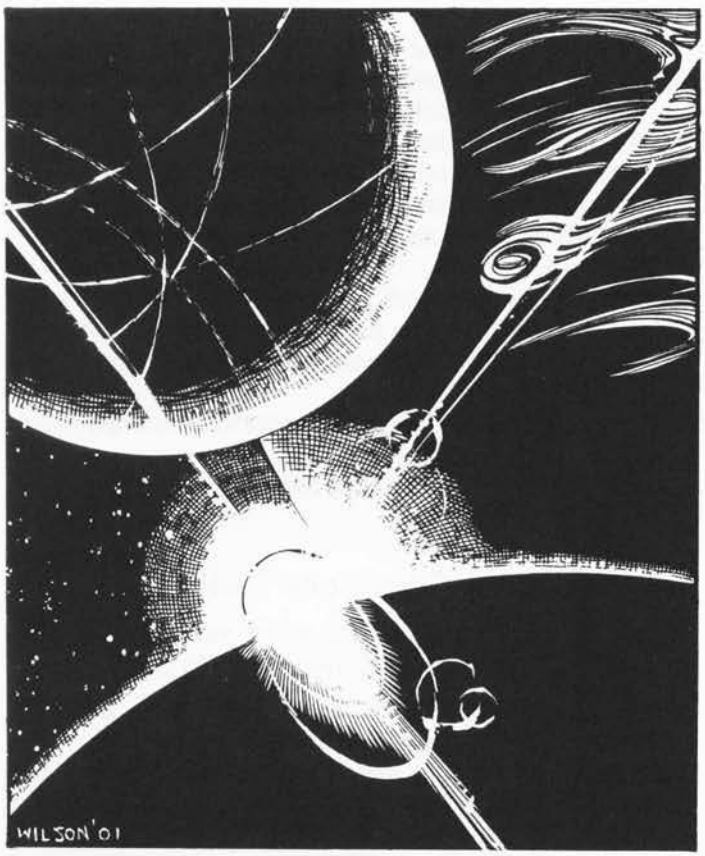
Voids are sections of space that are so low in magical energies that it is literally non-existent. A mystic who enters one of these places will be stunned for 1D4 melees as the very powers which have been with him for most of his life feel as if they are being suddenly whisked away. Although the spell caster will not lose his personal P.P.E. reserve, he will regain expended P.P.E. ten times more slowly than usual (about one or two P.P.E. per hour of rest). Supernatural beings and creatures of magic, such as dragons, will feel a general sense of torpor that puts them at -2 to strike, parry, dodge, and initiative. Enchanted weapons and other magic items (such as those from the Magic power category) will continue to work but their range, durations, damage, etc., will be reduced by half!

Black holes, which are basically massive rifts in time and space, are the most noteworthy of ley line nexuses in the galaxy. Lone ley lines crisscross the void, but despite the faint glow they give off, are easily overlooked or missed by scanners. Even ley line nexuses can go unseen if the spacecraft is not within passive sensor range. There supposedly exists worlds that have perfected forms of magical technology capable of pinpointing ley line activity virtually anywhere in the galaxy, but such efforts remain in the province of myth and theoretical speculation. Still, if such technology does exist, the Atorians and FAR would be most eager to acquire it, if for no other reason than to deny these things from their enemies.

Super ley lines are commonly known as "nova lines." These ley lines are normally the size of other space ley lines, but they radiate such magical energies that their entire length can be considered a nexus point! Needless to say, all of this magical power not only results in the opening of dimensional rifts on a regular, though random basis, but they also attract all manner of practitioners of magic, creatures of magic and supernatural beings (including so-called gods). Looking for a dragon in a **Heroes Unlimited** galactic campaign? Find a rare *nova line* and one is likely to find one (or more) among a collection of demons, Deevils, frighteningly powerful wizards, godlings, and an array of other interdimensional powerhouse beings gathered around this source of mystic energy. The average sorcerer should not be traveling to nova lines. First, they are usually isolated and difficult to locate, and people who find them will not usually give out their locations to anyone for any reason. Secondly, these lines are hotly contested territories claimed by those who live on planets near them, as well as the inhuman beings who live along them. Very powerful entities, gods, alien intelligences and gatherings of dragons and demons claim extensive portions of each of these rare lines and protect "their claim" to the fullest extent of their abilities. For example, when magical races like the *Gymoy* or *Manteze* make a pilgrimage to a nova

line, they usually send a small armada to protect the pilgrims and ensure the completion of their quest. Anybody found on the segment of nova line that the Gymoy or Manteze claim is likely to be atomized first and asked questions later. Those unable to confront such creatures had better reconsider crashing nova lines any time in the near future.

When planetary alignments happen, even the impressive residents that stake claims to the super-ley line leave. No known being would be on a nova line at those times, because alignments often generate deadly ley line storms and gargantuan dimensional portals that destroy or consume everything nearby. In simple terms, the nova line becomes a large black hole or series of smaller ones with a maelstrom akin to a super nova raging about its edges. Despite the sheer destructive power of such events, they still draw the more courageous galactic mystics, who seek to take advantage of the excess raw energy. During an planetary alignment-driven ley line storm, even the smallest nova lines generate ten times the magical energy that normal ley lines do, and the largest one can put out twenty times the usual energy.



Planetary Settings

By Wayne Breaux Jr. & Kevin Siembieda

So far, we have seen a sampling of some of the harsher planetary environments that may be encountered (frozen worlds, high radiation worlds, abrasive atmosphere worlds, etc.). The *Worlds of Interest* section of this sourcebook will also describe a number of the more noteworthy planets to be found in the Four Quadrants, but these do not begin to cover the sheer multitude of worlds in the galaxy. Keep in mind that the Milky Way contains *billions and billions* of stars, many of which have planets. The chances of finding two identical worlds in such a multitude is like spotting two identical snowflakes in the middle of a blizzard. Even among planets of similar type, there are bound to be many different variations. A thermal world, for example, can be a steaming jungle, a barren rocky furnace, a world with a Venus-like greenhouse effect, a world covered by molten lava, or an Earth-like desert world.

Certainly the G.M. can customize alien worlds according to his needs and tastes, but what if something happens unexpectedly and he needs a planet on the spot? Crash landings are a good example and so is, "Let's hide on that nearby planet till the Atorian cruiser passes." To prevent Game Masters from ever being caught short, the following sections present both random tables to generate the setting of an alien planet, which can even be used to randomly generate different countries within the same continent or planet, and entries detailing a handful of specific planets for your use and inspiration.

Before we even get to the tables, a few comments. First of all, yes, trees and plants can exist in a frozen environment, they would just have lower metabolisms and tolerances much like alien characters from those worlds. Likewise, deserts, thermal and radiation planets can have plants and life adapted to their conditions just as readily as they can be barren, hostile environments. Also note that each planet will have varying ecosystems and technology levels as well as minor variants on the primary race living there. It's just like Earth where you find rural areas in places like Vietnam and India with almost no tech, then compare them to the developments in Hong Kong and New York. A whole series of adventures can result from a crash landing as the character must travel from a remote wilderness area to one with technology to acquire spare parts and repairs. On the other hand, it is also highly likely that an unexpected landing on an alien planet will put the character in a place with very low-technology levels across the whole planet, or all the more likely, a world without any intelligent life forms whatsoever. On worlds with primitive cultures, the space faring characters may seem like gods, but they can be some of the most dangerous for them. See later sections for some reasons why.

Step One: World Classification Table

01-08%: Earth-Like Environment
09-16%: High Gravity
17-24%: Low-gravity
25-32%: High Radiation
33-40%: Frozen World
41-48%: Toxic Atmosphere
49-56%: Vegetation World
57-64%: Thermo World
65-71%: Twilight World
72-79%: Aquatic World
80-86%: Abrasive Atmosphere
87-93%: Roll twice and combine the results. Re-roll or discard incompatible results.
94-00%: Roll three times and combine the results. Re-roll or discard incompatible results.

Step Two: Dominant Environmental Feature Tables (A & B)

A) Ground Terrain Table

01-05%: Covered with the shattered ruins of a lost civilization. Could be the ruins of once modern cities or primitive, ancient ruins for humanoids or completely alien life. No sign this race has survived.

06-10%: 70+3D6% of the planet is covered by water; sprawling, deep oceans and few islands of land.

11-15%: Icescape. 50%+4D6% of the land is covered in snow and ice even in the spring and summer. However, there are some areas of tundra (grassy plains and low trees), and even some areas of forest and grasslands. Winters are long, cold and hard with heavy snowfall.

16-20%: Arid, dry, and flat, but not a desert. Much of the land is stony, with sparse vegetation, cactus and scrub, but also patches of grasslands or tundra. No mountains or hills, few bodies of surface water, but may have a vast network of underground rivers and springs (or not).

21-30%: Parched earth. Effectively an endless dust bowl. The once moist earth has become dry as stone, cracked and split. In some places, large ravines have opened up. There is little or no water even underground, and no surface vegetation. Fossil evidence shows this planet was once very Earth-like. The planet's ecological misfortune may have been natural or man-made (stripped by interstellar miners, war or pollution, in which case evidence of a lost civilization may also be apparent as buried ruins, artifacts and fossils). This planet has been dead a very long time.

31-35%: Thick vegetation; large flowering plants, fruit bushes, shrubs, bamboo, and tall grasses, but few trees.

36-40%: Vast forest (tall trees and heavy underbrush); cool, warm or temperate.

41-45%: Rain forest/jungle; hot and steamy environment.

46-50%: Large lakes and/or marshlands.

51-55%: Mountainous and rocky; can be Earth-like and alpine in nature or gigantic in scope with peaks and summits towering miles into the heavens.

56-60%: Smooth rock, stone or clay hills; minimal if any vegetation.

61-65%: Rolling hills; mostly grasslands, prairies and meadows. Few trees, mostly grasses, vines, bushes and shrubs.

66-70%: Rocky, jutting buttes (which are as wonderfully alien amid a thick forest as they are deserts and prairies).

71-75%: Barren plains and desert (can be sand or rugged rock; little or no vegetation).

76-80%: Rubble strewn; could be a natural phenomenon, the shattered remains of a lost civilization, or refuse/garbage dumped on the planet (yes, you've landed on "garbage world").

81-90%: Scarred planet. Over the ages, this planet has suffered intense geological activity that has left it scarred by tall mountains, tall hills, deep ravines, crevices, expansive canyons, high plateaus and open cracks. If war torn or a thin atmosphere, the planet *may* also be peppered with thousands of craters ranging in size from as small as a house to as large as an entire city or lake.

91-93%: Roll twice (re-roll or discard incompatible or undesirable results). One part of the world has one environment, another location something different (i.e. forest and desert).

94-96%: Roll three times (re-roll or discard incompatible or undesirable results).

97-00%: Roll 1D4+3 times for a large range of diverse terrain around this planet.

B) Atmospheric Conditions Table

Note: The exact composition of the air, and whether or not it is breathable for a given race, is left to the G.M.

01-10%: Surprisingly Earth-like in every way, complete with typical weather and changing seasons.

11-20%: Mostly sunny, with clear, crisp, clean air and crystal clear water.

21-30%: Constant mist or fog; the sun shines only 25% of the year, but when it does the sky is filled with rainbows and sunsets glow in an array of spectacular colors.

31-40%: Perpetually overcast and cloudy. Not as dark as a Twilight World, but definitely gloomy and grey with cloud filled skies.

41-45%: Thin atmosphere, but moderate weather and seasons. Visitors used to a thicker atmosphere will become easily winded and fatigued (may suffer *high altitude sickness* if the G.M. wants to go that route). Penalties: Reduce speed, P.S. and P.E. attributes by 20% and the character becomes exhausted/fatigued

twice as fast as normal. It takes 1D4+1 weeks to become completely acclimated to this atmosphere, eliminating the penalties. The use of breathable air supplements (i.e. oxygen for humans) and artificial air circulation systems in spacesuits and environmental armor will circumvent these penalties, but the character has no chance to acclimate himself to the environment and will succumb to the penalties should he lose his supplementary support system.

46-50%: Heavy smog, soot and dirty air; can be pollution from industry, volcanic activity, or dust storm. Grime, dust and particles irritate the eyes, inflame the sinuses, and collect on clothes and under fingernails in a matter of 12 hours.

51-55%: Extreme temperatures. This may occur with the transition of night to day (drops below freezing at night and rises to above 90 degrees Fahrenheit during the day), be seasonal (blistering hot summers and bone chilling winters), or as the strange effect of a storm (the storm itself may be rain, lightning or just wind; violent or moderate).

56-60%: Rains half the time year round, with a four month rainy season where the rain never stops. Goes from a constant drizzle to light rain, to the occasional downpour.

61-65%: Constant driving rainstorms and high tides. The rain stops for fewer than 5D6 days a year and seldom for more than 24 hours at a time.

66-70%: Storm planet! Frequently bombarded by turbulent storms year round, including thunder and lighting storms, monsoons, hail, ice, snow, tornados and hurricanes (the latter only if there are oceans and seas). If the planet is a desert or parched, the majority of the storms lack precipitation. Although rain does occasionally fall, most storms come in the form of lightning (without rain), long-lasting wind storms and short-lived, smaller dust storms. Only 3D6 days of calm weather.

71-75%: Sulfuric and mildly toxic or polluted atmosphere with acid rain and grey snow instead of normal rainstorms and snowfall. May be the result of industrial pollution, global war, volcanoes or other natural phenomena. Irritates the eyes, throat and other mucous membranes.

76-80%: Wind swept. The planet is constantly swept by strong winds of 20-40 mph (32 to 64 km), with wind and rain storms ranging from 50 to 100 mph (80-160 km). May also have tornado and/or hurricane seasons.

81-85%: Generally clear and calm with mild seasons, few storms, and light rain.

86-90%: Turbulent upper atmosphere makes high-flying and entry to the planet difficult and inflicts a -30% penalty to the Piloting skill.

91-95%: Roll twice on this table. The first result is during the day and second is at night!

96-00%: Roll twice on this table (re-roll or discard incompatible or undesirable results).

Step Three: Technological Level Table

01-07%: Little or no technology! At least as we humans understand it. This may be by choice, or because there is no native people or civilization, or because the civilization has advanced without technology (may use magic, psionics, spiritualism, etc.).

08-14%: Stone Age (Cavemen).

15-21%: Bronze Age (Ancient Egypt and Ancient Greece).

22-28%: Iron Age (Ancient Rome).

29-35%: Agrarian Age — Medieval Europe. The main industry is farming and raising livestock. Life is hard, technology low.

36-42%: Renaissance Age. Black powder weapons, printing press, sailing ships, and low-technology (but no steam or combustion engines).

43-49%: Industrial Age. Steam and combustion engine technology, reasonably advanced wooden and stone buildings; make bricks and use concrete and iron girders. Good understanding of metallurgy, engineering and manufacturing. Can make iron and metal alloys, but most machines and vehicles are slow, large, bulky and fairly low-tech with plenty of rivets and large bolts on nearly everything. Only the fundamentals of electronics and modern medicine are known. *No* genetic engineering, advanced medicine, micronization, computers, video recording, CDs, or atomic energy (e.g. all pre-Earth World War II technology).

50-56%: Atomic Age. An industrial giant, equal to Earth's mid to late 20th Century. Understands and uses nuclear energy, has made good strides in medicine, micronization, and basic communications, robotics, and computer technology.

57-63%: Information Age. Advanced electronics, mirconization, robotics, powerful computers and varied communication networks pervade everyday life. Beginning to unlock the secrets of advanced artificial intelligence, robotics, nanotechnology, genetic engineering, and may, or may not, have a modest, crude space program in place – satellites, simple space stations, rockets and the most rudimentary space travel capabilities (like Earth's NASA).

64-70%: Metropolis Age. Sprawling cities, advanced technology ranging from weapons to medicine to transportation. May or may not have any space travel capabilities.

71-77%: Megalopolis Age. Advanced cities with arcologies, superconductor-driven transportation, cybernetics and robotics. May or may not have space travel capabilities.

78-85%: "True" Space Age. Advanced cities and technology with a strong space program and the ability to travel throughout their own solar system and the fringes of the neighboring ones.

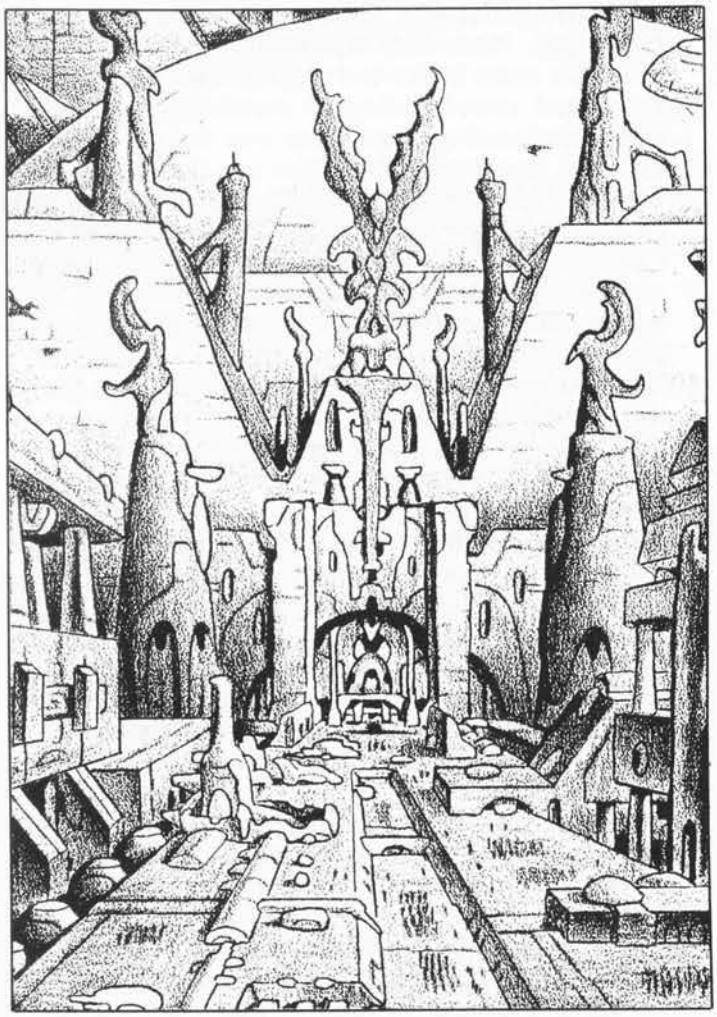
86-92%: Star Age. Interstellar travel; frequently travel to neighboring star systems and look toward greater advancements. Basic to good understanding and growing use of warp and gateway systems.

93-99%: Galaxy Age. Advanced technology, communications, medicine, genetic engineering and space pro-

gram. Can travel to the farthest reaches of the galaxy and a little beyond. Wide use of Gateway technology, warps systems and the use of Black Holes and dimensional jumps.

00%: Universal Age. Advanced science and technology. Intergalactic travel is commonplace. Regularly travels beyond the Milky Way to other galaxies and even explores alien dimensions. Expert use of gateway technology, warp systems, Black Holes, dimensional jumps and possibly other (alien or little known) ways of space travel.

Note: The Universal Age technology is Ultra-rare, and not even confirmed to exist. It is a theoretical likelihood, but none of the civilizations *known* to exist in the Milky Way have reached that level. Most space faring people in the Milky Way range from the True Space Age to Star Age, with a small percentage on the Galaxy Age level.



Step Four: Architecture Appearance Table

Note: Not necessarily indicative of the culture's tech-level, just its appearance.

01-05% Primitive, Stone Age or Bronze Age. This may be the case because the people are primitive and lack technology, or because they have forsaken or lost their technology (perhaps because of a war or plague accidentally engineered in the lab, or natural disaster that has devastated the civilization, etc.), or because they rely on magic, psionics, spiritualism, a supernatural being(s) or some other reason that has prevented them from developing science and technology, or has led them in a different direction.

06-15%: Heavy industrial. Lots of metal, concrete, and rivets. May have a bulky, art deco or Bauhaus appearance.

16-20%: Imposing religious. Many large temples and church complexes like the ancient cities of the Maya, Inca, and Egyptians on Earth. The cover of *Rifts Atlantis*™ is a good example of this.

21-30%: Sweeping alien. Smooth and graceful, with tall, thin buildings and towers, elegant bridges, globes and graceful curves; may have an organic look and feel, or a blend of tech and organic.

31-40%: Techno alien. Dark and creepy by human standards, perhaps stark and menacing, or strange and frightening with demonic or monstrous images and motifs, spikes, spines, hard edges, big guns, big entrances, big machines, towering statues, tubes, bulbs, odd designs, eerie lighting, dark colors, alien ornamentation, etc.

41-50%: High-tech (human or alien). May look like an advanced Earth, or a sleek, ultra-modern super-city or megalopolis with tall, sleek buildings, monorails in glass tubes, robot servants/assistants, projected holographic billboards, advanced communication networks at one's fingertips and so on.

51-55%: Paradise tech. A wondrous melding of technology and nature. Sprawling parks, gardens and forested nature preserves are intermingled with tech cities that use pollution free power systems, ecologically friendly industry and modes of transportation, as well as features of nature such as waterfalls, ponds, gardens, stone, natural formations and design elements in their architecture. The people may simply respect, love and appreciate nature, striving for ecological balance and preservation of their world, or may be very spiritual, psychic (feeling a tangible link to their world) or rely on magic rather than industry and manufacturing.

56-60% Hidden/Underground. The surface of the planet seems uninhabited or barely touched, perhaps with only the occasional farming district, space port and small city or resort town. That's because the true heart of the civilization is located underground or underwater.

61-65%: Medieval. Huge, stone castle-like buildings, towers, bridges, walls, aqueducts, stone or concrete lined streets, and heavy castle-like fortifications. The overall appearance may even include body armor and robots that resemble knights in shining armor, and renaissance styling, dress and artwork. Can be bold and beautiful, heavy and fort-like, or creepy or glorious high-fantasy.

66-70%: Art Nouveau: This architectural style is very ornate and flowery, with tall or long elegant structures molded with twisting and interlocking designs and covered in frilly artwork. Everything has a light, airy feel, fences and bridges are thin and wiry, while buildings are capped by spires and ornate domes.

71-75%: Gothic. Flying buttresses, ribbing, spikes, spines, peaked roofs, ledges, stained glass windows, gargoyles, and brooding designs.

76-80% Glass. The tall buildings, spires, and bridges appear to be made from sparkling glass (actually plastics and alloys), chrome and gleaming metal. White and pastel colors along with warm earth tones (particularly gold, bronze, copper, silver, etc.) give these cities a bright and cheerful aura. The overall architecture has a certain fanciful elegance and grace to it, but also conveys a sense of refined culture, confidence and strength for daring to build a city that seems so fragile. However, any perception of fragile beauty or weakness from elegance is false. Most so-called "glass" cities are usually as sturdy, durable and capable as any of the others listed here. It's all a mater of attitude and perception.

81-85%: Sprawling high-tech. The architecture is clearly that of an advanced culture, but rather than a bustling, cramped megalopolis or New York style city made of towering skyscrapers and heavy industry, they have opted for a low profile city. One where even industrial buildings are seldom taller than three or four stories and the sky is open and unobstructed. Such places may look very modern with glittering chrome and metal buildings, plastic domes, glass tubes, and sleek rail systems or flying hovercraft. The streets are smooth and winding, shopping and entertainment zones provide for every conceivable need, and buildings are designed to look pleasingly homey, inviting and pretty ("cute" even). Every home and business has a well manicured lawn and flower gardens, and parks and playing fields are found in every neighborhood. In short, super-suburbia that imperceptibly flows from one suburban town or city into another, broken only by the occasional big city, air or space port, industrial complex, farm region, parkland, nature preserve or natural formation (lake, mountain, etc.).

86-90%: Agrarian, concealed tech. Buildings and society appear to be primitive and simple. At first glance, all one notices are sprawling fields of crops, cattle, flowers and trees with only the occasional airfield or medium-sized city. Upon closer inspection, one realizes that half the farmers are androids and that advanced hydroponics, irrigation, pest control, genetic engineering, food processing and botany are all at work here. Likewise, all the modern conveniences like television, computers, travel, entertainment and other amenities, as well as advanced sciences, are available to its citizens. The people just like a simpler, peaceful, low-tech environment and have opted for a "farm and/or village" look rather than industrial or megalopolis. Large machines, manufacturing, and transportation systems (perhaps even some of the housing) are cleverly concealed underground, in the sides of hills and mountains, and/or underwater; in some cases, off-world on one or more moons, space stations or neighboring planets. Sometimes magic and spiritual based societies opt for a more simple or back to nature look and feel. **Note:** Concealed tech can be applied to cultures and architecture other than agrarian; for example, the full extent of a modern high-tech city, paradise or alien civilization's military, space travel capabilities and even half its population could be concealed underground, underwater, or hidden by clever architectural designs.

91-95%: Megalithic retro-techno. This is an interesting, but often ugly and dismal architectural style that blends the big, blocky, medieval style with advanced technology. Buildings are huge, cold stone, concrete and metal edifices with few windows or delicate touches. They may include skyscrapers that resemble polished monoliths and/or low profile buildings that look more like bunkers than homes and businesses. Polished black, dark grey, dark blue, black marble, steel and chrome are the most popular color schemes with red, blue, brown and gold accents and trim. Everything is hard edged, big, dark and blocky. And did we mention big? While there may be some stretches of land put aside as nature preserves and parklands, there are rarely any parks, trees or even outdoor potted plants. Everything is stone, marble, concrete and metal (plastic and ceramics too, only they are made to look like stone and metal). Industrial complexes often look like massive cities in and of themselves. Some are surprisingly non-polluting, but others belch smoke, fire and fumes that makes one wonder if they have not stepped into one of the planes of Hell. **Note:** Megalithic cities are usually (but not always) built by cultures with a rigid, militaristic social structure or class system and strict adherence to laws, customs and stern morals.

96-00%: Mixture of two of the above. For example, gothic and art nouveau, or modern stone temples side by side with sweeping alien structures, or megalithic retro-tech for cities with sprawling high-tech suburbia or paradise tech, and so on.

Step Five: Alien Race Table

This table describes the basic kinds of aliens found throughout the Milky Way galaxy. For many examples of these categories, please refer to the **Aliens Unlimited™** sourcebook.

01-09%: Amphibian Races (e.g., Cameroon, Darkith, Mantella, Sorinam).

10-17%: Aquatic Races (e.g., Cherion, Inennsi, Nattereri, Salvelinus).

18-25%: Ape-Like (Simian) Races (e.g., Cebus, Dyteens, Maeus, Thropo).

26-33%: Avian Races (e.g., Gymoy, Struthios, Threskians, Timneh).

34-41%: Canine Races (e.g., Canis, Latrans, Toyoc, Vulpese).

42-50%: Feline Races (e.g., Altaicans, Felias, Linx, Pantherans).

51-59%: Human and Humanoid Races (e.g., Atorian, Darakans, Kassans, Shissans).

60-67%: Insect Races (e.g., Danaus, Photins, Pyralis, Relogians).

68-75%: Humanoid Mineral Races (Basanites, Lassinikes, Miceans, Raldemeans).

76-84%: Reptile Races (e.g., Baccarus, Erittima, Qua-Trau, Thisseras).

85-92%: Humanoid Plant Races (e.g,. Camleans, Chianas, Erythros, Kisent).

93-00%: Galactic Monsters & Evil Beings (Brakkana, Cyklops-Serpentmen, Dragonoids, Morphos, etc.).

Primitive Worlds & Culture Shock

As mentioned earlier, primitive worlds can be some of the most dangerous places in which a character can adventure. Primitive worlds are those that have tech or social levels well below those of the visiting alien. Earth would be a less advanced planet to most aliens, though with a space program and mass communications among other achievements, it could hardly be considered "primitive," but that doesn't mean it would be a cake walk either. The biggest danger with visiting primitive and low-tech planets is finding suitable fuels, materials, tools, and technology (computers, electronics, robotics, manufacturing, etc.) to make repairs, replace parts and maintain the spacecraft. Should any important piece of equipment or the spacecraft get damaged, it may not be repairable or replaceable using the technology and resources of the indigenous people. Even on a suitably advanced world like Earth, parts, tools, and ammunition for a laser rifle won't be readily available, let alone a plasma core for a hover system or spacecraft. This means under the right (or is that wrong?) set of circumstances, space travelers could find themselves stranded on a primitive planet with no way to make repairs and escape!

Of course, G.M.s should be careful about stranding characters on primitive worlds unless he has cool adventures and some way to (eventually) escape. Otherwise, it might well be a boring life sentence. Still, it is a problem that can be easily fixed with a plot or setting twist or two. Like being followed by an enemy or the authorities and stealing or stowing away on their vessel, or allowing oneself to be captured and hauled away where the characters can attempt an escape at a civilized space port, or via some ancient artifact, or by creating a signal beacon that happens to attract some other space traveler willing and able to help, or escape via a dimensional warp, magic or any number of other ways. One option I've used is to have the spacecraft pursuing the group (if there is one) also crash. This offers a ready supply of spare parts and provides great role-playing if the characters from the two rival groups have to *work together* to get off the rock. A similar scenario might involve a relief or rescue ship answering their SOS, only it crashes itself. In such a scenario, the player group may have to rescue their would-be rescuers, then band together to repair "one" of the vessels to escape. Another is to have an alien spacecraft already crashed on the planet. This would require an expedition to the wreckage to search for parts and necessitates adventure along the way. Or there could be an abandoned or infrequently used outpost, mine, settlement, penal colony, secret pirate base, etc., on the remote planet that *should* have the necessary items to make repairs (or a spaceship to steal). If the facility is military in nature or automated, the characters may have to fight its defenses or defenders to get inside.

In most of the above settings, the stranded characters should have to deal with the local natives, who can be feral, Cro-Magnon-like canines armed with spears or well dressed insects with a renaissance culture, or anything one can imagine. The natives may simply be an obstacle

or elements of a larger story. Perhaps the characters must help one tribe win a war in order to capture the enemy territories they must pass through. In another scenario, the locals can worship, control, or guard the very items or artifacts the group needs to effect their repairs. The latter would necessitate negotiations and/or trickery or some dangerous and crafty theft.

Dealing with the native populations brings up the second largest danger in adventuring on primitive worlds: a general lack of cultural knowledge about the natives. On truly primitive worlds, the visiting aliens are likely to be seen as powerful foreign invaders, and quite possibly as angels, spirits, gods, demons or monsters. An indigenous race that can only make swords for weapons will be awed by the capabilities of a laser pistol, let alone characters who can fly via power armor, jet pack or superpower. Even those with industrial capabilities and steam engines will be unable to comprehend the full capabilities of a laser pistol or jet-pack. All this can spell trouble (and certainly adventure) for space travelers on many levels. For example, being worshiped and followed can lead to all kinds of problems from war and vendettas, to demands from the people to heal the sick, raise the dead, stop some devastating natural catastrophe, defeat some powerful magic force, free them from slavery, lead them against an enemy, strike down a "false" religion or god, care for the masses and countless other things. Moreover, characters who let themselves fall into the "role of god" are likly to become overconfident and make mistakes that will either hurt himself and his companions (fellow gods?) or hurt the misguided people who follow him/them as god(s). "Playing god," or an avatar of a god (angels, spirits, demons, etc.), can instigate holy wars, spawn vendettas, breed cruelty and evil, create misunderstandings and lead fledgling cultures into ruin. And never underestimate overconfidence. Remember, the average galactic adventurer in a half suit of hard armor, equipped with an energy rifle and half a dozen other gadgets or super abilities is in little danger from 1-4 neanderthal lizard men with clubs, but six or ten or fifteen, might muster the courage to attack and easily wrestle him to the ground, strip him of his weapons, and take him (a god?) captive, or even peel him out of his armor and kill him! Any warrior or group of warriors capable of slaying a god, angel or demon will be instantly elevated within their society as great heroes and leaders, which can snowball into an entirely new set of problems. Likewise, magic and psionic powers can often circumvent technology and bring a fake god or demon to his knees.

Time spent can lead to trouble, and familiarity breeds contempt. Sure, high-tech visitors and superhumans can fend off the natives or become a god to them, but if their visit lasts longer than a day or two, there will come a time when the character will become vulnerable. Sooner or later he must, for example, step out of his armor to sleep or eat, or may otherwise lower his guard (playing, laughing, talking or even helping others), and boom, it's all over. Everyone needs to sleep, and spending more than a night or two inside a suit of even the most advanced environmental armor is uncomfortable and will cause aches, pains, cramps, and lack of sleep (possibly even an infestation by bugs; there are lots of those on primitive worlds). Long periods of fraternization and cohabitation with the primitives also gives them the opportunity to observe weaknesses and patterns of behavior, as well as to notice things that might indicate one is NOT superhuman, a demon or a god. Little frailties and "human" foibles start to show through and make the characters flawed, vulnerable and less awesome. Similarly, while the people may love their new god(s), the displaced, demoted, angry or jealous spiritual or political leaders may seek revenge, or they may love the gods while the people fear them and want them gone.

Superstitions. Stealing powers is a common belief among primitive people. The visitor might never know what the locals actually think he is. They may consider the character a demon or a god or something much less respectable. What if they believe that strength is passed on through killing and eating one's enemy or the gods themselves? After all, a god doesn't actually die, does he? They might have no qualms about killing the visitor and feasting on him/them or sacrificing them to a greater (or the "real") god. Better be sure you're alien good looks really attracted the beautiful primitive princess, and that she's not luring you into a trap in which father hopes to catch you with your pants down to more easily drag the character off to the stew pot or sacrificial altar. Likewise, it might initially seem great to be thought of as the "Death God" or "God of War" to a primitive people, but what happens when the character finds out that they kill the Death God at the end of each year so that he can be "reborn" stronger? What happens when that visiting "god" or "demon" breaks a sacred law or taboo? Any number of beliefs and superstitions can be put in place as obstacles for a visiting space traveler.

Don't forget, curiosity killed the cat. What happens when that primitive (or even Industrial Age scientist) sneaks into the character's spaceship and presses the wrong button? Does it go boom? Is there some other damage? Is valuable research wiped from a computer, or an automated defense system turned on that kills the curious individual, or worse, a weapon system activated that destroys half of a village or annihilates the royal palace or holiest of holies? Curiosity and innocence may also kill the space traveler — sure a god can eat that muck, but not a human. Or maybe a playful or curious native pulls a hose or accidentally cuts a hole into a spacesuit or environmental suit that exposes the character to deadly radiation, atmosphere or disease. Or accidentally shoots him with his own gun.

A weapon is a weapon. And dead is dead. Unless the planet being visited is some kind of Utopian paradise or still in the throes of its primary evolution, the natives will have weapons of some kind. They might only be long sticks or rocks, but a weapon is a weapon, and under the right circumstance, can kill even a (mortal) "space god."

In the context of a galactic campaign, primitive cultures are those whose weapons are no more advanced than paper cartridge firearms. Shells with cases and repeating weapons begin to move into the range of modern firearms and should pretty much mark the upper tech boundaries in these discussions. Game Masters can extrapolate damages for primitive weapons based on their modern equiva-

lents, but should keep in mind that most will be made of inferior materials and will either do slightly less damage or will break much sooner than their modern counterparts. Older firearms will also do basically the same damages, but ranges will be less than modern equivalents and accuracy will be poorer (-1 to strike). Older types of body armor can be based on the ancient styles given in **Heroes Unlimited™** or sourcebooks such as **Palladium's Compendium of Weapons, Armor & Castles.**

As mentioned before, the culture of such primitive planets can parallel that of Earth or be totally different. You can have feline aliens in a Medieval setting with swords and knights just as easily as primitive rhino plains dwellers with bows or an ancient oriental culture populated by fully human looking people. Beyond all that, don't forget the home world type. It can add a whole other level to your setting just by itself and may present its own physical challenges to the survival of the character. Have fun with it.

Magic can be the great equalizer. Okay, so the natives are a simple people with no or low-technology; do they know magic? Even primitive tribal communities have shamans, priests, oracles and wise men who are often said to possess spiritual insight (psionics), magic, or powers from the gods, spirits or nature (magic again, and sometimes super abilities). In fact, a G.M. can spice things up by including different types of magic than the limited range presented in HU2. **The Palladium Fantasy Role-Playing Game®**, for example, presents circle and symbol magic, wards, elemental magic, witchcraft, druidism and clerical magic (necromancy and shaman magic can be found in the Fantasy sourcebook, *Adventures on the High Seas* and various *Rifts®* and other Fantasy titles offer other types of magic). Any of these can be easily dropped into a **Heroes or Aliens Unlimited™** campaign, and an alien world is the perfect place and time to do so. Magic can often counter, circumvent or equal technology. If a world, primitive or not, has practitioners of magic, the space visitors may be in for some serious trouble.

And these are just a few of the pitfalls. Space visitors will have to be very careful in their dealings with those they don't or can't understand and their trust should be carefully reserved for those they know deserve it. By doing a little thinking and showing self-control and compassion to the primitives, the characters can have an enjoyable adventure in an alien setting, instead of racing breathlessly through a nightmare of their own making. Which isn't to say they should throw all the alien princesses out of their rooms for fear of their father's treacheries, but unless a haughty or foolish attitude is part of one's character, he should think twice before abusing his position. Not all characters want to be gods and fewer still can pull it off (you can ask my gaming group about that one).

The Galactic Time-line

The following is a general time-line history of the growth and interaction of the Milky Way Galaxy's more prominent inhabitants. All races referred to are presented in either **Aliens Unlimited™** or this book, except for the *Toogarth* and *Zylik* which appeared in **Villains Unlimited™**. The dates are all given on the *Atorian Imperial Calendar*. The two time periods are Pre-Empire (P.E.) and Imperial Rule (I.R.). Most of the events given for the Atorian Empire are not known outside of the Empire.

Note: Any conflict between these dates and those given in **Aliens Unlimited™** is due to the fact that those given previously are from varied sources and most are based on speculation, not accurate intelligence reports. Also note that the Atorian entries on the time-line are approximations and can not be reliably validated. Many scholars place the Atorian dates much farther back than they appear here, because trends noted over the last century seem to indicate that such an expansion of the Atorian/Fehran histories is necessary. An accurate Imperial time-line will be given later in the **Heroes Unlimited Guide to Imperial Space™**.

800 P.E.: Fehran Industrial age begins.

660 P.E.: Fehran space programs successful.

600 P.E.: The Atorian clan consolidates its wealth and influence to become a sociopolitical entity.

525 P.E.: Atorians hold all major offices of power in government and big business. Advanced space travel research begins.

512 P.E.: Successful space programs employed by Struthios.

501 P.E.: First Fehran expansion under the directives of the Atorian clan.

500 P.E.: Atorians record first contact with Dragonoids.

495 P.E.: All male Atorians are stripped of power and replaced by females. This marks the beginning of the clan Powers.

443 P.E.: Struthios begin advanced space travel research.

405 P.E.: Fehran advanced space travel methods successful.

225 P.E.: First records of the Raiding Clans in the Milky Way.

205 P.E.: Fehran discover how to use gravity wells for Point-to-Point travel.

318 P.E.: Second of the Fehran expansions.

300 P.E.: Struthio spacecraft achieve light speed.

219 P.E.: First recorded contact with Timneh nomads.

20 P.E.: Third expansion of Fehran. Lady Constance declares all female Fehrans to be *Atorians*. Male unrest begins. Constance becomes the official ruling family in the Atorian clan.

1 I.R.: Lady Alimira Constance accepts the title Empress from her clan Powers. The Atorian Empire is born.

10 I.R.: Atorian males are all officially removed from positions of any responsibility. They are declared second-class citizens, and protests begin.

29 I.R.: Atorian Empress, Lady Alimira, abdicates rule to her six daughters. They vow to end the violent male uprisings of the past two decades.

31 I.R.: The Atorian Empresses declare males to be inferior to females, and relegate their status to that of prop-

erty. Males are rounded up and sold. Many react violently. One of the Empresses is killed by male rebels.

35 I.R.: A new Atorian Empress is appointed and the War of Understanding begins. Atorians effectively perfect the science of human augmentation by chemical experimentation.

36 I.R.: The Imperial Ladies finish their division of the Atorian Empire and begin separate but united rule.

55 I.R.: The War of Understanding ends as the Atorian males surrender. Man Worlds are created to house those not already owned.

60 I.R.: "The Doors" are built on Lorila.

127 I.R.: Atorians lose their seventh research vessel in black hole experiments, causing them to officially abandon such research.

230 I.R.: First recorded contact with Cyklops-Serpentmen.

375 I.R.: Fourth Expansion begins. Atorians perfect their robotic/cybernetic technologies.

400 I.R.: Struthios develop gateway travel.

489 I.R.: Atorians complete first working Matter/Anti-Matter engine. The energy of the entire planet is needed to start it. This inspires the Empresses to create other planets for the sole purpose of creating energy. The Energy Planets are born.

506 I.R.: Nen is converted to an Energy Planet which kills off most of the Innensi.

566 I.R.: Kisents first forge kisentite weaponry.

600 I.R.: Photins ally themselves to the Empire.

635 I.R.: Matter/Anti-Matter experiments destroy the Struthio home world.

688 I.R.: Atorians conquer Danude, forcing the Danaus to flee.

733 I.R.: The Arismal home world is destroyed.

750 I.R.: The Empresses choose their respective home worlds and establish security perimeters on and around them. They also enact measures to close the Empire and prevent the defection of its citizens and the spread of information.

775 I.R.: Last warfare between Arerri on Arora.

784 I.R.: Through trade with space faring visitors, the Anubio reach space. The Danaus found Nors.

802 I.R.: Toogarth expand into their third star system to become an Empire.

815 I.R.: Tagoniglomerate is formed by the merging of nine Tagonican mega-corporations.

830 I.R.: Felias Information Network officially established.

845 I.R.: The continued silence from the Atorian Empire frightens other races who band together by laying the groundwork for the FAR.

850 I.R.: Accara, home world of the Baccarus is struck by a giant asteroid, forcing them to sell it.

875 I.R.: The Federation of Allied Races is officially established.

884 I.R.: Erittimas are sent away by the Vymras and establish a new home world.

934 I.R.: Krit ally themselves with the Toogarth.

975 I.R.: Thropo join the Empire.

990 I.R.: Naterreri join the FAR.

995 I.R.: Fifth Expansion begins.

997 I.R.: Niamese Coalition formed by Naterreri to covertly oppose actions of the Empire. Zylik conquered by Toogarth.

1000 I.R.: Tagoniglomerate operations total over 2,500 solar systems.

1025 I.R.: Psianines are banished from Rath.

1050 I.R.: Wardions escape execution by stealing Atorian war station and slipping into a gateway.

1075 I.R.: TMC signs first charter.

1084 I.R.: Er, the Errasa home world, undergoes ecological changes which force its people into a mass exodus. The battle of Yakin devastates the Photin population.

1091 I.R.: Pyralis home world of Litha is absorbed by the Empire. Chianas begin colonization and impose martial law on their populace.

1098 I.R.: Fifth Expansion complete.

1111 I.R.: Erythros arrive in the Milky Way via a black hole.

1120 I.R.: Toogarth order the elimination of all Zylik.

1124 I.R.: The Mantella join the Empire and wipe out the Xenopus. Epidemic kills the majority of the Tedeschian population.

1145 I.R.: Maeus flee Ropora.

1150 I.R.: Nuclear war devastates the Toyoc home world.

1175 I.R.: Height of Lassinike prosperity in magical trade. Thilik-3 enters the galactic drug market.

1183 I.R.: Atorians drop anti-matter bomb on Cebus home world. Plague first hits the Manarr population.

1190 I.R.: Assin destroyed by Lassinike experiments. Riathenor enter Milky Way Galaxy. Qua-Trau join the Empire as allies.

1200 I.R.: TGE reaches its current status.

1205 I.R.: Dyteens discover Shissans on Shia.

1225 I.R.: Gallopa population disappears from Gagine.

1230 I.R.: Threskian-Linx war begins.

1239 I.R.: The Pantherans' home world of Seriv becomes an Atorian Energy Planet.

1244 I.R.: Desperate Manarr flee their home world to escape the plague.

1249 I.R.: Captain Rithrop and the crew of the Darkith break from Cameroon rule and begin raiding as pirates.

1250 I.R.: TMC reaches its current status. Charters include over 900 planetary systems.

1260 I.R.: The Darkith criminal organization is formed and begins to grow rapidly.

1270 I.R.: Diatcme begins its raids against Atorian targets.

1274 I.R.: Caecil revolt that exiles super-powered nobles.

1277 I.R.: Threskian supersoldiers are exiled.

1305 I.R.: Sixth Atorian Expansion begins.

Worlds of Interest

Spanning nearly 100,000 light years, the Milky Way Galaxy is a dazzling array of billions upon billions upon billions of stars. If just 1% of those stars have planets, and just 1% of those planets bear life, and just 1% of those planets bear intelligent life, and just 1% of those bear intelligent, civilized life, then that still encompasses *billions* of worlds for heroes to explore and adventure on. When considering all the worlds in addition to those that are home to alien civilizations, the possibilities really do seem endless.

This section presents the barest smattering of noteworthy worlds found in the Milky Way Galaxy. Perhaps they are home to an influential alien race, government or culture. Perhaps the planets themselves bear strange characteristics space travelers might be interested in. Or perhaps the worlds are themselves part of a larger drama affecting other star systems.

Some of the planets feature expanded material originally presented in **Aliens Unlimited™**, while others are entirely new. For further information on the *Atorian Empire*, keep your eyes peeled for the upcoming **Heroes Unlimited™ Guide to Imperial Space**. For further information on the worlds of the Federation of Allied Races (FAR), the **Guide to Imperial Space** will offer more on them, as will future sourcebooks describing the galactic aspect of **Heroes Unlimited™**.This section also takes a brief look at several multi-planetary entities, such as the Atorian Empire, the Federation of Allied Races (FAR), the Tagoniglomerate (TGE), and the Thisseramicean Cooperative.

Assin

The frozen world of Assin was once home to a race of *mineral aliens* known as the **Lassinikes**. Using the magic-rich environment of their home world, the Lassinikes mastered numerous mystical arts, attuning their very bodies to the magic energies that flowed around and through them. As the centuries went by, the Lassinikes' expertise in spell craft grew considerably, and they were able to create mystic portals great enough to reach other worlds! Using these portals to establish interstellar trade, the Lassinike culture flourished for a long time, as they and their world became a great power in the galaxy and a hub of magical knowledge. Their efforts even halted Atorian expansion into their sector four hundred years ago, but they would ultimately make a tragic mistake.

In an effort to expand and improve their trade routes by reducing the numerous small portals they maintained, the Lassinike mages sought to create even more massive mystic portals that would allow the passage of immense cargo ships. Their experiments led to the development of the *Create Gravity Well* magic spell, but it was not quite what they wanted, since only a very powerful spell caster could make a gravity well large enough for cargo spacecraft. While searching for shortcuts in mystic travel, an experiment opened a dimensional portal to the home world of the *Riathenors,* a race of aggressive interdimensional beings many consider to be "monsters." Exactly where they come from and what motivates them remains a mystery. It is known that the Riathenors can assume a variety of physical forms, and that they enjoy the challenges of combat, and enslave other races. Their fusion of magic and technology (and monstrous nature) makes them formidable adversaries, indeed.

Experienced dimensional raiders that they are, the Riathenors instantly sensed when the dimensional portal between their world and Assin opened up, and in a flash, hordes of the marauding creatures poured through. In the ensuing confusion, the Riathenors worked their own brand of magic to keep the damned portal open *permanently!* Whether this effort ultimately failed, or whether the Lassinikes managed to counter their efforts (or perhaps the Riathenors decided to turn this experiment into something more sinister) is unknown. All that can be said is that somehow, the Riathenors' tampering with the Lassinike portal caused a magical cataclysm that decimated the planet Assin. The world's ley lines began to erupt, killing millions, and since most Lassinike settlements were directly on Assin's ley lines, the poor aliens had no chance to save themselves.

The resulting surge of magic from all those deaths created a mystic maelstrom that ripped the planet to pieces. As more people perished, their escaping life forces fed the surging energy, creating new dimensional portals, magical storms, earthquakes and spasms that exploded from its very core. Although it is believed that the Riathenors did not intend to destroy Assin, the planet literally tore itself apart within 48 hours after the creation of the initial gateway joining the Lassinikes' and Riathenors' worlds.

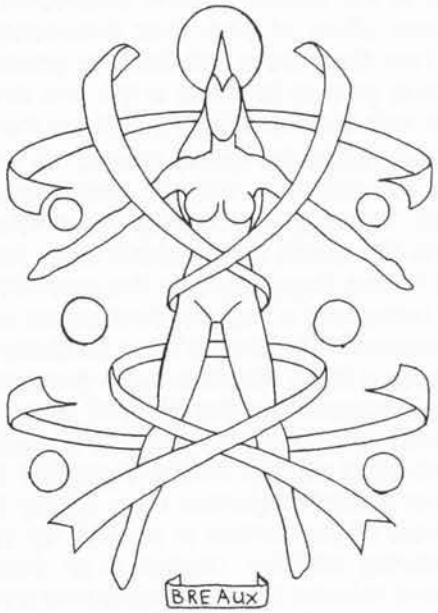
Very few Lassinikes survived that holocaust. Less than 100,000 are believed to have managed to escape through

dimensional gateways to some of the worlds they had made contact with. Another estimated 20,000 escaped by fleeing into the dimensional portal to the Riathenors' world where they were enslaved and sold to other monstrous beings across the Megaverse. Thousands of others were saved by fleeing into (or falling into) the hundreds of random dimensional portals that blinked in and out across the planet. The result was the scattering of their race as tiny clusters all across the universe. The rest of the Lassinikes, well over two billion, perished.

Today, Assin is nothing more than an icy asteroid belt of debris, home to water miners, rock hermits, and outlaws. Those who escaped the planet's destruction travel the universe in search for other survivors or live among other races. Some of the descendants of those survivors have taken it upon themselves to make sure other civilizations do not repeat their mistake. These crusaders confront those who abuse magic or use it to raid other dimensions. Many of them oppose the awesome power of the *Atorian Empire* because they see them as a dangerously reckless power and fear it may one day threaten to destroy the galaxy.

There are rumors that several of the Assin dimensional portals remain open, hidden among the debris field of the shattered planet. "Space rifts" are still only theory in most parts of the galaxy and none are *known* to exist in the Assin region, but the regular appearance of Riathenors as well as supernatural beings in that sector of space would seem to suggest that there may be some truth to the rumors.

As for the Riathenors, those fiends largely escaped Assin before it was destroyed and now prowl the galaxy, preying on passing spacecraft, outposts, small planetary settlements and any other sentient life they can vanquish. The Riathenors are vicious and heartless fiends whose appetite for destruction is matched only by their love of combat and the thrill of defeating a skilled opponent. Most Riathenors travel in small fleets of pirate vessels. Most seem to live for themselves, pillaging as they can, while some others actually hire themselves out as mercenaries, assassins and bounty hunters to the highest bidder. It is rumored that a rare few actually possess noble hearts and become champions of truth and justice, but such talk is routinely brushed off as nonsense. Anybody who has encountered a Riathenors and lived to tell about it (few that they are) will assert that the Riathenor have no room in their hearts for mercy, pity or remorse. Some even claim that they are some sort of vampires who feed on the energy or emotions of their victims. Whatever they are and whatever motivates them, Riathenors continue to use the Milky Way galaxy as one of their hunting grounds – or is it a new realm to be conquered and subjugated by their race? The truth is the Riathenors strike so hard and fast that their victims rarely get a chance to learn about them. As a result, the creatures are a well-known presence to be feared in the galaxy, but few actually know much about them other than they are powerful humanoids clad in strange armor and proficient in both magic and high-tech weaponry. Anything beyond that is guesswork. **Note:** Also see page 135 of **Aliens Unlimited™** for more on the Lassinikes and page 170 for additional info on the Riathenors (not to mention more material elsewhere in this book).



The Atorian Throneworlds

The Atorian Empire is the single most powerful and influential force in the Milky Way galaxy. More than 1,000 years ago, the humanoid Fehrans began to explore outer space and colonize other worlds. The most influential of the Fehran clans were the **Atorians**. They quickly forged alliances and developed new technologies that would ultimately make them the galactic powerhouse they are today. This head start and aggressive adaptation to space exploration enabled them to monopolize the resources of their solar system and give birth to a nascent Atorian Empire. Gradually, the Fehran culture became a separate entity from the Atorian people. Today, the Fehrans are an endangered species, culturally speaking, for their ways have been all but eradicated by the overwhelming presence of the Atorians.

As the Empire grew in power, it became a *gynarchy* (rule by females). To this day, only women hold the reins of power in this society. Males in the Empire are treated as second-class citizens at best and slaves at worst. Though there have been a few male revolts over the years, they have never amounted to much because female Atorians rule with such an iron fist that their male subjects are simply afraid to oppose them.

The Atorian Empire is currently ruled by *six* Atorian Empresses. Each has control over a single sector of space in the Empire, but they communicate frequently to determine Imperial policies. Within their sectors, each Empress has a planet she has chosen as her throneworld. These planets are all well within the Empire and protected by a vast number of military spacecraft and soldiers. The throneworlds have been this way for the past 600 years. Theoretically, there is a single, originating Atorian home world, but for

some mysterious reason, its name and location have been purposefully forgotten (or concealed) by the Atorian people. As a result, the six Atorian throneworlds are the *de facto* capitals of the Empire. Atorian Empresses typically make their own place of birth their throneworld. Thus, each time a new Empress is installed into power, the old throneworld may give up its status to the new throneworld if her place of birth is different than that of her mother's.

As far as the rest of the galaxy knows, the six Atorian home worlds are currently: *Vikelter*, *Sheherezad*, *Sellun Prime*, *Olerrat*, *Yaemos*, and *Dansall Minor*. **Vikelter** is a beautiful Earth-like planet (only several times larger) that has been an Atorian throneworld for the past 400 years. It is known for being both a major cultural center and a hub of scientific research. The Empire's top academy of transportation is located there. **Sheherezad** is dominated by incredibly huge volcanoes the size of small continents. The venting of these ash cones has turned the world into an hellish thermo-world. **Sellun Prime** is another Earth-like planet, but her natural resources have largely been depleted and most of the surface is covered by vast cities and manufacturing facilities. **Olerrat** is an ocean world whose only land masses consist of numerous small archipelagos dotting the surface. Under the water, large bubble cities have been built to accommodate the substantial Atorian population. The native aquatic race of this world has long since died out. **Yaemos** suffers from both a frigid temperature and extremely high radiation. On any given day, faintly glowing snow falls by the yard/meter across the planet, and only the advanced Atorian technology on this world keeps its settlements from being buried. The planet is valued, however, as the only source of *burgundium*, a dynamic element sometimes used for building miniaturized power supplies and weapons enhancement technology. Finally, **Dansall Minor** was once a thriving vegetation world but a recent asteroid impact has laid waste to much of the planet's ecosphere. The Atorian colonies managed to evacuate the planet before the impact (the indigenous tribes people were not so lucky) and have since returned to start settlement anew. The new capital city has been built in the impact crater — a sign of the Atorian will to overcome any diversity. **Special note:** The above information is what foreigners to the Empire (notably the FAR) have on hand. Its accuracy remains unverified, and should the FAR or another group send a survey expedition into the Atorian Empire, they might find that the Atorian throneworlds have all changed. Or they may have been misidentified all along.

As a planet is absorbed into the Empire, either by invasion, alliance or gunboat diplomacy, an *Atorian Duchess* or Lady is given it as a "holding." She runs the planet and leads the native government. A large contingent of soldiers is also placed at her disposal, even on allied worlds. The Atorian duchesses hold the second highest titles in the Empire, and often act as their Empress' lieutenants. Although the Empresses are the ultimate authority, the Duchesses do most of the actual running of the Empire, handling the day-to-day matters of government on a planetary basis. Each Duchess rules one of the Atorian clans, social entities that usually control between one and a dozen solar systems. There are thousands upon thousands of Atorian Duchesses throughout the Empire, and they are in many ways the source from which the stability of the Empire draws its strength.

The Atorian Empire has access to the best technology in the galaxy. With the enormous amount of resources, planets and personnel at its disposal, they make equipment, weapons, vehicles and spacecraft of higher quality in less time, and at lower cost than any other race. Most Atorian spacecraft, armor, and weapons will have 20% more S.D.C., 10% greater speed, and weapons will inflict 10% more damage than their competitors'. Their robots all have the maximum S.D.C. and A.R. for their type.

Atorians resemble Earth humans except their hair is always white, gray or silvery. It also grows in a strange pattern — a line of hair down the middle of the head, like a mohawk, and on the base of the head in the back between the ears. Clan tattoos are also common and often fill in the bald spots above the ears.

Atorians are originally from a high gravity world, but their physiology differs only slightly from other humans. Males are short and the females are tall. Males develop large builds with powerful muscles, while the females are tall and shapely, with well-chiseled muscles but not what one might call musclebound.

As a people, Atorians are arrogant and ruthless. They see themselves as an unstoppable super power that is superior to most other life forms. They have conquered scores of worlds, often by employing warrior races (such as the Thropos) as their storm troopers and minions. For the last 1000 years they have been regarded throughout the galaxy as an "evil Empire" that gobbles up worlds to increase its holdings and power, and for other diabolical purposes. Indeed, the Atorians rarely have other civilizations' welfare in mind — they simply use them however they can and discard or ignore them when their usefulness has expired. They will do whatever it takes to win a battle, make a profit and expand in power. Unless stopped by the FAR or some other force, the Atorians shall not be satisfied until the whole Milky Way is theirs.

For statistics on the average Atorian, please refer to page 108 of **Aliens Unlimited™, Revised**. For more information on the Atorian Empire, look for the upcoming **Guide to Imperial Space™**.

Daban & Bau Daban

The **Bwadenn** are another race to have suffered at the hands of the Atorian Empire and survived to oppose them as members of the galactic community outside Imperial space. Despite the negative outcome, the amphibian Bwadenn had a long and prosperous relationship with the Atorian Empire up to and just beyond the fifth Imperial Expansion in 995 I.R. Prior to that, their home world of Daban was located 50 light years from the Imperial borders. Trade agreements between the Empire and Daban were very profitable. Their status as an ally race would be approved with the fifth expansion when the borders of the Empire rushed to envelop Daban and her people, placing them nearly five hundred light years within Imperial space when the expansion was done. With almost a century of interaction between them, very few Bwadenn were concerned about their new status or their new location rather deep within the Empire.

As the fifth expansion was drawing to a close, the Imperial Army requested Bwadenn soldiers to help with battles on the edges of the Empire. It was in those war zones that the Bwadenns witnessed the power and callousness of the Atorian Empire and the ruthlessness of its armies. They also saw the laws and restrictions placed upon those subjugated by the Empire. The arrest of every male in the entire race, and their incarceration or execution. All these tales were brought back to Daban, and when the call for soldiers went out again, the Bwadenn balked. The Atorian Empire was not pleased with this turn of events and the Atorians decided to put them in their place. First a garrison of Thropo warriors came to the Bwadenn moon, followed by Fehran troops who, together, advanced on the planet to impose "order, understanding and cooperation." Slowly the Bwadenn were becoming enslaved just like all those other races they had helped to subjugate. Rebellion was not an option, for the Bwadenn had seen how the Atorians dealt with insurrection.

With their options limited and dwindling fast, the amphibians decided to try and run from their oppressive masters. The plan was not the most optimistic, but there was little else they could do beyond relent to slavery or annihilation. Such a grand scheme, however, would be impossible to hide from a power like the Atorian Empire, and on the eve of the mass exodus, an Atorian armada gated into Dabanian space to secure the planet. As much as ninety percent of the Bwadenn exodus fleet was stopped in the initial attempt to flee; at least half was destroyed. Another five to seven percent were stopped before they could make their run to the nearby gravity well. All told, a pitiful three to five percent managed to make it out of Imperial space. None of the escapees know what fate may have befallen those who remained on Daban or were captured trying to escape. In the years that have followed, no word has leaked from within the Empire.

Thankfully, the refugees were fortunate enough to make quick contact with the Federation of Allied Races (FAR) and they were taken in. After a short while, an uninhabited planet was found for the Bwadenn refugees to colonize. This new home world was named after the original they left behind, and the Bwadenn started anew upon **Bau Daban** (New Daban). Since their exodus and relocation, they have been recovering steadily and thriving upon their new world. As one might expect, the relocated Bwadenn have become the stoutest of opponents toward the Atorian Empire and they strive to rescue or defend any people who would suffer similar oppression. Thus, they are one of the most stalwart supporters of the FAR.

The Bwadenn are an amphibian race easily recognized by their bulbous heads and bright skin pigmentation. Two large, fleshy globes form their heads with a bony lower jaw structure. They have three sets of dark eyes arranged in a roughly triangular pattern on each side of their round heads. Their nose is formed by two large, close nostrils that almost appear to be one opening, and their mouth hinges down and out, the lower lip splitting in half almost like the mandibles of an insect. Their skin is very soft and smooth with vibrant hues coloring it. The reds, blues and greens of a Bwadenn's skin are rarely the kind one associates with natural colors, such as the bright crimson of a fire engine as opposed to the muted reds of an apple. Their bodies tend to be one uniform color with some lightening on the face and chest, but all have black freckling on the tops of their heads and the backs of the arms, legs, and torso. They also tend to grow small areas of body hair, most notably on the chin (even in females) and the very top of the head.

Bwadenn technology is based upon their semiaquatic, amphibious nature and, more often than not, combines aspects of above and below water use. Appliances will be watertight and usable underwater and in an atmosphere whenever possible; a hair drier certainly won't function underwater, but it definitely can survive the experience and will work when returned to the surface. Likewise, vehicles are commonly multi-purpose and can function in both environments, going from hover car to submarine as needed. The cities of the Bwadenn are sprawling metropolises built on the large fresh-water oceans of their home world. Half of the cities are beneath the surface while the other half rise above the waves. Certain industries that require a dry environment occupy much of the upper cities along with

those Bwadenn who prefer to be dry most of the time. Conversely, many of the lower levels are partially flooded to provide aquatic accommodations for those that prefer them. Their spacecraft are much like their cities, with the lower levels holding water reserves and often having partially submerged areas or frequent moisture pools for the convenience of the crew. This is a necessity, for like all amphibians, these humanoids must regularly spend time in the water or they will dehydrate, suffer and die.

Bwadenn

Alignment: Any, but predominantly tend to be good or selfish.

Attributes: I.Q.: 3D6, M.E.: 3D6, M.A.: 4D6, P.S.: 3D6, P.P.: 3D6+2, P.E.: 3D6, P.B.: 3D6, Spd.: 4D6.

Hit Points: Standard, P.E. attribute number plus 1D6 per level of experience.

S.D.C.: 30 plus those acquired through physical skills (or power category for super beings).

Height: 5 feet plus 3D6 inches (1.6 to 1.98 m)

Weight: 120 to 300 pounds (54 to 135 kg)

Average Life Span: 80-100 years.

Super Abilities: Any power category can be found equally among the Bwadenn, just as with humans. Theirs is a diverse society of technological wonders, genetic and chemical experiments, and mental aberrations. Roll normally on the Random Power Category Table found on page 95 of *Heroes Unlimited™ Second Edition*.

Natural Abilities: Bwadenn can hold their breath for 20 minutes and automatically have the swimming skill at 90% proficiency. They swim at six times their normal running speed and can dive to 500 feet (152 m). Maximum depth tolerance without artificial augmentation or support is 1000 feet (305 m). A submersible or power armor is required to go deeper.

Education: Any. Again these aliens show a diversity like that of most humans. As they continue to grow and repopulate their new home world, they are redeveloping all of the arts and sciences that flourished on Daban, resulting in a wide range of occupations.

Special Weapons: Due to the watery characteristics of their world, the Bwadenn have developed sonic technology into formidable weaponry that is effective above the surface and devastating below. Any sonic weapon can be chosen, but disruptors are the most common. See page 187 of *Aliens Unlimited™* for stats on sonic weapons.

Special Vehicles: Conventional boats and submarines dominated Bwadennian travel during their industrial era, but hover vehicles that can skim the surface as well as dive to the depths have come to dominate the current advanced technologies era. Any kind of hover vehicle can be chosen, but it will automatically be outfitted for aquatic travel with a dome if needed (for hovercycles and platforms) and a sealed compartment. Such vehicles can function in space, but their speeds will be halved unless proper space thrusters are purchased (see the equipment section for details and prices). Typical depth tolerance is 2000 feet (610 m).

Preferred Armor: The armor of a Bwadenn will be based on their occupation, with combat oriented ones having heavier armor (A.R. 14, S.D.C. 100) and others tending toward much lighter (A.R. 10, S.D.C. 50).

Familiarity With Earth: None. Daban and Bau Daban are both on the opposite side of the galaxy from Earth and Ilta quadrant.

Rifts® Notes: In a Phase World setting, these aliens will remain very much as presented here, with their flight having possibly been from the Kreeghor instead of the Atorians, unless the Atorian Empire is also transposed

to the Phase World setting. In a normal **Rifts®** setting, they would be viewed as aliens or D-bees and hunted by the Coalition for that. In both cases, their technology, armor and weaponry would be converted to Mega-Damage equivalents.

Federation of Allied Races

While the Atorian Empire was in the middle of its last expansion, the advanced races of the neighboring Ilta and Liloqua quadrants watched nervously. They hoped against hope that the Empire would stop before reaching their quadrants. When the Empire stopped several hundred light years short, the watchers from Ilta and Liloqua were relieved, but worried. As usual, the newly defined Imperial Borders were closed, the Atorians changed their gateway codes, placed combat satellites along the new border, stationed warships and battle-ready space stations at strategic positions, and began to force unallied races living, working or visiting the Empire's newly conquered region of space out.

In reaction to these events, the Shissans contacted representatives of the Kassan and Elecian races to propose an interracial summit for the purpose of discussing the situation with the aggressive Atorian Empire. The Kassans agreed, but not wholly trusting the Shissans, invited others like the Silisons and Darakans. The Shissans were overjoyed to see the arrival of representatives from almost a dozen races instead of just two. All were concerned with the threat of falling victim to future Imperial expansion and genuinely sought to work together. These discussions would lead to fifteen years of summits and treaties that would ultimately give birth to the **Federation of Allied Races (FAR)**. That period was filled with trials for the interstellar conglomeration of diverse races involved, but despite Atorian spies, internal rivalries, racial opposition to the unity, and natural disasters on more than one world, everything worked out in the end and the proper treaties were signed in 875 I.R,. making the FAR official.

In the decades following the official creation of the Federation of Allied Races, things moved slowly. Members were reluctant to commit too much of their resources, and many of them hedged their contributions until they thought equal amounts had come from the other members. During this time period, the FAR began to diverge from an altruistic organization determined to protect themselves and the weak from the Atorian threat, into a *political entity* more willing to talk, threaten and maneuver than take affirmative, military action.

New member planets and even entire solar systems continued to join with inspiring regularity, and even though hedging still occurred, the growth of membership provided the fledgling Federation with a substantial pool of resources with which to establish itself as a galactic power. Despite its hesitation to engage the Atorians, as well as, political infighting and the organization's ponderous bureaucracy, the FAR has done, and continues to do, a great deal of good. Numerous revolts and wars have been quelled through the diplomatic, economic and military influence of the FAR, but it was the defeat of the *Teritellian Empire* in the War of Imporzei after nine years of fighting that truly solidified the FAR as a (mostly) benevolent and shining symbol of unity, strength, and power through brotherhood and cooperation. A year later, the FAR would draw a "line" in the void and begin to take a genuine stance against the Atorian Empire. However, the relative close proximity to Atorian space and the stolid appearance of the Imperial war machine would lead to many, many years of talks and threats with no real weight on the part of the FAR to back them up. Whether this rhetoric has worked in scaring off the Atorians, or whether the evil Empire simply plots and bides its time before launching an expansion into FAR held territory is unknown. Some members of the Federation of Allied Races are confident the Atorians would never make any kind of move against them. Others have let their paranoia be replaced with a tired lack of concern and false hopes as they go about their lives. Still, at the heart of this galactic union, the members are scared to death of the Atorian Empire, but they have come to delude themselves into thinking those fears may be unfounded, and that if the Empire should ever move against them, they could hold their own. Only time will tell.

The FAR Today

The initial idea behind the Federation of Allied Races was for all members to protect each other from the Atorian Empire's incursions and possible invasion into their sectors of space. To this end, all are supposed to actively participate in building an allied defense force, supply troops and monitor Imperial activities. By banding together, they have created an atmosphere of security and strength. Whether or not it is a false security is greatly contested. Newer members tend to be more assertive than the founding races when dealing with the threat of the Empire, in part, because they have never seen the Atorians in action and grossly underestimate the Atorians' power. Newcomers like the **Sorinams** and **Nattereri** are responsible for the establishment of "The Line," a perimeter of warships positioned to both watch the Empire and directly oppose it if necessary. Newer members also support measures to close the Imperial Borders from the FAR side. They propose *matching* the Empire (an impossibility) as closely as possible to dissuade any hostile actions. So far, such radical and aggressive approaches have been

voted down for fear of inciting Atorian retaliation and interstellar war.

The FAR makes a big show of flexing its diplomatic muscles by sending envoys, criticisms, and threats to the Atorian Empire over a number of issues. The Atorians, in turn, calmly listen to the FAR and promise change or ignore their threats and sanctions. Nearly all of the influence the FAR may have had with the Empire has long since evaporated, for it is doubtful that the FAR could actually enforce any decisions against the Empire it might level against them. Its only solid stance against the Atorians is "The Line," and it is hardly a viable defense web when compared to the capabilities of Atorian combat fleet. For decades, the **Nattereri** have been pushing for a strengthening of The Line by doubling the number of spacecraft and combat platforms. They are backed by the **Sorinam, Maeus,** some **Darakans**, and many others, but the majority has always been against them, and the status quo remains.

Critics of the Federation (and there are many) are skeptical as to whether or not the FAR's defenses, as represented by The Line, would even slow the Atorian Imperial Fleet down. Many critics contend that the FAR represents nothing more than hollow threats and the Atorians know it (they are right). Despite the Federation's practice of refusing membership to "high risk" planets close to the Atorian Imperial Borders, their slow response to any threats from the Empire, and the fact that they have never taken a truly hard line against them other than vocal chastisement, the FAR *is* honestly prepared to go to war. It's just that they see no reason to rush to war, especially if there is a real chance it can be avoided. Thus, they will do everything possible to avoid clashing with the Atorians, until that inevitable day of conflict is thrust upon them. Most members of the FAR believe they have given the Atorian Empire reason for pause (they have), and their united efforts have achieved unprecedented peace, security and cooperation among the planets and solar systems of its membership for generations of people (also true). For now, whether or not the FAR could stop an Atorian invasion force is a matter of conjecture, and the level heads in the organization hope they never get to a point where they have to find out. Unfortunately, frequent political and theological conflicts create constant tension between the FAR and the Empire. One constant bone of contention for the Atorians is the FAR's efforts to rescue, support and aid refugees, slaves and political prisoners fleeing the Empire, or as the Atorians see it, "harboring traitors, rebels and criminals trying to avoid Imperial justice." Likewise, the Atorians accuse the FAR of knowingly and willingly aiding and harboring terrorists, rebels, pirates, spies and other enemies of the Empire. Not true, at least the "knowingly and willingly" part, but FAR policies and practices do provide an environment where such groups are relatively safe from Atorian law and retribution. Consequently, terrorists, pirates and enemies of the Empire do indeed gather in the FAR sectors of space to hatch plots, gather their forces and launch regular incursions into Atorian space to wreak havoc and extract bloody revenge. To complicate matters, when the Atorians pursue these attackers beyond their borders and into non-Atorian space, the FAR intercedes to stop them. Altercations that often result in combat and end in death. Worse, a few members of the FAR secretly do support enemies of the Empire.

People and Places

The FAR covers nearly half of the Liloqua quadrant and a small part of the Ilta quadrant. Its member races number close to 4,000, with almost ten times that many member planets. All of those planets are divided and grouped into *districts* based on location. Each district elects a *representative* to the FAR Voting Council, which is the main decision making and governing body of the organization. There are approximately 380 district representatives on the voting council, but when a significant number of new member planets are inducted, additional districts will be added. The diversity of races, cultures, and viewpoints brought to the FAR by their numerous member races not only provides much of the richness and opportunities that make the organization strong, it is also to blame for contributing to the difficulties of getting things done. On one hand, the policy of decision making in the FAR is not lengthy thanks to advanced technology (all members do not even need to be physically present) and simple majority voting, but the politics involved in the process is another matter entirely. When a few thousand races with different interests and beliefs try to get their respective way, even when working indirectly through roughly 400 representatives, the deal making and political maneuvering involved are staggering.

It is obvious from the numbers mentioned that the races presented in **Aliens Unlimited™ (AU)** and here in the **Galaxy Guide** represent only the minutest fraction of the Federation's diverse membership. Indeed, they are only representative of the most notable movers and shakers in the FAR. Active members of the Federation of Allied Races include the Caecils (**AU**, page 53), Darakans (**AU**, page 109), Dyteens (**AU**, page 72), Elecians (**AU**, page 76), Fredulians (**AU**, page 134), Kassans (**AU**, page 112), Latrans (**AU,** page 88**)**, Maeus (**AU**, page 73), Naidens (**AU**, page 116), Nithians (**AU**, page 146), Salvelinus (**AU**, page 66), Shissans (**AU**, page 118), Silisons (**AU**, page 119), and the Sorinams (**AU**, page 58). These are just some of the most prominent members of the FAR; dozens

of less influential civilizations are also part of the Federation.

Factions within the FAR

The Federation of Allied Races has several strong factions that have different stances and beliefs on how to deal with the Atorians. Opposition to and defense from the Empire is touted by all, but only a few of the races actually push for some kind of direct action like sanctions, boycotts, acceptance of planets bordering the Empire, military build-ups and even war. Of the major races, the **Sorinams, Nattereri, Krakyt, Maeus**, and most **Fredulians** are in this militant camp. Of them, the Krakyt and Nattereri favor direct, violent (if necessary) opposition to the Empire. They even promote going to war, an option that most others reject until all other recourse have been tried. The primary motivation of this sub-group is the belief that the FAR needs to *assert* itself and gain back its credibility as an authority figure, military power and viable opponent of the Atorian Empire and its inhuman policies of conquest, extermination and slavery, among others. Recent discussions about splitting the FAR into *two councils* have been encouraged by these political minorities. Through such a change, they hope to have more influence on other members of the FAR, especially those sitting on the fence, and bring more direct pressure to bear on the Empire. However, there are no plans to create additional Councils and it is unlikely to ever happen.

Another faction includes **peacemakers** and those who are *neutral* or undecided. Member races who take this stance either believe that the need to change policy is negligible either way, or that the Atorians should be dealt with on a diplomatic and political level, rather than through aggression, on a case by case basis. Those who feel no change in policy is needed are generally strong supporters of "peaceful coexistence." They do not necessarily believe that lasting peace is ultimately possible, but they do not feel that the current status quo needs to be changed. In a sense, they are traditionalists and contribute to the stagnation of the FAR's power and influence. On the other hand, they represent cooler heads and a certain amount of stability and necessary conservatism. At the moment, the various factions of peacemakers represent a clear majority and include most of the original founding member races.

Another group of peace-minded members are those who feel that the Atorian Empire should be treated with reciprocation. They believe that the Empire is now at peace and so the FAR should also concentrate on being at peace. However, they also believe that if the Empire becomes warlike, the FAR should be prepared to "reciprocate" in kind – but only with enough force to quell an invasion and push the aggressor back behind its borders. This faction is supported by the **Dyteens, Naidens, Latran** and some **Fredulians**, among others. They are the second largest, after the peacemakers, and are constantly courted and approached for support by the more proactive and aggressive factions (which is usually an exercise in futility). The Atorians will not give this faction any grounds for argument for at least another century.

The third group of peacemakers believes in the (false) hope that a lasting peace can be reached with the Atorians. The races that support this faction have no way of knowing the truth about the Empire and can not know that the Imperial Rulers will not stop their expansion until the Empire itself is destroyed or the whole galaxy is under its heel. That fate is, of course, several centuries down the road, and it will not be changed by diplomacy. Under normal circumstances against an ordinary foe, hopes for peace could possibly have merit, but against the Atorians, they are a fool's dream. No one, however, knows this, and the thousands of races who pray for peace continue to elect representatives that support this dream. Some of the most notable races include the **Elecians, Deurycans, Nithians, Perola**, and others. This faction is the most powerful one in the FAR, but it has its hands full blocking the more aggressive members in their attempts to push the two-Council plan through the Voting Council, and other militant proposals.

The enemy among us. Completely unknown to the members of the Federation of Allied Races, a very small, but sinister group within their organization secretly *works for* the Atorian Empire! They collect intelligence and influence policy whenever possible. The Imperial Ladies who rule the Empire have hired more than two dozen **Dop-elpoep** and **Erishik** mercenaries to infiltrate the FAR Voting Council and its military leaders. These imposters have orders to promote and support the pacifism predominant in the organization, all the while acting as spies and relating intelligence to the Empire through a mercenary network bought and paid for by the Atorians. Nearly all of these infiltrators have accomplished their missions by replacing Voting Council members as well as six FAR generals. Another six spies are making their way up the command structure and are only a step or two from their goals. Recently, one of the spies relayed an intelligence report on the location of a "crashed" equipment shuttle. This bit of information allowed the Imperial Military to pinpoint the operations area of one of the *Diatome's* units. The pirates lost two of their three spacecraft in a battle with Imperial forces while trying to unload the "crashed" spacecraft. A select few in the FAR suspect there is some kind of traitorous element on the Council, but the main investigators are members of the more aggressive factions and have little support. In addition, the small number of Dop-elpoep makes it very difficult to identify them, let alone prove anything. Moreover, while these agents are leaking information and secretly undermining FAR operations, they vote with the majority and openly support peace, thus they raise no suspicion. It will be a very difficult endeavor to expose these spies, and if it does happen, it is likely that only a small number will be found out.

Note that the racial divisions given in the faction demographics are generalities based on the racial descriptions, prevalent attitudes, and beliefs of that race; however, each race is made up of individuals, and their opinions can and will vary. There are certainly those Deurycans who wish to fight the Empire, as there are Naterreri who sanction peace, but their opinions will be based on their personal beliefs, and their respective reasons will be different from those of the racial majority. Meanwhile, the Fredulians are equally divided into two factions.

Waiting for War

Perhaps the greatest irony or hypocrisy is that a vast majority of the FAR membership, even the peacemakers, believes they will eventually come to blows with the Atorian Empire. They are simply doing their best to put war off for as long as possible, or ignoring the idea altogether. This head-in-the-sand attitude of some will almost assuredly jeopardize their troops when war does come. In order to placate the more active members and as a (weak) contingency, the FAR has deployed troops, satellites and spacecraft to watch the Atorian Empire, and bar its activities beyond a certain point. The major component of this deployment and the only remnant of the once resolute and ready Federation of Allied Races is **The Line**, a vast assembly of warships a few hundred light years from the Imperial Borders. From The Line, smaller units and scouts sweep the edges of the Empire, searching moons and planets for any sign of Atorian troop movements. Indeed, the Atorians frequently provoke conflict and stray into FAR sectors of space (often in pursuit of alleged criminals and rebels, or so they claim). Admittedly, such battles are usually brief and sometimes accidental, caused by misunderstandings or involving a third party. Then again, there are times where the Atorians are clearly testing the limits of the FAR's tolerance or war capabilities, and other times they are conducting deep reconnaissance, spying or engaging in some other nefarious plot to annoy or damage some aspect of the FAR or extract revenge upon some group under the FAR's protection. None of these incidents are ever major enough to warrant a call to all-out war, but they are regular enough to keep emotions and tensions high. Moreover, the Atorian Empire has some of the slickest diplomats and spin-doctors in the galaxy to brush such incidents under the rug and defuse situations before they get too hot.

Although the Federation of Allied Races wisely hesitates in committing to widespread war against the Atorian Empire, they are far from cowardly or impotent. The FAR has fought many battles and wars in its role as interstellar peacekeepers and protector of its members. A revolt on this planet, ethnic violence on that colony, wars over minerals or disputes over other space rights, feuds and trouble of all kinds create conflict within the borders of the FAR. Most are handled quickly and efficiently by either diplomatic or military intervention. There are also numerous other galactic empires out there that are far less significant than the Atorians but nonetheless dangerous and antagonistic to members of the FAR. These rogue powers must be dealt with, placated, and engaged in the arenas of diplomacy, economics and war on a regular basis, and cause their fair share of trouble and grief. The magnitude of the Atorian threat simply makes these other aggressors seem more manageable in the grand scheme of things.

United and committed to the peaceful advancement of its member races, the Federation of Allied Races requires all its members to provide troops, equipment, weapons, ammunition, vehicles, and money to be used at the organization's discretion. The required contributions are based on each planet's individual capabilities and vary with the level of technology, resources, manpower and prosperity

available to it. Members are not required to provide non-military services, but most do, illustrating how committed these worlds are to one another and the overall goals of peace and unity promoted by the FAR. The result is a large number of civilian or humanitarian sub-organizations within the FAR. These include construction and repair, farming and agricultural, research and development, legal and business, plus scores of other departments and organizations that aid, educate and support member planets during times of crisis.

As can be imagined, the **FAR's Protection Force** (it is not called an army) is huge and varied, being drawn from more than 4,000 planets. However, unlike the Atorians, the FAR does not have the luxury of *demanding* the necessary manpower and spacecraft to adequately monitor and patrol the vast territory covered by its member planets. As a result, the FAR protection force is largely reactionary, which means the FAR PF waits for something to develop or approach a breaking point before they respond to it. There simply are not enough men or ships to have them on active duty and be able to maintain any semblance of reasonable coverage (which the Atorians regularly exploit).

The soldiers of the FAR Protection Force are primarily trained and outfitted by their home planets with supplemental equipment from other, more advanced sources as necessary and available. When they are deployed with other races, some steps are taken to group them in *complementary structures*, but in the end, they are sent wherever they are needed and expected to cooperate with one another. This can get complicated sometimes, because the many different races may not have regular interaction, so there is a learning curve for all parties involved as they familiarize themselves with their respective cultures.

The deployment and directives of these volunteer soldiers are issued by a coalition of ranking officers. When units of different races are deployed together, the officers' coalition will be made up of members from each of the races involved. This gathering technique of field deployment is definitely a weakness of the FAR military (as opposed to units trained by a single source to work together using uniform tactics), but the feasibility of a largely voluntary armed force of this size, finding the funds for it, and agreeing on the exact regime of training for this diverse group would be nearly impossible (and rarely ever considered among the Voting Council, though the activist faction has been pushing for uniformity for years). Although the diversity of the races in the FAR Protection Force causes some problems, all in all, most soldiers learn to live, like and work together as a unit. Diversity also has its advantages as it provides the troops with several different points of view and combines a variety of different natural powers and abilities, as well as different types of knowledge and advanced technology. This has proven to be an asset on many different fronts, however, when pitted against the Atorian Empire (considered the best trained and equipped in the galaxy) many wonder how well the FAR forces will compare.

FAR Protection Forces are mainly deployed to police and protect its members' space ways. In this capacity, the FAR operates in a manner nearly identical to that of the TMC, but unlike the TMC, the FAR operates within both an interstellar and interplanetary jurisdiction, and as a result, has authority in nearly every aspect of operations both on and off worlds. The FAR also maintains its own courts and interplanetary judicial system (unlike the TMC). Overall, the influence and jurisdiction of the FAR as a policing force represents, to some extent, what the TMC could become in a century or two. These similarities and differences are why the TMC flourishes in the Ilta quadrant exclusively; there just isn't a need for their services in the majority of the Liloqua quadrant where the FAR has its greatest influence.

Other duties of the FAR include relief, rescue and support services to its members as well as refugees and interested planets seeking their help. Of course, helping members is top priority, with aid to all others taking second seat. Still, the FAR does a wonderful job policing the space ways of the Liloqua quadrant and dealing with problems as they appear. In its capacity as "police," the Protection Force investigates crimes, tracks down criminals, brings perpetrators to justice, enforces recognized laws, chases space pirates and raiders, gathers intelligence, assists people in trouble and generally protects and helps others. They gather in large numbers in a military capacity only when there is reason to do so, like to stop warring planets and defend against other invaders or non-member planets stirring up trouble.

Despite the far reaching demands on the FAR, it manages to put aside a little surplus money, resources and manpower in case of a serious crisis. However, if a large scale war were to break out with the Atorians, the surplus would be used up in a matter of months and most of the FAR's resources would be pulled from throughout the galaxy and put into the war effort. This would leave many of the member planets to fend for themselves. Of course, most worlds have their own army and defenses, some quite powerful, others barely adequate, but people have become so reliant on the FAR Protection Force that without their presence, they would feel vulnerable and uncertain of themselves, even when they should not. This would result in some measure of chaos, confusion, fear and conflict. The Atorians are well aware of this, and will exploit it to their own benefit.

Adventures with the FAR

Adventures that include the Federation of Allied Races can be quite far ranging. The most obvious types would be those involving politics and intrigue, crime and conflict involving pirates, raiders, monsters and super beings, localized conflicts (limited to one or two nations or planets), as well as all the possible adventures involved in "policing" the space ways.

Political intrigue. The FAR is filled with people, groups, and planets trying to get more political power or leverage situations (and others) to get what they want. It is politics at its best (or worst, as the case may be). The player characters certainly do not have to be directly involved in the wheeling and dealing (though it could be quite interesting and different), but they can be easily

caught up in political skullduggery and interstellar controversy. Even player characters with no ties to the FAR can be dragged into politics, scandal and conflict, whether they are hired as heroes, mercenaries or spies, or duped into helping or hurting one side or the other. All they have to do is fly into FAR space and things can take off. Much of the political maneuvering is done behind the scenes and enlisting outside agents for help is just part of "the game." Of course there are also murder and assassination plots, secret investigations and intelligence, extortion plots, schemes to expose or incriminate a rival or enemy, imposters to reveal, revolutions to stop (or help), spies to be ferreted out, reputations to rescue (or destroy), military and political coups to prevent (or help succeed), lives to save, despots to topple, corruption to be stomped out, and many, many other options. Exactly which side of these plots and adventures the heroes might come out on will depend on the circumstances (and the G.M.).

Military-styled adventures and campaigns are also perfect in a FAR setting. Player characters can be FAR soldiers, hired mercenaries or noble heroes enlisted to help fight rebel forces and rogue empires, or helping quell civil unrest and protect dignitaries, or monsters from the Ilta quadrant, or battle the Riathenor or Toogarth, or other invaders. Not to mention all kinds of intrigue, schemes, plots and trouble from the Atorian Empire, from spies and assassins to small military incursions, secret vendettas and open attacks spawned from anger, retribution, open defiance, a need to prove themselves (i.e. a demonstration of their power against a suspected enemy, terrorist group, rebel forces or even an entire planet harboring refugees), or just plain meanness! Such stories of war and combat can easily be linked to the political intrigue or Atorian provocation, but may involve criminals, military aggressors and evil forces within the FAR's own jurisdiction. Fighting is a day to day fact of life for the FAR, but it is never done for its own sake. There is always some provocateur or complicated set of issues behind the fighting. Just do a little research on any of the Earth's own wars and conflicts and you'll get the idea.

Other avenues of adventure could involve the Diatome pirates or other group of pirates, crooks, heroes, guns for hire, refugees or local planetary authorities. Perhaps the player group pursues a villain into the FAR dominated quadrants and joins forces with the FAR to capture him/them. Or perhaps the heroes rescue the FAR from some danger or ambush. On the other hand, maybe the player group interferes in something that gets them branded as criminals themselves! Or they mistake a band of FAR Protection Force officers as villains and battle them, allowing the real villains to escape (Riathenors, Atorian saboteurs, pirates, murderers, or whomever). Maybe the player group gets captured and put on trial, or maybe to prove their innocence or to make amends they fly off to bring the brigands they let escape to justice. Then again, the Ilta and Liloqua quadrants are so large and full of possibilities, the group could fight bad guys, explore planets and do all kinds of things without ever running into agents or lawmen from the FAR. Unleash that imagination and run with it!

Enemies and Allies of the FAR

The enemies of the FAR are as numerous as its member planets and races. The significance, power and danger represented by those enemies varies greatly and can range from a small civil movement in several major cities of one planet, to all-out war between half a dozen worlds or localized invasion or war in a particular sector of space. The FAR basically has all of the enemies one can imagine in one form or another, at one strength or another. Ultimately, the greatest enemy of the FAR will always be the Atorian Empire, which was, after all, the reason for the birth of the Federation in the first place.

Likewise, the allies of the FAR are nearly as numerous as their enemies and detractors. Not only are those planets which belong to the FAR counted as allies, but there are many worlds, interplanetary coalitions, business people, trade partners and admirers who are not official members of the FAR, but who will support them nonetheless. That support may come in small ways (like words of encouragement and public admonishment of the troublemaker) or be more significant (such as continued trade, contributions of cash or resources, honoring political and economic sanctions, and even sending humanitarian or military assistance). One of the FAR's strongest allies is the **Trillellien Empire** founded by the Perola. It is a vast, peaceful coalition of planets and races that seeks advancement and strength through mutual dependence and growth instead of military invasion, coercion or subjugation.

FAR Research & Scientific Achievements

Though the FAR has thousands of advanced races from which to draw scientific and technological knowledge, it does not have the forceful integration of those technologies that the Atorians do. This means that if one race among their members has anti-gravity technology, it does not necessarily mean they will share it with everyone else in the Federation. In fact, many worlds refuse to share or exchange technology, or hold the exclusive manufacturing and exploitation rights. As a result, despite their numerous allies, the FAR only has limited access to the diverse sciences, equipment and weapons of its members. Moreover, most space faring people are on roughly the same technological level, so while designs may change, and there are some innovations unique to a particular race or planet, most are roughly on par with one another (as presented in both **Aliens Unlimited™** and this sourcebook). Rather than force new and often alien technology upon them (something of an invasion in and of itself), *less advanced planets* are helped along and nurtured, while leaving them to develop and grow at a pace that best suits each individual culture.

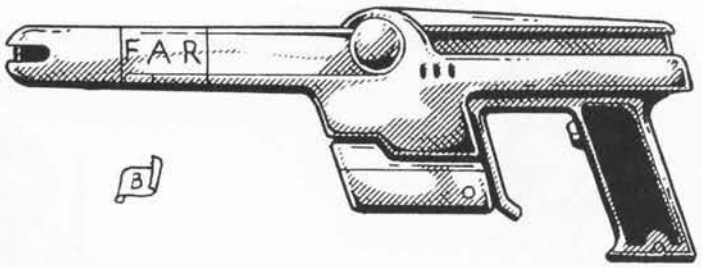
While there *is* some uniformity of weapons, vehicles and technology within the FAR Protection Force, unique items of low- and high-tech origin and alien nature are allowed. The FAR uses over 1,000 different "standard" issue sidearms and battle rifles and almost twice that many dif-

ferent body armors. All of those differing brands will have the same basic statistics, but each *looks* unlike the other, sometimes dramatically. In many cases, this is to accommodate the unique physiology of the different races, i.e. same basic weapon, different design element. The FAR does indeed produce some of its own items in contracted factories, but the vast number of soldiers they field when compared to the limited number of production facilities means that relatively few of the soldiers will have FAR manufactured weaponry. Unlike the TMC, which is a business venture, the FAR is a largely volunteer operation that has to make do with what it can get. If that means each race has its own set of equivalent weapons and equipment, then so be it. The safety of the galaxy is more important than having its protectors look uniform.

FAR Production Line Weapons

While weapons of many varieties and designs are allowed in the Protection Force, the FAR does manufacture a few mass produced weapons. Namely the FAR laser pistol, rifle, body armor and power armor. FAR laser weapons are top quality, offer good firepower and superior range, while remaining affordable (especially compared to the time and cost of making ion or particle beam weapons). There is a drawback, however, to laser weapons. Highly advanced (or at least militarily advanced), "Galaxy Age" (and a few "Star Age") civilizations such as the Atorian Empire often have laser resistant armor, which dramatically reduces the effectiveness of laser weaponry. Many factions within the FAR realize this, but for the most part, laser weapons do fine against the common pirates, criminals, insurgents and "Space or Star Age" opponents the Protection Force normally faces. In the meanwhile, other types of energy weapons are being manufactured and stockpiled. With any luck, the supply will be sufficient to equip the majority of its fighting forces when the need arises. As noted earlier, this is why non-standard issue weaponry from a thousand other worlds is also allowed to supplement their firepower.

FAR Laser Rifle: The laser rifle produced by the FAR is very much like its pistol equivalent with high quality construction and long range. This weapon also has a following on the black market, and is a favorite of snipers and assassins. Approximately half to 60% of all of FAR's soldiers carry this laser rifle in their personal arsenal. Range: 5,600 feet (1706.8 m), Damage: 5D6, Rate of Fire: Semi-automatic, Payload: 28 shot E-Clip, Cost: Free to FAR soldiers. Roughly 20,500 credits on the black market.



FAR Laser Pistol: High quality and long-range make the FAR laser pistol a very useful sidearm for both the battlefield and civilian security duties. Stolen weapons and knockoffs make it to the black market, but their price for it is high. Approximately 76% of all FAR agents carry this sidearm. Range: 975 feet (297 m), Damage: 4D6, Rate of Fire: Semi-automatic, Payload: 20 shot E-Clip, Cost: Free to FAR soldiers. Roughly 8,000 credits on the black market.

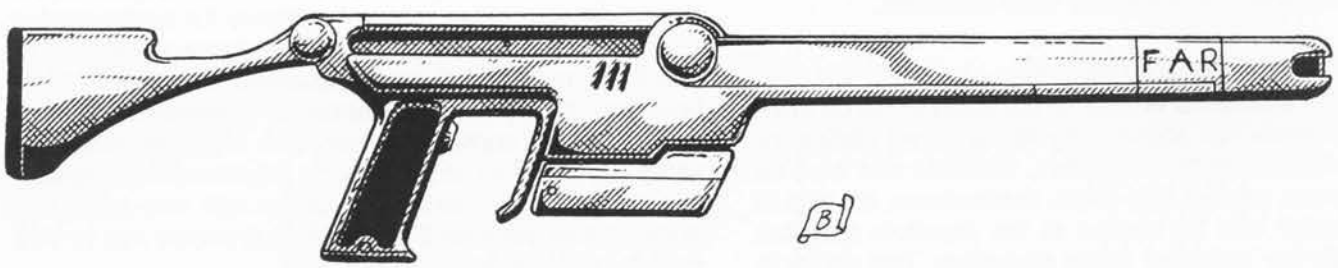
FAR Body Armors

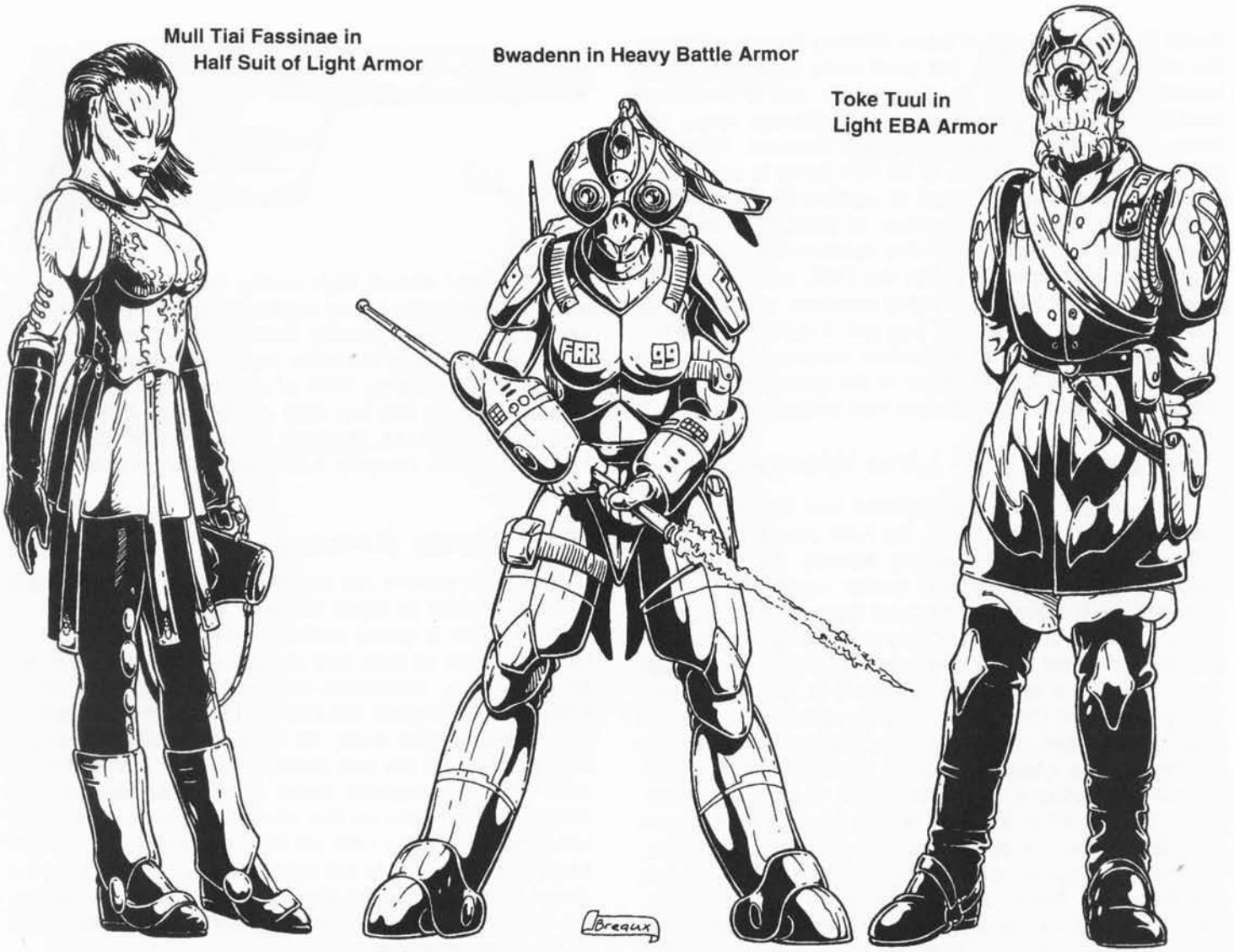
FAR body armors are produced quickly without cutting corners in order to equip as many agents in the field as they can. This is typical environmental body armor with all the basics, but no bells and whistles (i.e. most have no laser resistance, concealed weapons, kinetic lining, etc.). Many FAR Protectors will augment the armor themselves when they receive them, by installing auxiliary systems and features, but the vast majority settle for the no-frills armor. Note that superior armor *is* available for those on special assignments as the situation demands. Certainly not all soldiers in the FAR will have these armors, that has been said many times, but each of them can be used as a gauge for the equivalent armors that will be found protecting the soldiers that choose to defend the galaxy in the name of the federated races.

FAR Half Suit (Light Armor)

This is a *non-environmental* suit that affords basic protection and may be used with or without a helmet. Basically a hard armor chest plate with padded elbow and knee plates, designed for general wear in urban settings, riot control, low threat operations and light combat. It provides decent protection, but has no environmental capabilities even when wearing the helmet, and can be worn over uniforms and ordinary clothing, or under loose fitting articles of clothing or bulky jackets, coats and cloaks. Helmets are optional, but encouraged.

A.R.: 12, S.D.C.: 80 (35 M.D.C. in Mega-Damage settings like *Rifts*®), Cost: Free to FAR soldiers. Roughly 2000-3000 credits for equivalent armor. Note: Excellent mobility; no prowl, movement or other penalties.





FAR Light EBA Armor

This is a full environmental armor suit and helmet that looks very much like the half suit, only it fits over a light, padded, damage resistant environmental (space) suit. The fabric is thirty times stronger than Earth's Kevlar, lightweight and flexible, allowing for excellent protection and ease of movement. Ideal for space and hostile environments (toxic atmosphere, gas or smoke filled area, etc.) where light to medium combat is expected, but is adequate in most situations including heavy combat. It provides good physical protection and environmental stability (i.e. its own air purification and recycling system, cooling, basic radiation shielding, etc.).

A.R.: 13, S.D.C.: 110 (50 M.D.C. in Mega-Damage settings), Cost: Free to FAR soldiers. Roughly 5,000-6,000 credits for an equivalent commercial suit. Note: Excellent mobility; no prowl, movement or other penalties.

FAR Standard Battle Armor

This is an expanded version of the lightly armored environmental battle suit above, only the armored plating includes protection of the shoulders, forearms and hips as well as knees, elbows and chest. Furthermore, the suit is padded better and the weave of the puncture resistant fabric is tighter, providing better protection. This armor is designed for use on an active field of battle or highly dangerous posting. It provides very good protection and comes standard with a helmet, and built-in radio setup (range of 10 miles/16 km).

A.R.: 15, S.D.C.: 150 (75 M.D.C. in Mega-Damage settings), Cost: Free to FAR soldiers. Roughly 7,000 to 10,000 credits for an equivalent commercial suit. Note: -10% movement penalty to prowl, swim, climb, acrobatics, gymnastics and similar skills.

FAR Heavy Battle Armor

This is the fully armored EBA version of the previous two armors. It includes a full set of hard armor plating for the chest, back, shoulders, arms, elbows, hips, thighs, shins and head (helmet) over a dense weave of padded, flexible armored fabric similar to the other armors. Its full environmental design makes it suitable for space combat and other space operations, inhospitable environments and fields of battle. Typically reserved for special operations and heavy combat situations. It provides excellent protection and comes standard with a helmet and radio setup (range of 15 miles/24 km). Environmental capabilities are standard. Limited production with only enough to outfit 40% of the FAR Protectors (that should rise to 65% over the next decade).

A.R.: 16, S.D.C.: 220 (100 M.D.C. in Mega-Damage environments), Cost: Free to FAR soldiers. Roughly 20,000-24,000 credits for an equivalent commercial version. Note: -15% movement penalty to prowl, swim, climb, acrobatics, gymnastics and similar skills.

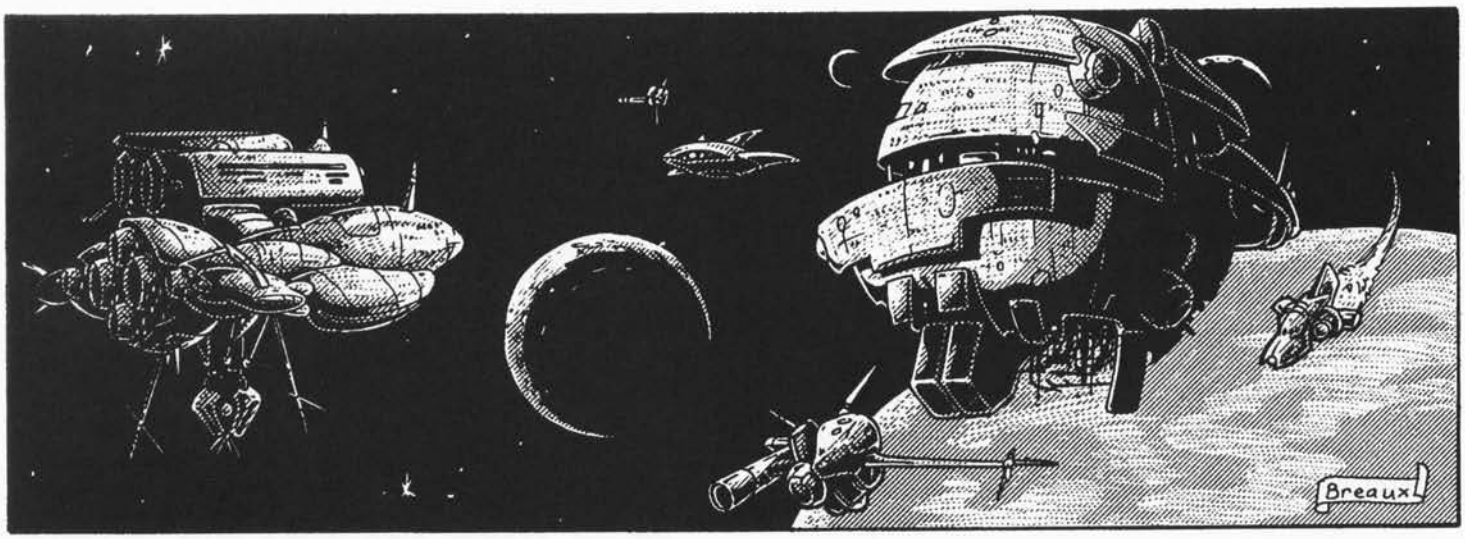
FAR Production Line Power Armor

The FAR only produces one basic type of power armor designed to accommodate most humanoid agents/Protectors. Additional units are provided by individual planets and designed for the needs of the unique physiology of the many different (inhuman) races. The FAR armor is intended as a bridge between combat air vehicles and ground troops. It is large by the standards of most power armors and carries a heavy ordnance load for its class of war machine. Power armor is deployed to augment and support ground troops.

A.R.: 17-19, S.D.C.: 400 (180 M.D.C. in Mega-Damage settings), P.S.: 27 (Superhuman), Spd: 88 (60 mph/96 kph and can leap 20 feet/6 m high and across), Other Systems: advanced optic, audio and communications systems, targeting sight (+1 to strike), short-range radar (8 miles/13 km; can track up to 24 targets simultaneously), air purification and circulation system, 4 hour independent air supply (indefinite if circulation system is working), basic radiation shielding, temperature regulation (cooling and heating system), and can function in space or underwater (the latter up to 1200 feet/366 m). Flight with Jet Pack: A back-mounted jet pack can be attached to give the power armor flight capabilities (150 mph/240 km) and the feet and lower back of the armor have small directional boosters. Maximum altitude is 15,000 feet (4572 m); works in an atmosphere and outer space. Cost: Free to FAR soldiers. 650,000-950,000 credits for a commercial equivalent or black market version; comes with jet pack.

FAR Production Line Robots and Cyborgs

The FAR does not put the emphasis on cyborgs that the Atorians do and thus they are not a common sight on the Federation side of any battlefield. If a particular race favors cyborg augmentation, or an individual soldier wishes such augmentation, the decision and subsequent use of the hardware is up to the sponsoring race or individual involved. The FAR does not encourage the use of bionic or cybernetic enhancements, though a struggling movement by the more aggressive factions within the organization is pushing for it.



Grymdin

By Wayne Breaux Jr. & Kevin Siembieda

Grymdin, like Plesus Euphia, is a world run by criminals, but unlike that desert world with its one rough and tumble city, Grymdin is a large, artificial planetoid (about a third smaller than the Earth) teeming with criminals, mercenaries, bounty hunters and illegal activity. Six powerful family organizations own, run, and control this planetoid, which is actually 79 artificial layers built around a foundation of space rock. Grymdin started out as a penal colony where criminals were sentenced to hard labor, mining on "The Rock" and neighboring asteroid belt. When the planet they were exiled from suffered a global war, the prisoners and their keepers suddenly became the forgotten survivors of a dead planet.

The prison guards and management released the prisoners and fled. Food and supplies were low and the only space worthy vessel left behind was a large, old cargo ship (which is still preserved deep in the heart of Grymdin). With little other choice left to them, a quarter of the prisoners took the vessel in search of much needed supplies and help. As luck would have it, they managed to reach a space station manned by a skeleton crew. After docking with the station, they easily took it over, killing many of its inhabitants, enslaving the survivors, and towing the entire thing back to "The Rock." Between the automated systems of The Rock and the space station, the brigands had the resources to meet their needs. The space station's supply stores would hold them long enough to hunt down others to plunder. It also provided them with two additional small spacecraft. Using the cargo ship as a decoy, they went off into a travel lane of space, activated the distress beacon, and bushwhacked the good Samaritans who came to help. In a short time, they added a dozen spacecraft to their growing fleet and were running a successful pirate operation.

Living by raiding, plundering and enslaving others, the villains prospered and expanded. Another captured space station was added to The Rock, as were new constructs made from abandoned outposts in the asteroid field. After building up their courage, a trip to their home world revealed a planet in its death throes. More than two thirds was completely obliterated and the rest lay dead or dying. Disease, radiation and a host of other plagues and disasters hovered over the planet, waiting to snuff out the survivors. The five pirate leaders hatched a scheme that should never have worked, but it did. They approached groups of survivors and offered them a new life, under their rule, on a distant "rock" that together they could build into a new home. Two hundred thousand agreed, the rest would perish. The crippled space stations, other salvageable space debris and whatever resources they could harvest from their home world were taken to The Rock. The entire exodus took six years to complete, and the remolding of The Rock into the habitat that would become *Grymdin,* took another fifty. Actually, even today, 150 years later, it is a work in progress, constantly changing and growing. The beleaguered group got a shot in the arm when a fleet of alien refugees from another solar system stumbled across the planetoid. They had actually followed Grymdin raiders to extract retribution, but when they learned of their circumstances the aliens felt kinship and took compassion on them. They pooled their resources and the aliens' superior technology transformed the shabby, makeshift colony into a high-tech marvel in just 17 years. These are the true architects of the artificial world known as Grymdin (named after the first pirate leader). Sadly, a plague brought back from the pirates' home world by a salvage crew had a deadly impact on the aliens, wiping out every last one of them in a matter of months. (One of the persistent urban legends is that the Charles Grymdin, son of the original pirate leader, had the "plague" virus biologically engineered. He and other members of the original founding group feared the aliens were too powerful and lawful, and thus threatened to take control over "their" planetoid. Consequently, once the aliens had finished building the superstructure they had outlived their usefulness and were exterminated. Nobody knows whether this story is true, but less than 1% of the non-alien population suffered any ill effects from the "plague" and few died.)

Over the years, six crime families have grown to prominence. Today they run both the world government and the six major organized crime outfits. Their influence reaches beyond the reach of the law (on Grymdin, they ARE the law) and even their own little corrupt world. As members of the Federation of Allied Races, their exploits reflect (badly) on the FAR and seem to be a constant source of concern, suspicion and consternation. As a legitimate world power, these crooks and scoundrels have planetary sovereignty and enjoy diplomatic privilege. Although they insist they have "gone straight" (and have numerous legitimate businesses and interstellar trade deals), few believe it. Grymdin criminal avenues include four of the most successful and dangerous cadres of space pirates in the galaxy, one of the most notorious thieves' networks, and a vast spy ring, as well as having their hands in numerous interplanetary hijacking, fencing, smuggling, drug dealing, gambling and prostitution rackets. They manage to get away with their criminal exploits because Grymdin is located in a fairly remote area of space, and the crime families are masters at disguising their operations and casting suspicion on others, destroying evidence, and buying off (or threatening) witnesses, and know how to massage the political system. With nothing but suspicions and finger pointing, there is little the FAR or independent planets and heroes can do against these galactic crime lords. Furthermore, the cunning rulers and crime families of Grymdin have wisely "bought" themselves good will from the FAR and its many members by making themselves invaluable to the defense against the Atorian Empire and other galactic threats. The Grymdin spy (and criminal) network is so well connected that they regularly uncover enemy spies, plots and trouble before it can amount to much. They also have a number of moles deep within the Atorian Empire providing invaluable information to the FAR, and have played a key role in uncovering and shutting down (rival) criminal operations and pirate gangs (it takes one to know one)!

The six crime families surround themselves with armies of operatives, enforcers, guards, stoolies, henchmen, advocates, lawyers, business partners and associates. They have legitimate businesses to front for their illegal operations, fixed books, and payoffs to maintain the status quo. Especially off-world, they own companies that own companies that own companies which produce a variety of things from cosmetics and lingerie to weapons and spacecraft. Buried somewhere among them are smuggling, fencing, and other criminal operations. They even have their own weapons and spacecraft manufacturing companies and off-world associates (the black market among them). Although weapons, spacecraft and other products used in war, piracy and crime are expensive to transport halfway across the galaxy, the Grymdin crime families have clients and partners throughout the galaxy, particularly in the relatively lawless Titrana Quadrant. In fact, they are one of the leading secret suppliers of pirates, raiders and criminals in the galaxy.

The Six Families each control large sections of Grymdin through intimidation, threats, money and the occasional use of violence. Rather than act like warlords, they much prefer to exert their influence from the shadows as business owners, political leaders and people of influence, as well as through less genteel third parties. Much of the government and most businesses on the planet corrupt and tied to one family or another. The "authorities" on Grymdin are a joint effort of the crime families to create a law enforcement and judiciary to deal with the day to day enforcement of law and order necessary in any civilization. Even Grymdin, the planet of crime, has its laws and customs. There is also a planetary defense force, but each crime family also maintains its own army and criminal operatives. No matter where one turns, there might be an agent or associate of one of the families.

The planet is run like a business, and run well. Government services are high and the people are happy. Sadly, the thief and crook mentality has been ingrained in the morals and ethics of most of its citizenry. As a result, the

predominant alignments of its inhabitants range from Unprincipled to Anarchist and Aberrant, with the worst being Miscreant and Diabolic. This means most Grymdini are, by nature, opportunists looking for an angle. Few see anything wrong with embellishing the truth, manipulating the system, bending the law, or taking advantage of an individual or opportunity for their own reward. Corruption, political favors, leveraging others and using guile and trickery are commonplace within the governmental bureaucracy and most businesses. Cons, schemes, payoffs, bribery, extortion and taking chances are all part of one's daily life on Grymdin. Morals tend to be loose, so it is no wonder that there are gambling casinos, bars, nightclubs, pawnshops, massage parlors, bathhouses, legalized prostitution, drug dens, and other places of vice and ill repute everywhere, alongside grocery stores, shopping malls, churches, resorts, exclusive clubs, extravagant hotels and homes. Just about anything one can think of is available on Grymdin, especially if it has been outlawed someplace else.

The slave trade also still flourishes here, but it is so slick and cleverly packaged that one might hardly recognize it for what it is. Psionics, magic, and drugs all help to make the merchandise, be it male, female, alien, or animal, more docile and presentable. The auctions are invitation only and almost more like social events or fashion shows with cocktails, music, and mingling. Bids are usually registered quietly through an electronic system at each table over dinner. The most prized purchases are often shown off at the balls and parties that follow. Other pseudo-secret enterprises open to the rich and decadent are available, such as legal and illegal gladiatorial events, which draw not only the best in the field to fight, but also attract the wealthy from across the galaxy to bet on the battles.

Perhaps one of the best known things about Grymdin outside of its wealth, luxury and undisguised decadence, is the *Soldier Services Directory (SSD)*, a listing, database and message board network that is part of the (not so elite) "members-only-club" for bounty hunters, freelancers and mercenaries (thieves, assassins, spies, smugglers, psychics, mages, and super beings among the membership). This "club" or fraternity is open to "professionals" on and off world, and includes races and (criminal) groups from across the galaxy. A full third are space pirates often masquerading as adventurers, mercs and simple cargo or transport operators. The SSD membership boasts some of the best in the business, but has a whole range of people including newbies and second stringers. Members can access the database and message boards to talk amongst themselves, leave (coded) messages, post warnings, solicit work, take contracts, and read about bounties and current job offers from invisible employers. Most of the jobs offered on the SS Directory are not on Grymdin itself as the six ruling crime families try to keep any criminal activity away from themselves and their world. The SSD, they insist, is nothing more than a "service" for the many mercenaries, bounty hunters and freelancers who find their civilization a nice place to visit.

Here on Grymdin, especially at the many clubs and facilities sponsored or owned by the *Soldier Services Directory Group*, pirates, criminals and cutthroats can relax in their exclusive clubs and gathering halls without fear of reprisal or being hunted by the law. Then again, to a lesser degree, much of the entire world is like that. Thus, interstellar criminals flock to Grymdin to fence their ill-gotten gains, spend their money, enjoy dark pleasures and simply relax. The only time the local authorities (or hit men for one of the families) get involved is when a crime is committed against the government, one of its citizens or one of the members of its elite ruling class (i.e. the six crime families or one of the smaller criminal organizations on the planet).

As one might expect, there are no extradition laws on Grymdin, so fugitives and wanted criminals are safe from the authorities and heroes of other planets (they are the ones treated like vigilante interlopers and arrested or thrown off the planet). However, people do "disappear" (usually at the hands of the Grymdin government) and duels, vendettas, ambushes and attacks from bounty hunters, heroes and lawmen who slipped past Grymdin authorities, do occur. No place is completely safe, and while visiting bounty hunters are not supposed to do business on Grymdin (i.e. capture fugitives), some take their chances to score a big hit and take off to collect on another planet or space station — Grymdin will not honor or enforce any bounties. The only exceptions are "contracts" placed on individuals or groups by the Grymdin government (i.e. ruling crime families). If one invokes the ire of one of the ruling crime families they are wise to run for their lives and never come back until they can make amends.

There are six small- to medium-sized space ports on the planetoid itself, but they are reserved for use by the six ruling crime families and very important visitors who need to be carefully protected. All other visitors to the planet must shuttle over after docking at one of the three orbiting space stations that serve as the commercial, public space stations (which are also owned and operated by the crime families). The luxury shuttle craft gather visitors at predetermined stops and ferry them in splendor and comfort to one of the orbital space ports. Private spacecraft are more common on Grymdin than most planets, but they too must get clearance from and dock at one of the orbital space stations unless they are working directly for one of the ruling crime families (in which case they have clearance to use one of the private space ports on the planetoid). Sneaking onto the artificial planet is almost impossible (-75%). When the outer layer was constructed, sensors of all types were built into its surface, as were alarms and defensive weapons — most of them in the medium or heavy weapon category.

The ultra-modern artificial world has 36 public levels which can each hold 120,000 guests or residents. The other 43 levels are the homes of Grymdin's inhabitants as well as housing for the planetoid's on-world production factories, weapon and armor stores, repair facilities, research areas, and slave quarters, housing for reserve mercenaries, and down at the heart of it all, the rocky planetoid that started it all. A series of old mine shafts and natural rocky tunnels honeycomb the planetoid, but are largely abandoned. **Note:** In addition to its home world fa-

cilities, the government (and crime families) have outposts, satellites, space stations and mining operations in the nearby asteroid belt, as well as numerous business operations, manufacturing partnerships and holdings on a dozen other worlds.

Grymdin is located near the borders of the Titrana and Liloqua quadrants, putting it very far from the Atorian Empire and a notable distance from the heart of the FAR, but it is close enough to the Federation's space to draw business from it and cause trouble in both quadrants (and beyond). Other regular patrons to the planetoid include the more refined and successful of Titrana's criminal bosses and overlords.

Ikarakt

Nearly everyone in the galactic community has heard of the **Krakyt**: prolific, aggressive, large insectoids. They possess an intellect, cunning and work ethic that rivals the industrious "ants" of Earth, which has driven these intelligent insectoids to spread across the galaxy in vast numbers. Krakyt seem to thrive in nearly every climate and environment, so there are trillions of them found across the Milky Way. Thankfully, the majority of them are not voracious conquerors or particularly evil, nor do they make a habit of living in mass ant-like colonies or hives like they do on their home world of Ikarakt. This isn't to say that the Krakyt can't be dangerous or invasive, for they are skilled fighters and aggressive by nature, many hiring themselves out as one of the most famous groups of mercenaries in the galaxy. They are masters of coordinated mass combat and large group tactics who fight with intelligence and daring; a rare combination. In fact, the majority of Krakyt mercenaries form armies unto themselves, hiring out their services to turn the tide of many a war. It is fortunate then, that most of the Krakyt in the Ilta and Liloqua quadrants are members of the FAR and fight on behalf of their allies. Despite their seemingly innate aggressive nature and warrior ways, the Krakyt are also idealists who prefer to fight for justice or a good cause, and enjoy being perceived as the underdog. Of course, there are those Krakyt who fight only for money and the joy of battle (many thrive on carnage), but the vast majority are more caring and nobler than that. Or are they? In a weird twist of fate, a significant portion of the Atorian Empire's fighting forces are also Krakyt! Remember, there are trillions upon trillions of these insect aliens throughout the Milky Way, many of which have formed independent factions and planet colonies of their own (just because they are insects, doesn't mean they serve one hive mind). Those who inhabit Atorian space have been turned into willing allies supporting the Empire's military expansion and enslavement of worlds. An equal number serve the Federation of Allied Races and oppose their brethren and the Atorians with equal zeal. Thus, the Krakyt will certainly play a huge role in any conflict that arises between the two.

The birthplace of the Krakyt is *Ikarakt,* a hot, violent planet that is rocked by seismic and volcanic activity to this day. The surface is covered by rocky terrain and canyons, dotted with massive active volcanoes. Earthquakes are regular occurrences, and despite the rugged terrain, vegetation in the way of ferns, vines and sturdy short trees covers the face of the planet. Ikarakt is also rich in minerals and all of its waters are invigorated by large amounts of them, providing an ideal environment for microorganisms which form the basis of a complex food chain, the top of which is dominated by the Krakyt.

Building extensive hive or ant colony-like structures, the Krakyt came to dominate their home planet many millennia past, even before they had fully developed the intelligence necessary to become an advanced civilization. The tunnel complexes they call home weave beneath the surface, giving little indication of their presence beyond the occasional dome-like entrances which appear every dozen miles or so. Most humans would be awed by the size of these subterranean complexes, the largest of which are roughly the size of the Earth state of Texas. Multiple levels and carefully planned tunnel systems can house 50 to 100 million Krakyt in a single colony, which would boast scores of "Royal Mothers." By living beneath the surface this way, the Krakyt do not occupy or dramatically disturb any of the surface ecology. Surprisingly, it is also safer to live underground than on the surface where one is more regularly bombarded by toxic fumes, pyroclastic clouds, mud slides, flowing lava and showers of rock and blankets of hot ash from the thousands of active volcanoes. Underground there are lava flows, earthquakes and cave-ins, but the Krakyt have learned to adapt to them and tap the geothermic vents and turbulent core of their planet to power their cities. Curious and aggressive, when the Krakyt developed space travel technology they took to the stars and have become a true "Galaxy Age" force in the way of space travel capabilities and presence in the Milky Way. Their exodus to the stars was, in

part, instinctive, for to do otherwise would have caused the Krakyt to engage in a constant battle among themselves in order to maintain their population at the proper levels. Even in space, warring factions of Krakyt battle one another to prove their superiority or to seize a colony or resource.

Krakyt live by a synthesis of hive intelligence and individuality with a natural telepathy and empathy opening them to each other, while the chemicals of the regional Queens influence unity within that community and reduce infighting. The only wars the Krakyt have known are those brought on by instinct and necessity. When an area of a planet colony becomes overpopulated, their numbers must be culled. That can only be done through war or by leaving that planet. Now that they can reach the stars, overcrowding is avoided by seeing a mass exodus every few years. As long as there is a Queen or Leader Female among a group of Krakyt, the group has tremendous uniformity and common goals and works together with machine-like precision. Away from the chemical influence of the Queens, the males and normal females behave more like other races and exhibit greater individuality. In fact, their natural empathic and telepathic abilities make them very understanding, tolerant and open to others. Krakyt are almost always loyal team players whose bond with their teammates is incredibly strong.

A Krakyt army or military unit led by a Queen is a truly effective and frightening thing to observe. The troops act almost as one, even when engaging different targets, and can react as a group within moments to any change in the battle. The Queen in such cases, is very well protected, but should she be killed, the insect warriors under her command will act on their last orders for 1D4 melee rounds before they must rely on their own perceptions and thoughts in battle. This is not to say that they can not think or act on their own while in the Queen's thrall, because they can. Her chemicals just work to keep them calm, focused and unified, her telepathy enabling them to respond quickly to new commands or new threats (+2 on initiative, +1 to strike and dodge). When she is gone, the warriors continue to work as a team and fight with skill, courage and cunning.

The Krakyt stand six to seven feet (1.8 to 2.1 m) tall, but are nonetheless massive creatures with multiple limbs and covered in a dark exoskeleton armor of black or red coloration. They have two pairs of arms and legs, giving them superior balance, hand-eye coordination and good speed. Most shun clothing except for decorative jewelry or accessories such as capes and arm bands. The most common forms of jewelry among these insects are ropes or chains of a decorative nature and gilding, what they call *Xaur-ti* and *Pitkak*, respectively. The ropes and/or chains are commonly worn on the shoulder and hang under the arm or they will loop about or dangle from the waist, but hundreds of combinations are possible, some of which have distinct meanings to the Krakyt. Pitkak accents the actual exoskeleton like a tattoo, except it is done in metals and bonded or anchored to their natural armor. Extensive Pitkak upon a Krakyt usually denotes wealth or position, and the Queens are commonly "gilded" in proportion to their age and the size of their hive colony. Pitkak can also have a deeper meaning to warriors and others, serving as a kind of pictogram history of their accomplishments. Many Krakyt will invest their earnings to create a living storyboard on their bodies as a legacy of their life. By tradition, ornamental Pitkak must be non-objective in its subject matter and can include names and designs, but few faces, places, scenes, or lengthy tales. Honorific Pitkak contains all of those elements and little decoration other than borders. **Note:** Despite the hive structure on Ikarakt, the free thinking aspect of these aliens does show itself and there are varying social, political, and economic strata within the society.

The Krakyt are full members of the galactic community, having developed space travel and eventually advanced space travel methods to make first contact with many different races. Their technology is roughly "Megalopolis Age" with "Star Age" technology bordering on the Galactic when it comes to space travel. The intelligent insects tend to prefer a more personal approach and favor fast, no-frills technology that gets the job done or only helps as much as it is necessary. Spacecraft and travel are the big exceptions, but even here the average Krakyt prefer personal mechanical wings or jet packs for transport instead of enclosed vehicles that carry a number of people. They also prefer to arrange meetings and discuss issues in person, face to face, rather than on the telephone, radio, computer or video-transmission.

By the barest majority, the Krakyt within the galaxy are members of the FAR, including the residents of the home planet and those living in the Ilta and Liloqua quadrants. They look forward to a glorious war with the Atorian Empire and their brethren who fight on the side of the Empire. They see such a battle as the ultimate challenge against the most skilled of opponents, but they find the overall atmosphere of the FAR and its Security Council to be "conservative and timid" at best (many would say, cowardly). As a result, they are staunch supporters of the Niamese Coalition, Diatome, and the Nattereri, as well as being key proponents of a split FAR Security Council. To complicate matters, many of these impatient insects have decided that they want to fight now, with or without the FAR! The more loyal and lawful of those have joined the Diatome or other small operations to leverage action within the FAR, but other Krakyt have simply begun their own raiding groups, which can number into the thousands, and make runs across the Atorian borders to attack military spacecraft and outposts. They also support pirates, terrorists and other enemies of the Atorian Empire, as well as actively hunt down and destroy Atorian spies and scouts on the FAR side of the border. Perhaps needless to say, this aggressive activity not only distresses the FAR who is afraid it will incite the very war they hope to prevent, but antagonizes the trillions of Krakyt in service to the Atorians as mercenaries. This has resulted in the Atorian Krakyt to respond in kind, seeking out their brethren and making raids across the border into FAR space, especially when in pursuit of rival Krakyt. Note that Atorian Krakyt bear the Imperial insignia as a pitkak.

Krakyt (pronounced "crack - it")

Alignment: Any, but tend toward Scrupulous, Unprincipled and Anarchist.

Attributes: I.Q.: 2D6+3*, M.E.: 3D6*, M.A.: 2D6, P.S.: 4D6, P.P.: 3D6, P.E.: 5D6*, P.B.: 1D6, Spd.: 5D6*

* Add +1 to these stats when six or more Krakyt are together, +2 when a dozen or more, and +3 for 150 or more. The presence of a Leader Female or Queen adds another +2 to these bonuses (yes, these females get the +2 to their stats at all times).

Hit Points: P.E. attribute number plus 2D4 H.P. per level of experience.

S.D.C.: 4D6x10+300 from their natural, heavy exoskeleton (3D6x10+200 M.D.C. plus Hit Points as M.D.C. when in Mega-Damage settings like **Rifts®**).

A.R. (Natural): 14

I.S.P.: M.E. x3; considered minor psychics with the limited powers of empathy and telepathy.

P.P.E.: 3D6

Height: 6 feet + 2D6 inches. (1.85 to 2.1 m).

Weight: 4D6x10+300 lbs (153 to 243 kg).

Average Life Span: 200 years, sometimes 4D6 years longer.

Super Abilities: All Krakyt have the naturally occurring super abilities of *Multiple Limbs: Arms, Multiple Limbs: Legs*, and *Resistance to Heat and Cold*. Player characters may have additional super abilities dependent on their roll.

Natural Abilities & Psionics: All *insect abilities* plus *chemical alarm and chemical trail* (as presented in **Aliens Unlimited™** starting on page 122). The Krakyt also have a *natural empathy and telepathy* (triple the normal range with other Krakyt and no I.S.P. cost when used on their own kind). Both function constantly, but otherwise operate identically to the psionic abilities of the same names, and require intent and I.S.P. when used on other races. A Krakyt can close himself off to other Krakyt, but the concentration uses up one melee action/attack for each ability that is being blocked, i.e. loses one melee attack to block telepathic communication or to prevent other Krakyt from reading one's surface thoughts, and blocking empathy means losing another melee attack.

The Krakyt with their natural, hard as steel exoskeletons are so physically tough that they can survive great depths underwater (up to 4000 feet/1219 m) and even the lifeless void of space without any special suit or gear! The creature can hold its breath for up to one minute for every two P.E. points, but usually wears a gas mask-looking breathing apparatus (6-18 hour air supply depending on the size of the unit; all are surprisingly small because Krakyt are used to thin atmospheres and need only a fraction of the air a human needs to breathe) and eye goggles when going underwater or out into space. Sometimes a complete helmet with built-in radio when working with other life forms. **Note:** The living exoskeleton regrows and heals at a rate of 2D6 S.D.C. per 12 hour period and will regrow spines and even fingers.

Don't forget about attribute bonuses.

Special Weapons: Krakyt prefer specially designed melee weapons called *kiktikti*. These weapons have multiple curved blades that are custom built to fit along their armored forearms, providing a long stabbing blade and a nasty slashing/chopping forearm attack. These weapons are usually Vibro-blades, though some energy versions have been reported.

Kiktikti: Length: 2.5 to 3 feet (0.76 to 0.9 m). Weight: 5-7 lbs. (2.25 to 3.15 kg). Damage: 3D6+3 (+P.S. damage bonus). Bonuses: +1 to disarm. Cost: Replacing a kiktikti will cost about 8,000 credits and energy versions will cost 21,000 credits. (Energy versions do 5D6 for damage, but gain no strength bonus, and weigh 1-2 lbs (.45-.9 kg).

Special Vehicles: The Krakyt have developed advanced space vehicles with FTL and warp drives. Most are fast and agile, and designed for one pilot or small groups (6-20). They are typically equipped with weapon systems but are lightly armored to reduce cost and because of the toughness of the creatures themselves.

One of the most popular methods of flight in an atmosphere are personal flying units known as *Wing Packs*, mechanical wings reminiscent of true insect wings that actually flap at rapid speed to provide flight. They make the telltale buzzing sound of an insect and offer surprising speed and aerial mobility. Weight: 22 lbs (9.9 kg). Wing Span: 9-12 feet (2.7 to 3.6 m). Range: 95 miles (152 km) on liquid fuel (rare) or practically unlimited flight on solar (can operate indefinitely while exposed to solar radiation, and has a three hour battery life at maximum speed when not). Speed: 70 mph (112 km) maximum; can hover, fly low to the ground, perform aerial acrobatics and attain a maximum altitude of 10,000 feet (3048 m). Bonuses: +10% to jet pack skill, +5% to Zero Gravity Combat and +1 to dodge.

Preferred Armor: Krakyt may use some form of life support or environmental equipment, but tend to avoid wearing heavy battle armor or power armor. Instead, they rely on their natural exoskeleton for physical protection.

The standard environmental battle armor shown in the main illustration is the most common Krakyt armor. It is not worn so much for protection, though it is very sturdy (A.R. 16, S.D.C. 100 — or 80 M.D.C. in a Mega-Damage setting) but as an all environment suit. As such, it gives the Krakyt greater underwater depth tolerance (2 miles/3.2 km), superior shielding from radiation and other ambient dangers in the environment, complete temperature control, built-in radio communications (50 miles/80 km, x20 in space) and serves as a framework and platform for mounting additional sensors (radar, sonar, motion detectors, etc.), optics, tools, weapons (blades and long-range energy types), Wing Packs, jet packs, and other types of equipment or supplies.

The armor shown has *kiktikti blades* on the forearms (the shoulder, elbow, knee, feet and leg spike/blades doing only 2D6 damage), several pouches for ammo, and a helmet/skullcap with infrared and low light sensor bulb. Note that the helmet covers three of the Krakyt's

eyes, allowing simultaneous viewing in up to four spectrums of light (one for each covered eye and normal vision in those uncovered). The insects can view two such spectrums with no difficulty, but the concentration needed for three or four applies penalties of -1 and -2 respectively on all rolls including combat and a -5% and -10% skill penalty. The rifle shown is a *TGE version* of the standard galactic pulse laser outfitted with a back mounted energy pack that provides 60 shots per hour

and recharges at a rate of six per hour. The weapon also accepts standard E-clips (one of which is already in the gun at the rear below the power cables).

Light Body Armor: The Krakyt may also adhere bits of armor to their own exoskeleton for additional protection and augmentation. Such "plating" is attached to the chest, neck, head, shoulders, and legs, and may include additional spikes, spines and weapon blades on the arms. Typically adds one point to the natural A.R. (15), and 100-150 S.D.C.

Familiarity With Earth: Minimal. Krakyt scouts have passed and noted the planet's location and that it is inhabited by humans, but have not done any investigation.

Rifts® Notes: As with all hard-shell insect aliens, the Krakyt will be Mega-Damage creatures in a Rifts setting. In Phase World®, they will operate pretty much the way they do here, with some warring for the good guys and others supporting anyone willing to pay them. On Rifts Earth, they will be considered dangerous D-bees by the Coalition and hunted down, plus their alien appearance may make it hard for even tolerant people to accept them. Some may mistake them for a new strain of Xiticix, especially if the Wing Pack is worn.

Jerrick 7

This is the seventh planet in the Jerrick Star System. Located on the fringes of FAR controlled space, it has been scanned and visually swept via spacecraft sensors by TGE scouting parties, but the planet itself has only been physically explored in the most cursory of ways. The lack of civilization on Jerrick 7 makes it a negative market for the TGE, but gives it vast potential as a resource planet. Consequently, a number of remote sensor stations have been dropped on the surface to monitor climatic/weather conditions, geologic events, and to notify others who scan the planet that it has been claimed by the TGE. However, TGE operations on Jerrick 7 may not begin for many years, even decades, unless some unique element or property is discovered. In which case, it will become a highly contested site. Tagoniglomerate's claims would be strong and valid, but certainly clandestine operations of rival companies will pop up. Regardless of its future, anyone who finds themselves on this planet will have plenty to worry about just surviving its primitive environment.

Hard data on the planet is minimal, but TGE does know that it is in its early stages of evolution. The atmosphere is hot and turbulent. Heavy volcanic activity disrupts the surface, which is otherwise covered with extensive marshlands and rain forests. The overall conditions combine aspects of a thermal world (use the "Cold upper latitudes" information in that entry for temperatures) and a mildly abrasive atmosphere (halve all modifiers and damages given for such worlds). The water is generally poisonous for mammalian life forms and requires heavy filtration before it can be ingested, but most vegetation and insect races could drink it. Thus far, no signs of any civilization have been detected, not even primitive villages, although the dense forests and hot climate could hide small enclaves from even the best sensor sweeps. Indigenous life forms, both plant and animal, have not been studied and remain totally unclassified, but those that have been detected are very large and reminiscent of Earth's dinosaurs.

Jerrick 7 has no space stations and only one satellite. There is no sensor web or any kind of electronic security around the planet, so landing undetected is practically guaranteed. The only sensors are the few terrestrial monitoring stations left by TGE, and they are designed to scan the planet and atmosphere, not the heavens for visitors, so they are easy to avoid (no penalty to the roll if sneaking onto the planet and only a 01-15% chance of being detected even when not sneaking around). The atmosphere is the toughest obstacle with its strong winds and turbulent air currents; apply a -20% penalty to Pilot skill rolls, and even aliens from a thermal or abrasive atmosphere will still be at a -10% penalty.

Once visitors land on the planet, whether by accident or willing intent, the only contact with advanced technology will be the TGE Remote Monitoring Stations (RMS). The stations are large, track-wheeled towers with broadcast dishes and sensor clusters at their top. They collect data and broadcast it to the TGE relay satellite that orbits the planet. The satellite then passes the feed on to a data processing station in a not too distant solar system where it is entered into the corporate data files. This makes the data easy to tap into, but it doesn't really offer much info about the planet that isn't already known. The base of each RMS has a small maintenance area (though no one comes to work on them unless they obviously stop functioning). Each has a cot, two weeks of dried food rations for two people, water purifying equipment, a laser rifle with three extra E-clips (there is also a recharging port), and three survival suits suited to the conditions of the environment. There is also a communications system for direct contact with the company. Messages are sent and replies arrive within an hour. In the event of an SOS, the company would be able to have a rescue craft in orbit within 2-4 days (half that time if TGE employees are involved). Trying to remove any of the built-in systems requires an appropriate roll at -30%. Stealing from the corporation is never easy.

Jerrick 7 is very much like Earth during the Jurassic era, including the dinosaurs. The thick jungles, vast deserts, open grasslands, rugged volcanic plains, and deep oceans are all teeming with huge dinosaur-like animals. Full stats on a number of the most notable dinosaurs native to Jerrick 7 can be found in the pages that follow. The thick rain forests that cover much of the world are home to the smaller, faster species too, though the larger types are certainly the most dangerous. In the sands of the desert and on the rocky expanses around volcanoes are found large insects and other unique animals, while some of the most common and numerous dinosaurs are found among the 7-20 foot (2.1 to 6.1 m) high vegetation of the grasslands, including grazing giants and the predators that hunt them. The TGE has catalogued a number of the larger animals, but their sensors are not sensitive enough to pick up anything smaller than 8 feet

(2.44 m) or so. The smaller creatures are detected and noted when they pass near one of the remote stations, but there are so few stations on such a large planet that very, very few have been noted.

It is possible that some kind of primitive humanoids or generally intelligent race could have evolved on Jerrick 7, but if they are there, they have not been uncovered. (Any intelligent life on this planet will be limited to Stone Age civilizations populated by a race that evolved from reptiles or birds and developed alongside the dinosaurs.)

Jerrick 7 Dinosaurs

Only a few dinosaurs are presented here, but the place is populated by at least 200 species of dinosaurs alone, so the G.M. can populate the planet as he desires, even mixing them with other elements, like a world where mammal-based, humanoid cavemen exist, or a small band of aliens who have established an outpost or hide out. The dinosaurs detailed in this section are described as residents of Jerrick 7, but they can easily be encountered on other worlds alien zoos, game preserves, big game resorts, or even as guard animals for space pirates, criminals and eccentrics. Also note that the Game Master can also adapt them to the conditions of the planet his adventure will be taking place on, rolling or applying the proper results from the Physiological Modifications table (page 93 of **HU2**) and applying the bonuses to the dinosaurs given below. Even though these rolls will likely put the dinosaurs in their native environment, which should provide no bonuses other than natural protections and bonuses, the G.M. can apply them all to add variety to the listed stats. Of course, using this option has to make one wonder what is worse, a lightning quick, high gravity Velociraptor or an armor plated, abrasive atmosphere Tyrannosaurus Rex.

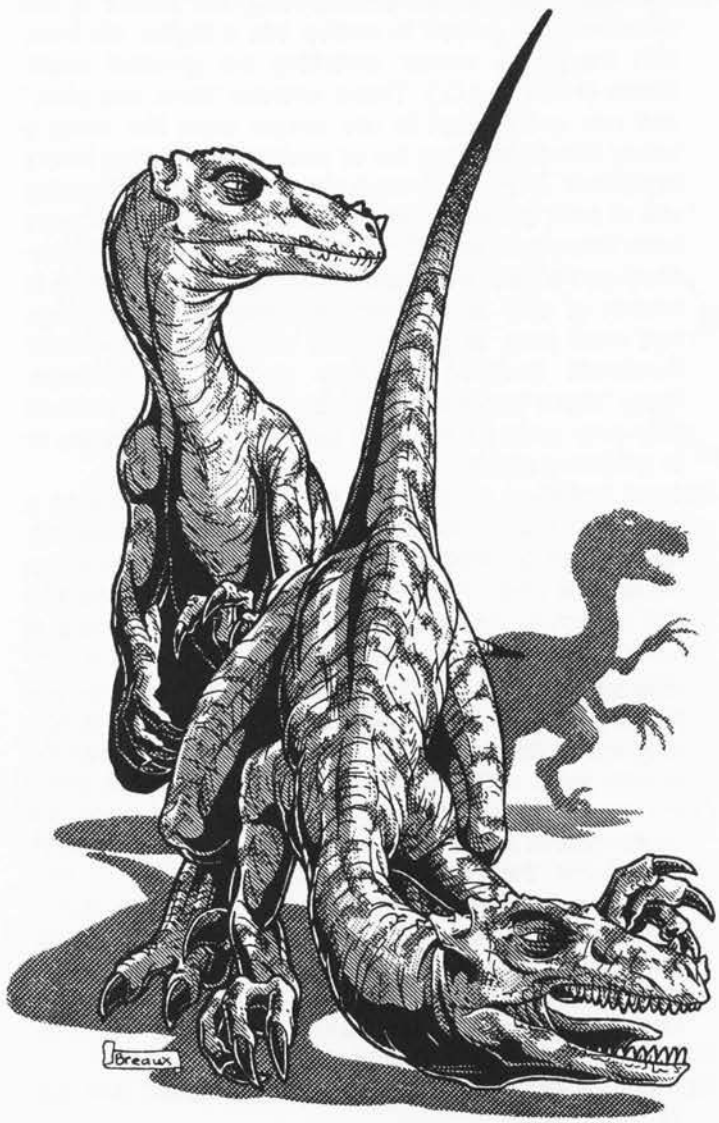
Velociraptors

These deadly hunters are among the most feared of the dinosaur predators. They are surprisingly intelligent, gather in packs, use ambush and divide and conquer hunting tactics, pick off the weak, and live within a complicated, wolf-like social group. On Jerrick 7, they are likely to evolve into the dominant intelligent life-form (given a few millennia) and exhibit greater intelligence than the traditional animal Velociraptors. They have razor sharp claws and teeth that in themselves would be deadly killing implements, but velociraptors also have an oversized claw on each foot that can snap down with incredible speed and slice through flesh with surprising ease much like a machete or sickle. The large claw is used in kicking and slashing attacks that can inflict grievous wounds. A leaping velociraptor who connects with two rapid kicks can easily take down prey like an unarmored human, and packs of 4-12 hunters can kill prey 3-4 times their own size.

Velociraptor-type dinosaurs are much like the wild canines of Earth, in that they travel and hunt in packs, have tight social groups and are found in a large variety of environments. Whether stalking in the tall grasses of the plains, prowling a jungle, or racing across the tundra of the north, velociraptors use speed, surprise, strategy and pack tactics to make a kill. The most notable variation of the velociraptor live in the dense rain forests, where they have learned to climb trees and leap onto unsuspecting prey from above. This particular species is smaller than its other cousins, but much faster and slightly smarter. Jerrick 7 has all varieties.

The intelligence and deadliness of the velociraptors makes them appealing to space pirates and others as guard animals, who use them like attack dogs. They can be trained to obey relatively complex commands, recognize faces, uniforms, codes, and voices, track by scent (especially blood trails), and any number of other tasks one could condition a dog to do, and do it better. They are also used as opponents in dog fights style competitions and where gladiatorial games are allowed, in the arena.

The main trouble with them is that velociraptors are a bit too intelligent, cunning and aggressive to be treated with the same comfort as a dog. Nor do they share the dog's loyalty. Consequently, they will defy and strike out at weak masters, and realize when they are being mistreated and will wait for a time to strike back in revenge! They can also become jealous of people, animals or things, causing them to lash out at rivals or those of whom they are jealous. Their aggressive nature, strong personalities and a



number of other quirks make them unpredictable and dangerous. They are predators by instinct and need to hunt and kill. Thus, they are only truly happy and most reliable when given that opportunity on a regular basis. This instinct is impossible to breed out.

Velociraptors (pronounced velossa-raptor)

Alignment: Cunning animal predator; considered Miscreant and even Diabolic. The most loyal and tame are only Anarchist; never good.

Attributes: I.Q. 6+1D6, M.E. 6+2D6, M.A. 3+2D6, P.S. 10+2D6, P.P. 10+3D6, P.E. 6+3D6, P.B. 3D6, Spd 1D4x10+33 (approx. 37 mph/59 km).

Size: 7-9 feet (2.1 to 2.7 m) tall and 12-16 feet (3.6 to 4 m) long with tail.

Weight: 300 to 600 lbs (135 to 270 kg).

Hit Points: P.E. attribute number +6D6.

S.D.C.: 70 plus any physiological modifications if applicable.

M.D.C.: On Mega-Damage worlds, combine the Hit Points and S.D.C. and turn them into M.D.C.

P.P.E.: 3D6

A.R. (Natural): 10

Horror Factor: 9 for single 'raptors or 14 for a hunting pack of 4 or more.

Average Life Span: 30-40 years.

Disposition: Very smart and cunning. On Jerrick 7, the velociraptor is poised to evolve into a higher life form, with the jungle variety exhibiting the greatest intelligence (+1D4 to I.Q.). These animals "think and plan," and can even adapt to use simple tools like using a heavy branch as a pry bar or pushing and pulling levers or latches. They rarely work alone and make frightening use of pack tactics to herd, corner, cut-out, ambush and wear down their prey. They are not tied to a specific territory and a pack will travel a thousand miles or more in search of prey and adventure. They will attack large and small prey, as well as feed on carrion and plunder humanoid backpacks, supply depots and garbage. Many 'raptor packs are migratory, following the animals they prey upon as they drift between watering holes or to greener pastures.

Natural Abilities: Keen vision about twice as sharp as a human's (double range and clarity), acute hearing, keen sense of smell (track by scent: 65%, +20% when following a blood trail), powerful legs can leap one foot (0.3 m) across for every two points of P.S., and half that straight up (double that height or distance with a running leap and jungle 'raptors can leap 50% farther and higher). Once per hour the predator can double its running speed for a burst that lasts one minute. The acceleration burst uses up two melee attacks/actions and if the 'raptor does a leaping attack during the burst, the attack counts as two actions (4 total). Using an acceleration burst, the creature can run at 70 mph (112 km), close rapidly on unsuspecting prey, and still be able to make a leap attack with both vicious claws! Unfortunately, that is when the second velociraptor will attack, then the third, and the fourth, and ... you get the picture. Few animals can survive this kind of assault.

Power Category: Alien predator.

Combat Skills: Natural combat abilities, speed and agility.

Attacks Per Melee Round: Five.

Bonuses: In addition to attribute bonuses, the velociraptor is +3 to initiative, +2 to strike (including tail strike), +1 to parry (yes, the 'raptor will bat aside melee attacks, but it tends to simply swing and will likely damage itself parrying the blades of swords, etc.), +3 to dodge, +4 to roll, 80% or +4 to maintain balance, and +2 vs poison, drugs and disease. Used to hot environments.

Originating Alien Environment: Varies; includes Jerrick 7.

Notable Skill Equivalents: Prowl 75%, Detect Ambush 50%, Detect Concealment 35%, Camouflage 50%, Climb 55% and can learn and understand two spoken languages twice as well as a dog.

Weapons: Natural weapons only: claws and teeth. Add P.S. damage bonus, if any, to all claw and leap attacks. Does equivalent M.D. damage in Mega-Damage settings.

Bite: 4D6 damage (4D6 M.D. in the appropriate setting).

Small Claw Strike (arms): 2D4 damage.

Claw Strike (feet/kick): 2D6 damage.

Large "Sickle" Claw Slice (usually performed on pinned opponents): 3D6

Large "Sickle" Claw Kick (combined kick with normal claws and large claw): 6D6

Double Claw Leap Kick: 1D4x10+10; counts as three attacks unless used with the acceleration burst. A pack will make their initial attack using this technique; they each attack in turn so by the time the last has made his strike, the first will be recovered and ready to strike again with the large sickle claw or biting attack. On a natural 18-20, the velociraptor will pin any target lighter than itself and can thereafter make two automatic claw slice attacks per round (one at the beginning and one at the end of the round) without having to use an attack to do so.

Tail Sweep: 1D6 damage, and can be used as a tripping or leg hook maneuver.

Tyrannosaurus Rex

Large and deadly, the Tyrannosaurus is thankfully rare on Jerrick 7. Said by many to be the ultimate giant predator, these hunter-scavengers are surprisingly fast and deadly. They can outrun many of their prey and their jaws can splinter small trees or thick bone with equal ease. They have sharp senses and quick reflexes, but though they are cunning, their intelligence is not as high as that of the smaller velociraptors or mammals. Almost the opposite of the velociraptor in all respects, the T-Rex is a hulking powerhouse who usually hunts alone or in pairs and utilizes brute force to quickly bring down its prey. When the jaws of this giant snap onto something soft and fleshy, few things can shrug the damage off and fewer still can break free and fight back. On Jerrick 7, the T-Rex is the largest of the bipedal predators, but far from the only large dinosaur predator. There are a variety of similar, but smaller animals that roam the plains and forests of the planet, including Allosauruses, Ceratosauruses, Dilophosauruses, and others (typically do about half as much damage but are just as fast and have similar abilities).

Tyrannosaurus Rex usually makes its hunting grounds on the open plains or near bodies of water where the larger prey are found, for it takes plenty of food to keep this hulking beast fed. Despite its size, the creature can be surprisingly stealthy. It certainly won't catch an alert human completely off guard, but it may get close enough to surprise them or run them down before they can hide or escape. When using such stealth against the large animals it hunts, however, the T-Rex can get just as close, and after a charging attack, the prey usually has little chance of escape. Unlike the generally aggressive and semi-migratory velociraptors, the Tyrannosaurus is very territorial, with a hunting range of 50-100 miles (80-160 km) shared by 1D4 other T-Rex or similar hunters, and will attack anything it finds within its territory, especially when it is even remotely hungry. Intruders such as a group of humans will not be tolerated, and with something as large and strong as this monster, getting away can be difficult for it can topple vehicles, smash through trees and given the time, rip through the armored hull of a spaceship.

Tyrannosaurus Rex (pronounced Tie-ran-oh-sore-us Rex)

Alignment: Considered a Miscreant predator.

Attributes: I.Q. 1D6+4, M.E. 2D6, M.A. 1D6, P.S. 30+4D6 (supernatural!), P.P. 3D6+4, P.E. 20+2D6, P.B. 1D6+8, Spd 40+4D6. These stats are for a full grown Tyrannosaur. Younger ones will have half the P.S., P.E., and Spd of a full grown one.

Size: 16 to 20 feet (4.9 to 6.1 m) tall and approximately 35-40 feet (10.7 to 12.2 m) long from tip of the tail to the end of its snout.

Weight: 6 to 10 tons for a full grown adult.

Hit Points: P.E.x5 for adults and P.E.x2 for young adults.

S.D.C.: 3D6x10+220 for mature adults, 2D6x10+60 for young.

M.D.C.: On Mega-Damage worlds, combine the Hit Points and S.D.C. and turn them into M.D.C.

A.R.: 12

P.P.E.: 6D6

Horror Factor: 12 for young and 15 for fully grown adults.

Average Life Span: 25 to 40 years.

Disposition: Territorial and temperamental, the T-Rex is aggressive and unforgiving. Though not as cunning as the smaller 'raptors, this giant is nonetheless alert and dangerous. They use their size and bulk to their advantage and strike to deliver a killing blow whenever possible.

Natural Abilities and Skill Equivalents: Keen sight, hearing, and smell. Can track by scent 45% (+20% to follow a blood scent), prowl 35%, swim 50%, and follow blood trails (50%); recovers H.P. and S.D.C. at a rate of 1D6+4 per 24 hours. Note: Loses interest and sight of a target if it stands completely still and is not bloody.

Power Category: Alien predator.

Combat Skills: Natural Combat Abilities; huge maw with teeth the size of 6-9 inch (15.2-22.8 m) daggers.

Attacks Per Melee Round: 4

Bonuses: In addition to attribute bonuses, the T-Rex is +1 on initiative, +1 to strike, +1 to dodge, +2 to roll and +4 vs poisons, drugs and disease.

Originating Alien Environment: Varies

Weapons: Natural teeth and claws only. Include P.S. damage bonus to all claw, tail and kick attacks. Does equivalent M.D. damage in Mega-Damage settings.

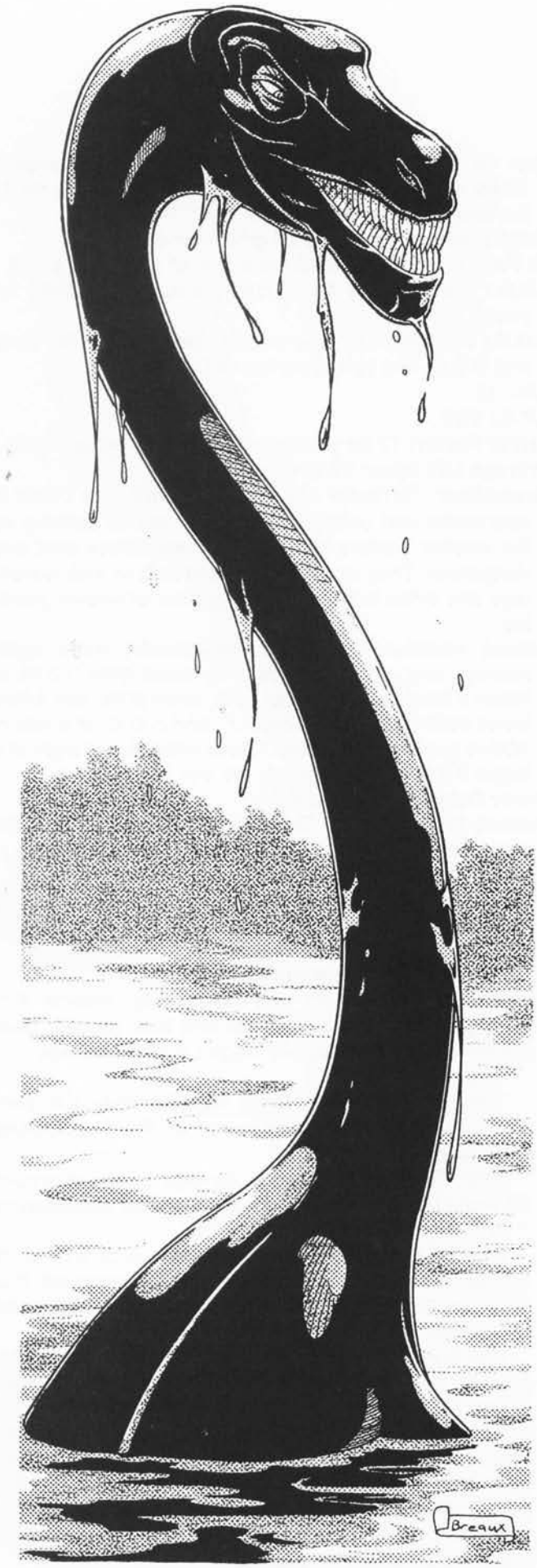
Bite: 2D4x10

Claw (small arms) or Head Butt: Typically 3D6 damage (equal to a *restrained punch* on the Supernatural P.S. table).

Kick: Typically 6D6 +P.S. damage bonus of around 25 (equal to a *full strength* punch on the Supernatural P.S. table).

Stomp: 1D6x10 +P.S. damage bonus of around 25 (equal to a power punch based on supernatural P.S. damage; only effective against targets 8 feet/2.4 m tall or shorter).

Tail Sweep: Typically 6D6 +25 P.S. damage bonus, but has a 01-70% likelihood of knocking an opponent under 2000 lbs (900 kg) off his feet, causing the character to lose initiative and two melee actions. Likewise, characters under a ton can not *parry* this attack (it's too fast, hard and heavy). Human-sized targets (smaller than 8 feet/2.4 m) will be thrown one yard/meter for every three points of the monster's P.S. and lose an additional melee action to recover.



Plesiosaur

Even the lakes and oceans of Jerrick 7 are populated by dangerous, giant carnivores. From overgrown prehistoric crustaceans (crabs and such) to meat eating fish and sea serpent-like monsters, many kinds of aquatic predators pose threats to those wading, swimming, or near the water's edge (within 20 feet/6 m). One of these monsters is the quick, long-necked Plesiosaur. With huge, powerful flippers and a streamlined body, these animals cut through the murky waters in search of living prey to feast upon, snapping up man-sized fish and snaring shore-side mammals as large as a horse. The stats given below can be applied to both the fresh- and salt-water species of this creature. Both varieties can go on dry land for up to three hours, although they seldom go more than a mile (1.6 km) inland. They can be seen basking in the sun atop rocks, sand bars and coastlines.

Though they prefer to mate and live in the deeper waters, they frequently hunt in shallow waters, like sharks, where prey is more abundant. Like the Tyrannosaurus Rex, these aquatic predators tend to hunt alone or in mated pairs, only occasionally in small pods of 3-8. They are territorial and often stake out a range 20-40 miles (32-64 km) in diameter as "their" hunting ground and home turf, tolerating only their mate, young and other Plesiosaurs quickly passing through. However, they will swim hundreds of miles in search of prey and may leave their territory for weeks at a time. Plesiosaurs respond quickly to movement and blood in the water, much like sharks (which are also a danger in the oceans of Jerrick 7). A hungry or angered Plesiosaur will attack boats and hovercraft that violate its territory and it will see humans in the water as potential meals. With smaller brains and more aggression than either the T-Rex or the 'raptor, these aquatic predators will fight with less strategic cunning and will often continue a battle until they are slain.

Plesiosaur (pronounced please-e-o-sore)

Alignment: Considered a Miscreant or Diabolic predator.
Attributes: I.Q. 1D6+1, M.E. 1D6, M.A. 1D6, P.S. 16+2D6 (Extraordinary Strength), P.P. 3D6+6, P.E. 3D6+8, P.B. 1D6, Spd 24+1D4x10 swimming, 1D6+4 waddling on dry land.
Size: 20-40 feet (6-12.2 m) long, with a neck that's nearly half its total length.
Weight: 1-2 tons
Hit Points: P.E. attribute number +6D6.
S.D.C.: 1D6x10+45
M.D.C.: On Mega-Damage worlds, combine the Hit Points and S.D.C. and turn them into M.D.C.
A.R.: 10
Horror Factor: 12
Average Life Span: 20-30 years.
Disposition: Very much like that of a shark, aggressive and prone to violent, savage attacks. Against smaller prey (half the size of a human), the creature will try to cripple and swallow its prey whole. Large prey are torn to shreds and devoured in chunks. Even more territorial and foul tempered than other predatory dinosaurs, the Plesiosaur should be feared and avoided even on dry land.

Natural Abilities: Swimming 98%, dive up to 400 feet (122 m), survive depths of up to three miles (4.8 km), prowl 75% (in water only), is resistant to cold (half damage), can smell blood underwater up to three miles (4.8 km) away, track by blood scent (underwater) 88% (60% on dry land and at a third the distance), polarized vision, cans see infrared, and excellent nightvision (1000 feet/305 m). Breathes both air and underwater; can stay on dry land for up to three hours before beginning to dehydrate. Recovers Hit Points and S.D.C. at a rate of 10 per hour.

Power Category: Alien predator

Combat Skills: Natural combat abilities

Attacks Per Melee Round: Five

Bonuses: In addition to attribute bonuses: +3 on initiative, +2 to strike and +3 to dodge.

Originating Alien Environment: Varies; common in the oceans, seas and lakes on Jerrick 7.

Weapons: The only natural attacks of the Plesiosaur are a bite with severely sharpened teeth, head butt and flipper strike. Does equivalent M.D. damage in Mega-Damage settings.

Bite: 5D6 damage

Head Butt: 4D6 damage +P.S. damage bonus.

Body Ram: 1D4x10 +P.S. damage bonus.

Flipper Swipe: 2D6 damage. Flipper attacks can be made on targets in the water that are smaller than the dinosaur.

Leine

Leine is home to the Felias, a race of tall, black furred, feline humanoids that specialize in collecting, collating and distributing information. For hundreds of years these aliens have used their natural psionic and super abilities to sweep the galaxy in search of usable information. They collect volumes of knowledge that includes names, places, dates, people, politics, governments, planets, military bases, weapons, spacecraft, stars, weather, production facilities, technologies, wars, assassinations, bounties, and scores of other subjects both mundane and impressive. This information is stored and sold to clients across the galaxy. For the Felias, knowledge is their most valuable commodity.

Virtually all Felias are knowledge brokers. It's part of their culture and second nature to them. Many operate as spies/espionage agents, extortionists, negotiators, researchers, historians, smugglers and mercenaries. They make masterful use of their *speed reading* and *total recall* abilities to remember and disseminate information. They can also make predictions on probable outcomes based on mathematical theory and hundreds of other factors. Prized as advisors and historians, Felias agents make their presence known in many places of power throughout the galaxy, including the Atorian Empire and the Federation of Allied Races (FAR). This makes these felinoids one of the wealthiest races in the galaxy.

Felias who respect the laws, mores, teachings and secrets of other worlds are revered and welcomed most everywhere. However, there are some worlds who fear the Felias, terrified that embarrassing secrets or damaging information may fall into their hands and be used against them. Some worlds and space stations have banned the felines from their territories entirely, and the crime of aiding and abetting one performing his duties is punishable by death!

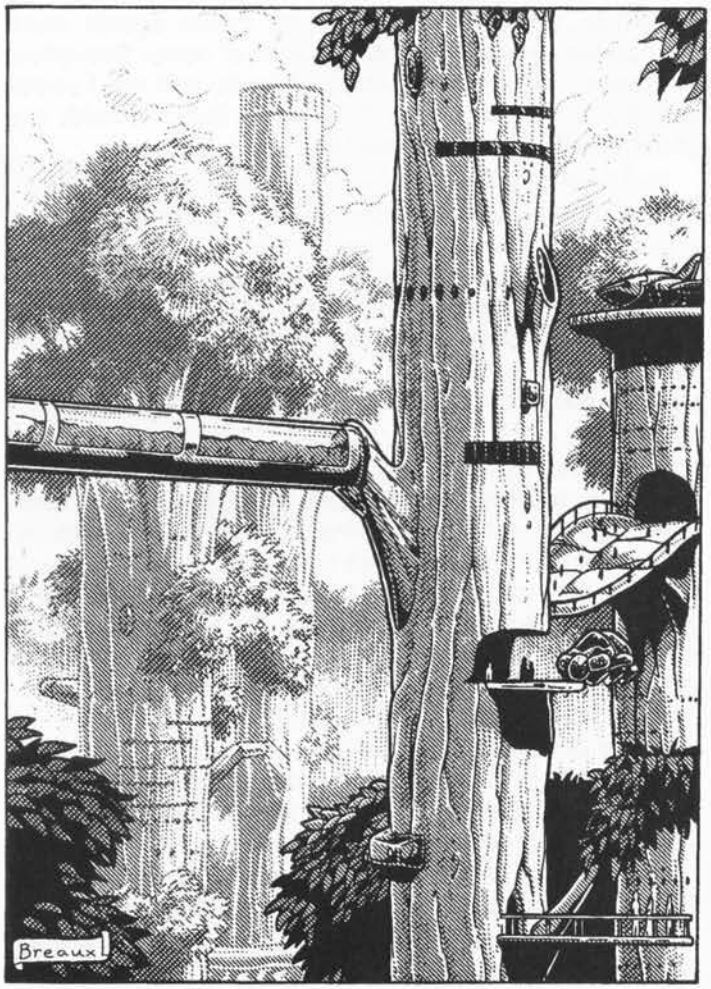
The planet Leine is best known as the headquarters for the **Felias Information Network (FIN)**, the "official" information-gathering and dissemination body of the Felias civilization. The FIN sells access to its voluminous databases on a per hour and a by-search basis. Since just about *anything* can be learned by accessing the FIN, patrons from across the galaxy are willing to shell out serious cash for temporary searching access. The FIN is regulated and directed by their governing body, known simply as the Board of Direction. They run the entire society like a monstrous mega-corporation. Both collection and dispensing agents operate under their government's jurisdiction. Only freelancers and rogues don't have to answer to the Board, but they cannot gain legal access to the FIN. Payments for information collected by active agents are given to the Board of Direction. The money is used for normal government maintenance and activities, plus each operative is paid a very handsome salary. Freelance collectors and brokers are not sanctioned or tolerated by the Board or other operatives, and bounties for these rogue agents and "infringers" are frequently issued to have them returned to the home world for a prison sentence or execution.

All the FIN brokers are psychic. They collect information from the FIN (which controls a galaxy-wide information network) and have several sanctioned collectors working for them in regional space. Collectors will almost always have super abilities, especially those involving Heightened Senses, Stealth, Invisibility, Intangibility, Nightstalking and others ideal for espionage, spying and information gathering. Most collectors have military educations with plenty of espionage and surveillance training, while brokers commonly have espionage and communications skills or a background in engineering or science. The Felias' military, police, and enforcers are heavily armed and intolerant of alien lawbreakers, information thieves and spies. Many are robots, androids or bionic soldiers, others possess super abilities or psionics.

For more on the Felias, please refer to page 96 of **Aliens Unlimited™ Revised**.

Mogomian

The planet Mogomian is a vegetation world. It has a tropical atmosphere, even at its poles, and many would consider it a lush paradise. The actual ground of the planet is rarely seen by most visitors to Mogomian, for gi-



gantic plants grow up from the ground and interweave tightly into a solid canopy of vegetation. This canopy is so tight and solid that it can and does support tons of weight. Most of Mogomian's native animal species live on *top* of this canopy, treating it the way most other beings would the ground. Imagine it as a thin crust of woven plant matter a few hundred feet deep with a cavernous layer of massive stalks the size of giant trees beneath that. The heavy vine and plant stems that make up this canopy are up to 100 feet (30.5 m) in diameter, and they entwine with thick stems, tendrils and bark as strong as steel to form an almost solid canopy over the crust of the planet. Only below the canopy's root structure will one find Mogomian's soil and rock. While some water collects in the giant leaves, nooks and crannies of the canopy, most of the water on Mogomian is far below the thick plant layer too, resting in enormous shallow pools protected from the sun and pollution by the dense canopy above. Water that is not trapped in leaves and crevices in the canopy runs down to the crust where it evaporates very slowly. Instead of evaporation for weather and moisture cycles, the water is slowly used up by the huge plants, then given off by them as oxygen and moisture. This process results in much of the planet being covered with a low, heavy mist. Only where cities are located is the mist lighter. Below the primary canopy is a cool, damp world of darkness, much like a cave network. Creatures of all kinds live in the blackness, finding their way with sonar and other senses that have no need for light.

Once they die, the vines of Mogomian harden to the consistency of concrete and any decay ceases for centuries. The homes and dens of the native species are cut from the still living plants, which harden around the holes and provide protection as well as a strong home. The native Robians have advanced this process to hollow out entire redwood tree-sized vines which are then allowed to harden so that refined construction can turn it into a skyscraper as durable as any on Earth, but entirely natural. Cities are usually carved out of significant concentrations of these massive vines and tree trunks. Large horizontal vines have their tops planed to make roadways and aqueducts. Tubes which will later carry water from below are hollowed out and fitted with pumps. This unique property of the vegetation is the basis for the construction of much of the Robian technology. The curing process takes almost three months, after which the plant matter is solid enough to begin construction with artificial materials (metal, concrete, etc.), and has the strength of steel reinforced concrete. Meanwhile the living canopy is so dense and strong that it is solid enough to support thousands of vehicles and endure the landing of heavy spacecraft.

Processes have been developed that can soften or reinforce the final rigid plant material, producing a range of solids from flexible plastics to the hardest titanium. The tools needed for all of this are generally only a fraction of the size of the equivalent steel or chemical ones needed for working minerals, thus making the process safer, cleaner, and cheaper than traditional mineral refining and shaping. The carved, shaped and processed vine materials can even be used in spacecraft construction when subjected to the right processes (a secret well guarded by the Robians). Any vehicle, weapon, item or spacecraft made out of Robian vine materials is considered organic and not affected by magnetic devices, powers, or fields, but the computers and other systems aboard them would be. The Robian vine material is called **Florasteel**, on the galactic market, and any items made from it will cost three times the normal list price, but vehicles are lighter and faster (+10% to speed and +1 to dodge) with the same S.D.C., damage, etc., as any equivalent vehicle.

Another unique product is a liquid called **Mogane Healer**, distilled from specific species of the vines, that is a potion with amazing healing properties when ingested by an organic life form. The liquid has a vast range of genetic receptors and affects nearly all flesh and blood alien races. In some types of aliens, it matches more receptors than others, and is thus more effective. When ingested by or injected into humans and other mammals, the elixir will heal 3D6 points of Hit Point damage in a matter of minutes. As little as a few milligrams mixed in with vitamins and pain relief medicine will help ease stomach upset, reduce headache pain and boost the immune system. When used in a balm it will soothe and heal burns, rashes and fungus (like athlete's foot) in a third the usual time, and with reduced scarring! Reptilian, amphibian, and avian races find it less effective, healing 2D6 points of damage and adding only slightly to the overall healing potency in other applications. Insect, dinosaur and aquatic aliens will only see 1D6 points of damage restored. Demons, supernatural beings, creatures of magic and certain super be-

ings find the elixir of no benefit whatsoever. The elixir costs about 100 credits a dose on Mogomian and at least three times that in galactic markets. **Note:** The plants of the Mogomian forests regrow so quickly that it appears to be a nearly inexhaustible, renewable resource, with vines 10-20 feet (3-6 m) in diameter growing back in a matter of two years.

Mogomian is situated far from the Atorian Empire, on the edge of FAR territory. The Robians themselves are active members of the FAR, but they fear that if war between the Federation and the Atorian Empire breaks out, they will be pressured to produce more healing elixir than is ecologically safe, and risk exhausting their natural reserves. The planet is already feeling pressure as the FAR continually attempts to stockpile the life giving elixir for possible rescue and humanitarian purposes and military contingencies. Thus far, the Robian government has refused and the Mogane Healer continues to be produced at a low rate for consumer markets.

The dominant life form on the planet are the human-like *Robians,* distinguished as an alien cousin by their prehensile tails and clawed hands and feet which help them navigate their natural environment in the trees. Their actions and movements are smooth and cat-like, and their features even vaguely resemble those of felines rather than primates. Even their posture and quick movement, long, thick tails, and slightly pointed ears are reminiscent of a cat. Only their round eyes ruin the feline illusion. Their technological level is roughly that of the "Megalopolis Age." It has advanced beyond Earth's, but is not as far along as those of other races in the galaxy. They can only produce fission and metallic hydrogen drives on their own, but have managed to trade for other technologies. The Robians are just out of their infancy as far as space travel and exploration goes, and visiting aliens on this world are rare, but increasing as trade routes are established and new contacts made. There is no magic among the natives, and power categories are limited to *Bionics, Robotics, Hardware*, and the occasional *Psionic.*

Nors

Nors is the new home world for the displaced *Danaus* (**Aliens Unlimited™**, page 124). Like their original home on Danude, now lost to the Atorians, Nors is a high gravity world with a moderately elevated landscape and vast open plains. Even the mountainous areas are little more than large, rolling hills. Trees and grasses are short, allowing extended views to the horizon, and the oceans are large, calm and relatively shallow (only one mile/1.6 km at its deepest point). Given the heavy reliance on magic here and the resulting moderation of industry, Nors is by and large a clean, picturesque world. Many tourists come to the planet just for those natural vistas and to visit the legendary Danaus libraries.

The cities are low, sprawling buildings that mimic the natural traits of the wilderness and conform to the powerful pull of the gravity. Architecture is a mix of modern concrete and brick, futuristic glass and steel, and ancient stone structures with facades reminiscent of Earth's ancient Greek or Roman architecture. The latter styles are used almost exclusively for the learning districts and libraries of knowledge, thus making such areas easy to distinguish from the rest of the metropolis. Universities and schools also follow this trend, setting them apart from the sparkling glass and steel of the business structures and the more conventional styles of the residential buildings. Streets are wide and clean, the air fresh and pure. Perhaps one of the greatest wonders of Nors is how easily magic and technology mingle and coexist without conflict or rivalry. Certainly the scholars of Nors have learned to combine magic and technology into one, but in many cases the two simply exist side by side. On one street, an elevated magnetic train might glide quietly over statues illuminated by magical spheres of light, while the next street may boast a café that has a patio covered by a perfectly lifelike, perpetual illusion of a beautiful sunset beneath which a robot bartender serves up drinks. If nothing else, Nors is a planet of wonder and learning, even for those that do not come to study.

All visitors to Nors arrive at one of dozens of small space stations known as "docking satellites." These satellites serve to process visitors and organize the spacecraft they arrive in without cluttering the larger "Terminal Stations." From the docking satellites, shuttles carry the visitors to the Terminal Stations, which are a trio of huge space stations. There are no shuttles or spacecraft that land on the planet's surface. Everything goes through the Terminal Stations and their unique orbit-to-planet transfer process via one of hundreds of *mystic portals* and tele-

portation magic. Just as in the airports and bus stations of Earth, these portals are referred to as "gates." Visitors are magically or psionically scanned by security for illegal items, diseases, destructive intent, and a number of other possible dangers before they are allowed to enter a gate. While walking through the gate there is a blinding light and a moment of light-headedness. When one's vision clears up a few seconds later, the visitor finds himself on the planet's surface at an arrival station as close to his final destination as possible. From there, the visitor can make conventional transportation arrangements to get to where he's going and see the sights. This is a visitor's first exposure to the magic of Nors, but it certainly won't be the last.

The strong gravity of Nors is very taxing on many visitors and the knowledgeable Danaus have seen to it that this is not a hindrance to the enjoyment of their guests. The arrival centers and space stations have services that rent compensating exoskeletons, private transports and accommodations to fit a visitor's physiological requirements. Unlike similar devices on other high gravity worlds, those on Nors negate all penalties through a little touch of magic. The person using it feels comfortable and moves as if he were in his native environment. Similar magically enhanced devices provide radiation, thermal, and frozen world visitors with comfortable conditions through the use of enchanted jewelry (the most expensive option) or body suits (least expensive of these options). These comforts are necessary for some aliens and the costs for them are kept reasonably low (normally about 100 to 500 credits a day for the rental). Nors also prides itself on being able to provide enjoyable sustenance to its visitors. Magic portals to large markets and other supply centers allow quick acquisition of familiar and alien cuisine which is then teleported to the visitor's lodgings. Needless to say, such services are often limited to the largest of restaurants, hotels and arrival stations. This process is made easier if the visitor fills out the questionnaires available at the docking satellites. The questionnaires greatly enhance the wealth of the knowledge the Danautians have on other races and help satisfy the needs of the individual at the same time. Again, there is an emphasis on the magical luxuries over the mundane, but they can be expensive, even on a planet where magic is commonplace. Prices may not be exorbitantly high, but high enough to be prohibitive to common folk.

There are numerous airports, bus stations, and train systems throughout most regions, although magic and other dimensional warp travel make up the bulk of the long-range mass transit systems. Travelers simply step up to the gate and walk to the other city or continent they wish to travel to. A system of transit that enables one to travel halfway across the globe in a matter of 10 seconds. Most of these magic portals are placed on ley lines and nexus points. They also have special magics and devices integrated into their design that maintain the stability of the spells and minimize the risk of a random snafu with teleportation or sudden disruptive anomalies. In fact, the researchers of Nors put considerable time and effort into successful research to control and direct ley line energies this way. Other transport terminals are scattered about in areas where ley lines are scarce, but these must be opened through the use of spell casting and thus operate on schedules like airport and bus terminal departure schedules. The traveler still simply walks or rides a shuttle through to the distant destination they wish to visit, but they will have to wait for the scheduled openings of the magic gate. Private trips to nearly anywhere can be arranged this way too, but the price will vary based on the starting location, destination point, and number of passengers making the trip.

Scholars and tourists are welcomed to visit Nors' many libraries. However, only those invited to are allowed to use the **Great Libraries**. These huge structures are located in each major city and house the original copies of all the information the Danaus have collected as well as magical tomes and scrolls that do not find their way into the public libraries. Much of the information in the Great Libraries is catalogued and available on computer, but they also contain many of the original works in book form or other hard copy, including clay tablets, carved stones, cave paintings, scrolls, diaries, sketch books, photographs and all manner of written works. The smaller libraries (which are still huge by anyone's standards) have computerized copies and facsimiles of most of the information found in the Great Libraries, but many scholars prefer to examine and study the original works. This helps to maximize the purity of translations or duplications and often provides greater insight, perspective or inspiration when one can examine the materials and techniques used in making the original. The scholars allowed access to the

Great Libraries are carefully screened and their visitations scheduled so as to give them the most access with the least crowding or interruptions.

Needless to say, theft from the Great Libraries is considered a serious crime and every effort is made to recover lost knowledge and stolen originals. Of course, it is not easy to steal from the libraries. Security at them is tighter than that of the planetary defenses. (-70% to a single roll, or the G.M. can require a series of rolls to penetrate subsequent layers of security. Having to specifically defeat the individual protective levels and barriers is also an option, but they would need to be set up in advance.) Typical security for one of the Great Libraries includes magical safeguards, wards, magical guardians, state of the art electronic security systems, security personnel (possessing conventional weapons as well as magic or psionic powers), sensor arrays, reinforced doors, biological scans (retina, blood typing, DNA scans, etc.; may be all or none of these depending on the security level), and any number of other measures the G.M. thinks appropriate. Remember that there are a lot of people out there who want to see Nors remain a secure center for learning, and they will help to maintain security, retrieve stolen items and bring thieves to justice.

The orbital sensor network that protects Nors is also partly magical in nature. Technological satellites with energy weapons scan the void of space for unauthorized vessels, but they are also outfitted with magical sensors and defenses, such as Energy Disruption, to disable or destroy invading spacecraft. These magical defenses are basically electronic "scrolls" attached to P.P.E batteries. When their programming tells them too (or alternately, a manual command from an operator), the "scroll" program is activated and the spell goes off (which wipes the electronic scroll just as it would a paper one). Each satellite will have a dozen or so spells in its memory. The selections and number of copies of each spell will vary with the satellite's placement and defense role. Similar systems are built into the defenses of the space stations and the small defense fleet of spacecraft. The nature of these defenses makes sneaking onto the planet without permission or attacking the space stations very difficult (-35% to skill rolls). When defense satellites are depleted of their spell knowledge, mystic technicians must physically dock with them and insert new memory cards with "scroll data" on them and recharge the P.P.E. batteries. For some reason, Nors has ben unable to successfully upload or download electronic scrolls to or from its satellites.

Just as their home world was once located near the dark heart of the Atorian Empire, Nors is nestled in the sparkling heart of space dominated by the Federation of Allied Races. Almost at the center of FAR space, it is safe from a repeat of Danude as long as the FAR itself remains a viable power.

Conversion Notes: If the Game Master is using Nors in a *Phase World*® setting or has converted *Heroes Unlimited*™ to M.D.C., the magical energies of Nors will be about a third less than those of Rifts Earth.

Pherridax

This vast, dry planet is home to the **Kaech Ne Tobru**, a race of human-like aliens who call their world "Go Gorau Ne Tobru." The planet came to the attention of the TGE and a rival group known as the *Merrinatica Consortium* when extensive deposits of a metal as strong as Kisentite were discovered by a remote probe. Verified by TGE scout craft that left orbital sensors to do routine scans, the planet's rich deposits were tagged for immediate mining. All that was needed was the green light from the sensor satellites that no indigenous peoples existed to prevent a claim. The Merrinatica Consortium did not wait that long. Seeking to get ahead of the TGE, they began mining operations illegally, disregarding the galactic laws to get their operations up and running. No one paid much attention, attributing their side-stepping of the law to overexuberance and misunderstanding.

The TGE shortly began its operations when the sensor scans turned up no indigenous sentient life forms. It wasn't long before they discovered the Merrinatica Consortium's operations and battles for mining rights erupted both the kind that take place in a court of law and physical altercations. The planet would come to be known as the *Pherridax Warzone* for the bloodshed and violence. It wasn't until much later that the TGE realized that the dangerous saboteurs and deadly mystic warriors who dealt them the most damage were not mercenaries in the employ of the Merrinatica Consortium, but some independent force. They ceased operations to investigate. Employing magical mercenaries of their own from Assin (Lassinike), Fiktia (Manteze), and Mawon (Gymoy), the TGE gathered intelligence on the mysterious foe who seemed more and more to be the source of the worst fighting.

Meanwhile, the operations of the Merrinatica Consortium continued to mine and suffer attacks and sabotage they blamed on the TGE. By the time the TGE discovered that the real enemy was the crafty and magically gifted natives of the planet, the Merrinatica representatives had begun a campaign to hunt down those who plagued their operation. Unknown to them, it was the native *Kaech Ne Tobru* and they had no concept of what they were getting into. The TGE pulled out of Pherridax completely after several meetings with the few Kaech Ne Tobru they could manage to contact proved unproductive. They were fortunate. The magics and spirits that were unleashed against the Merrinatica Consortium completely wiped out the corporation's personnel on Pherridax, leaving the Kaech Ne Tobru with dozens of spacecraft and billions of dollars in mining equipment. Now, a century later, the technology has been successfully reverse engineered, mastered and copied, giving these once terrestrially bound people wings to the stars.

Kaech Ne Tobru means "People of the Power," while the planet's name, *Go Gorau Ne Tobru*, translates to, "Place that holds the Power." The Kaech Ne Tobru are indeed a people vested with power. All of them have natural magic abilities that are cultivated and mastered at a very young age. Puberty for these people is filled with dreams and portents, and ends with a vision-quest to the "Heart of the Power." The "Heart of the Power" is said to be the cen-

ter of the planet inhabited by a sentient force of great mystical energy. It is this energy and the children of the Power that was unleashed upon the Merrinatica Consortium. All Kaech Ne Tobru can summon and control spirits as part of their mystic abilities, even when they find themselves away from the Heart of the Power. They explain this by saying, "We each carry a significant share of the Power within us, and it can manifest no matter how far from its source we may go."

The Kaech Ne Tobru are quite human looking, except that their faces lack a prominent nose which is replaced by thin slits in the forehead, cheeks, and chin. Their hair is thick and almost like rat tails or quills, but it is generally supple and velvety to the touch. Their physical builds are slight, even in individuals stronger than most humans of comparable height, and skin color ranges from a pale ocher to the darkest sienna. Their eyes, without exception, are black. Having originated in a dusty, sunny environment, they prefer flowing robes or clothes that wrap in layers. Go Gorau Ne Tobru is not a thermal world and its gravity is equivalent to that of Earth, but it is hot and arid. This caused the Kaech Ne Tobru to evolve in such a way that they have very little fluid in their system and do not bleed, instead losing powdery bits of themselves when wounded, almost like a crumbling statue. They feed on magical energies, and failing that, can survive indefinitely on solar radiation in the form of light. Needless to say, their skin may be warm and rather soft, but it is dry, rough and often has a powdery sheen. Having had a rather negative first impression of people from the stars, the Kaech Ne Tobru tend to view all outsiders with suspicion and it takes a while to earn their trust. Even after it is given, that trust must be cultivated and maintained or they will grow distant and suspicious again. The Kaech Ne Tobru do not take anything or anyone for granted, and winning ground with them in any matter is a constant struggle. Consequently, they are themselves incredibly loyal and truthful to those they consider friends, and react to lies with extreme emotion and prejudice, while betrayal cuts them to the quick and may never be forgiven.

Relying heavily on magic and their natural spirit abilities, the Kaech Ne Tobru have less advanced technologies than most, and what tech they do possess was copied from the Merrinatica Consortium and others they have since met. Although they appreciate technology, they still prefer to use magic in all aspects of life from communication and healing to travel and protection. Thus, they'd much rather use a "spirit messenger" (identical to the *Magic Pigeon* spell except it looks more like a ghostly figure; P.P.E. must be spent as per the spell) to communicate than a telephone or radio. This means even the technology they use is augmented or used in conjunction with magic whenever possible.

The society on Go Gorau Ne Tobru has never been fully seen or documented by outsiders, so there are many aspects of their civilization, customs, and life that remain unknown to outsiders. A select few mystics of varying intentions and orientations have had glimpses of it, but little more. The people here are guided by the spirits all around them. They see many of these spirits as ancestors, nature spirits and deities, but they also recognize less significant spirits as well as evil and malevolent ones, including demons. This link to the supernatural enables the Kaech Ne Tobru to see and interact with any ethereal entity, including ghosts, spirits, entities, and astral beings. However, while they can see and converse with these beings, they can not automatically control or command them, although they do possess some magic to do so. The Kaech Ne Tobru's perceptions of spirits, though similar to that of the Native Americans of Earth (see **Rifts® Spirit West** world book for more details), is not based on a circular interrelation of all spirits and the monitoring of that circle by the gods to ensure it is respected. Instead, they see *all things*, both living and spirit, as equal and significant to the way things are in the universe. For example, the Kaech Ne Tobru respect the spirits as another alien race, but they may still bind and control them through magic. As long as the spirit isn't abused while in their service, they believe everything will be alright. Likewise, a major catastrophe in the spirit world might cause catastrophe in the physical world in the form of a plague, natural disaster and even civil discord, for they believe both the spirit/supernatural and physical realms are connected and have an effect on each other. To the Kaech Ne Tobru, all things seen and unseen, understood and mysterious, are a natural part of the universe.

Kaech Ne Tobru

Alignment: Any, but typically Principled, Unprincipled, Anarchist or Aberrant.

Attributes: I.Q.: 3D6, M.E.: 3D6+1, M.A.: 2D6+3, P.S.: 3D6, P.P.: 3D6, P.E.: 3D6+6, P.B.: 2D6+3, Spd.: 2D6+3.

Hit Points: Standard, P.E. attribute number plus 1D6 per level of experience.

S.D.C.: 6D6+6

Height: 5 feet +2D6 inches for females (1.5 to 1.8 m) and 5 feet, 8 inches +2D6 inches for males (1.73 to 2 m).

Weight: Approximately 10% less than a comparable human

Average Life Span: 120 years.

Magic Abilities: Mystic Study Power Category. Standard Wizard abilities, but any summoning spells and magic that reveals, controls or communicates with spirits and the supernatural have the greatest appeal. Moreover, summoning spells, including Summon Shadow Beast and Summon Fog, cost the Kaech Ne Tobru only *half* the normal P.P.E. required for such spells.

Kaech Ne Tobru use the standard Wizard rules and possess their typical abilities, but these aliens develop their spells naturally, thus they do not learn spells from books or tutelage, but from dreams where knowledge is visited upon them by spirits. In a game context, select the usual four spells from each level 1-4 (16 total) and a total of eight from levels 5-10.

Learning new spells: Starting at second level, the character can select two new spells from levels 1-6 or one spell from levels 7-11 (they are revealed in dreams and during meditation). Not until 8th level and beyond can the character select spells from levels 7 all the way through 15.

P.P.E.: Same as for any Wizard: 2D4x10+20 +P.E. attribute number for the base, and an additional 2D6 P.P.E. per level of experience. Note: On their home world, they can draw upon an additional 20 P.P.E. per level of experience from the alien intelligence living inside their planet! However, this energy supplement does NOT apply when off-world. Nor can Kaech Ne Tobru draw P.P.E. from other living beings, but they can draw upon ley lines and nexus points.

Education: Any education is possible, but the types of spells selected will generally reflect and complement the profession and education of the character.

Determine education and drop one skill program due to the character's focus on magic and mysticism as an active part of his life and knowledge (see *Other Magic Abilities of the Wizard* on page 152 of *Heroes Unlimited, 2nd Ed.* for mystic knowledge and abilities).

Natural Abilities: Summon Ally Spirit: This ability costs 20 P.P.E. and summons a spirit with the following stats: Mental attributes are all 9, physical attributes are all 16, Hit Points: 20, S.D.C.: 30; three attacks per melee round and does 2D6 damage per attack.

The spirit can attack astral beings and entities or become physical to engage solid ones. It can perform minor healing (1D6 points) three times per day, and can only be summoned once per day/24 hours for a duration of one hour per level of the summoner. Each level of the summoner's experience adds +1 to the spirit's Hit points, S.D.C., and Spd. Additionally, every three levels of the summoner's experience gives the spirit one additional attack per melee round. The spirit can also *merge* with the one who called it to impart limited knowledge upon the Wizard. This manifests itself as a +15% bonus on any one skill already known to the character (the bonus lasts for one hour) or a 40% ability in a skill not normally known to the mage (lasts for 30 minutes before it is completely forgotten). In either case, the merging process will cause the spirit to effectively vanish.

At 6th and 12th levels, a second and third spirit may be summoned, but its bonuses and abilities are at the basic level noted above and do not increase.

Special Weapons: All Kaech Ne Tobru are given an *enchanted knife* upon completion of their vision quest for adulthood. They carry this symbol with them for the rest of their lives. Damage: 2D6+2 and hurts physical, energy and supernatural beings, as well as creatures of magic who might otherwise be impervious to normal weapons (it is magic). Weight: 0.6 lbs (0.27 kg). Length: Varies from six inches to almost 12 (15.2 to 30.4 cm) and often depends upon clan and heritage.

Special Vehicles: Magical flight ring or medallion identical to the Fly spell – it enables the wearer to hover and fly at up to 35 mph (56 km) with a 1000 foot (305 m) altitude ceiling. The ring can be used repeatedly without external P.P.E. being pumped into it and without a time limit. Will only work on Kaech Ne Tobru, however.

Preferred Armor: Kaech Ne Tobru prefer magical protection in the form of spells. If body armor is worn, it will be light to medium and easily hidden beneath the loose clothes they prefer.

Familiarity With Earth: None.

Rifts® Notes: The Kaech Ne Tobru in *Rifts®* should be considered very powerful Mystics. Use the *Heroes Unlimited™* rules for creating them as noted above. In a *Rifts®* setting, the spirits they can summon will be M.D.C. creatures and are able to inflict Mega-Damage with their attacks.

Phorila

Phorila is the home world of the vegetation aliens known as the **Kisents** (See page 153 of **Aliens Unlimited™**), the developers of *Kisentite weaponry*. It is a technologically rich world of industry and cutting edge technologies on a Star Age level. The geography of Phorila is mostly rocky, and all of it is hot by Earth standards. Much of the surface hovers at around 200 degrees Fahrenheit (93.3 Celsius; 366.3 Kelvin) while the tropics range as high as 300 F (148.9 C; 422.0 K)) and arctic zones drop to a mere 90 F (32.2 C; 305.4 K). The deserts of Phorila are vast plains of black volcanic rock under which the *Heat Mines* that produce Kisentite are found. Rolling clouds of dark soot cover these deserts, creating a strange perpetual night that is under-lit with the orange glow of free flowing magma. Characters spending time in these deserts must take precautions for their survival, including insulated environmental suits and drinking water to avoid dehydration. Even aliens from thermal worlds may need some protection. The arctic regions resemble the deserts of other planets with huge dunes of sand and jutting columns of stone. The whole vista, sand, rock and sky, is colored by a palette of reds, oranges and purples. Other areas of the planet vary in terrain, geography, and elevation just as they do on Earth.

Phorila's vegetation is sparse and most of the surface is rocky. The plants that do thrive include a variety of cactus, long snaking vines, and stout, short trees with tough, leathery bark and little or no leaves. They draw nourishment from the sulfates in the air and their numbers vary with the different environments. For example, cactus are most abundant in the arctic zones. There are oceans on Phorila, but the waters are thick, dark and hot. Water from springs deep in the rock is also available, but it still has the taste of sulphur. As a result, one of the most profitable (and sometimes abused) industries is the importation and distribution of water to visitors, like humans, who need to drink water to survive. The Kisent are vegetation aliens and as a result, there is little in the way of natural foods on the planet for other races. Sustenance for the Kisent comes primarily from life giving light. The Kisent do ingest some protein mixtures as supplements and these come in numerous forms and flavors ranging from the equivalent of fine wine to solid junk foods. To non-vegetable aliens, however, these foodstuffs look and taste like fertilizer. Most Kisents understand that "animal" life forms are unable to eat their foods and are not usually offended when they speak badly of it, although many will get a good chuckle out of those who are willing to try the stuff.

Phorila is famous as the birthplace of Kisentite weaponry and spawned an entire industry around the rare, dense metal. In order to shape such a hard substance, it must either be cast as a liquid into a mold where it solidifies upon cooling, or it has to be forged when solid, which requires tremendous forces. The casting process produces a weaker weapon because it is basically just a block of shaped metal. Weapons produced this way are very functional, but are only marginally stronger than a high quality steel weapon. To capture the exceptional qualities that make Kisentite weaponry famous, namely its durability and razor edge, the metal must be meticulously cut, chiseled and shaped so that each layer of the weapon's construction is as strong as the next. This yields a finished melee weapon superior to most others, including those made of molded Kisentite. The technology used for this process is called *laser forging,* and is a closely guarded secret. Many races and entities have tried to copy or emulate the process, but with minimal, if any, success. The Kisent pioneered it, still make the best weapons, and take great pains to keep their secrets as well as the latest developments and advancements in Kisentite technology. As a result, the laser forging facilities are like military installations with very tight security and dedicated workers. The average laser forge is about the size of an Earth tractor trailer cab and weighs about 7 tons, but the state-of-the-art forges on Phorila can fill entire warehouses. Only technicians and workers bound by rigid contracts to the major corporations that run the forges are allowed inside the facilities. Attempts by competitors to ac-

quire copies of the laser forge schematics are routine and thus far, unsuccessful, though over the years, plans for ancient methods behind the creation process have leaked out to create a small cottage industry for Kisentite weapons.

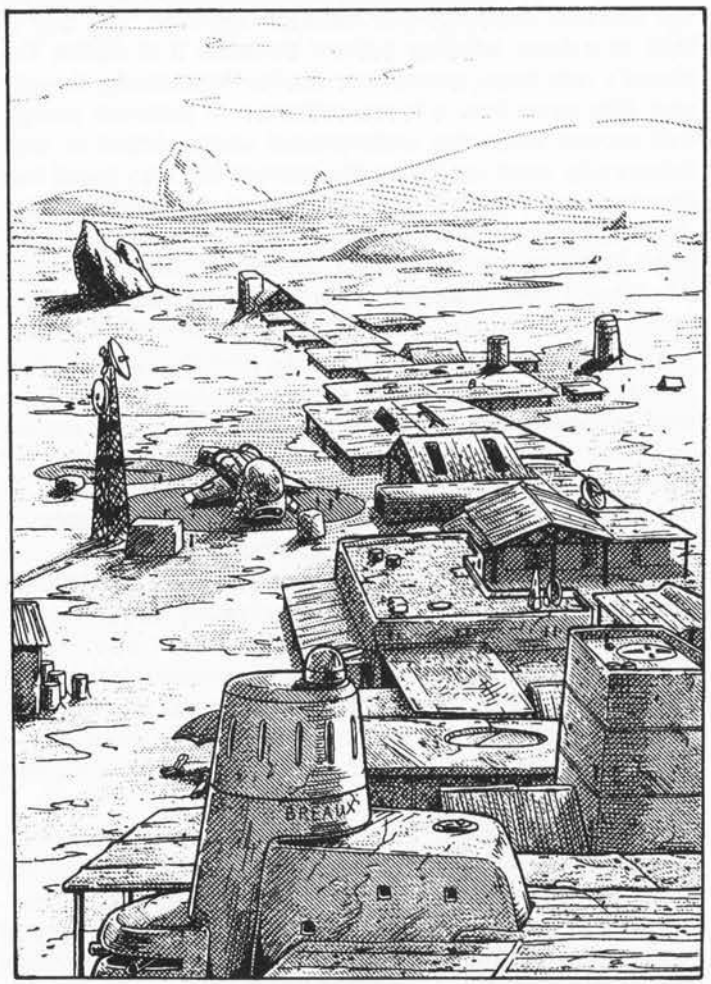
Despite the Kisent's efforts to keep the details of their trade secret, they are immensely proud of their achievements and actually promote tourism to showcase it! Tours of old facilities (with key production elements removed) are sometimes arranged, but are strictly regulated and monitored. Such facilities are rarely in use any longer, making security that much tighter for anyone involved in industrial espionage. Given the tight security around the laser forging process, these high priced tours are a real treat, even if they don't reveal any true secrets.

Tourism on Phorila is a big business and attracts millions of visitors every year; most staying only 1-4 weeks. Visitors to the planet arrive via commercial space travel lines or can dock private spacecraft at any of a hundred space stations in orbit around the planet. Each station acts as a check in point and customs agency for all visitors. Dozens of military installations and hundreds of satellites also orbit the planet but are off limits to visitors. Most visitor processing stations are sparkling clean, comfortable, well lit and efficient, as are the shuttles to the planet's surface. In addition to recreational visitors, Phorila also receives a large number of traveling researchers, scientists and students each year. Kisent technical academies offer a wide variety of highly advanced science and technical degrees, all of which are top rate, and produce many fine engineers and scientists (a number of whom go on to lucrative contracts with the forging companies). These institutes of learning are so highly regarded that they attract students from across the galaxy, making the universities home to the largest *non-Kisent population* on the planet.

The turbulent, fiery volcanic plains and the heat mines where the Kisentite metals are found are impressive enough to draw their own steady stream of tourists. Since these plains harbor no industrial secrets, tours here are much more relaxed than those to old Kisentite facilities and modern cities. However, tourism on Phorila remains a tightly controlled industry. Those who visit the planet will be logged and monitored closely, especially if they are regarded as suspicious or suspected of industrial espionage or other crimes. Though the volcanic plains and barren arctic of Phorila are large, sneaking onto the planet in a private spacecraft is virtually impossible due to the high-tech security and vast number of space stations, satellites and tracking systems. (Any attempts to sneak on to the planet without registering are done at -40%.)

If there is one major crisis facing the Kisent, it is the fact that Phorila is located very close to the Atorian Empire. This proximity is a blessing when it comes to trading with the Empire, as it purchases large quantities of Kisentite ore and finished weapons, but there is the ever present threat of Imperial invasion. Relations between the natives of Phorila and the Atorian Empire have been amicable but strained. The Kisent are careful not to get too cozy with the conquerors nor share too many of their secrets. Many observers believe that the Kisent are likely to be offered status as an allied race when the next expansion begins, something many fear they will accept. At the same time, there is constant diplomatic pressure from the FAR for the Kisent people to oppose the Atorian Empire, or at least remain neutral. Unfortunately, the Kisent are a very practical people and seem unlikely to refuse a friendly invitation to join the mighty Empire. After all, those who reject such Imperial generosity usually earn the Empire's ire and distrust, and are not likely to get a second offer, but see their worlds invaded and conquered.

Conversion Notes: If the G.M. is using Phorila in a *Phase World®* setting, or has converted *Heroes Unlimited™* to M.D.C., the technical level of the Kisent will be M.D.C. of the highest quality. Kisentite is a Mega-Damage material, and any melee weapon forged with it will inflict 1D6 M.D. (for small knives and such) to 3D6 M.D. for the typical sword, 4D6 for large, two-handed types, and 5D6 for giant-sized blades. No Kisent or Kisentite weaponry is known to have ever made it to Rifts Earth.



Plesus Euphia

Plesus Euphia is an arid desert planet on the borders of the *Titrana and Ilta quadrants*. It is a dry dust bowl with no oceans and very little water of any kind. Rain is almost nonexistent and when it come, it pours down in a deluge that can last days, but such rains might only happen twice a year. Six to ten days of rain a year is not enough to support any native life forms on the planet, but there is certainly life, it just comes from off-world. The only people

who would even try to live on this dry hell are those who are unwelcome anywhere else. Criminals, fugitives and other antisocial or exiled types have built on this unforgiving planet, a meager but thriving existence. The planet's namesake and only city, *Plesus Euphia*, is a long strip of buildings constructed under a canopy of steel one mile (1.6 km) wide and 200 miles (320 km) long. The canopy is supported by large pillars and is open on the sides with no walls or doors. It is a huge shade roof to keep the heat off of the city underneath, otherwise any moisture would evaporate, the heat would beat down unmercifully, and life would be that much more difficult. The shade from the roof cuts the average temperature from 120 degrees F (48.9 C; 322.0 K) to a tolerable 100 degrees F (37.8 C; 310.9 K). Plesus Euphia is still a thermal world and follows the rules as such, however, most characters will be able to get by with or without thermolate clothing. Renting such protection costs 75 credits a day. Those that like the heat, build homes outside the refreshing shade, but the majority of the 250,000 residents live beneath the roof. The city is built in a long, winding pattern because it is above the planet's only large, permanent aquifer. Historically, the city was little more than a loose collection of cutthroat camps that moved when the underground water shifted or was temporarily used up. When the current site was found two hundred years ago, the camps stayed put, began to put down roots and grow. Now that enough technology has been transplanted to monitor the water, and the ruling powers are sure it will not dry up any time soon, they are able to fortify and build defenses for this criminals' haven.

Six medium-sized space stations orbit the planet. They are armed and have a number of satellites to augment their firepower, but the weapons are for general defense and not to keep people out. The orbiting space stations serve as drop-off stations and will ferry visitors down to the surface if their spacecraft have no trans-atmospheric capabilities, or if they simply prefer not to land on the surface. Those who go through the space ports and shuttle down are often required to leave extremely large or powerful weapons at the check-in counter of the space port, but a bribe will usually get one the required "permit" to carry anything into the streets below. Those who do wish to land directly on the surface can use the small space port on the outskirts of town or find a spot in the open desert.

Most anyone other than bounty hunters and lawmen are welcome on Plesus Euphia, and the worst of the worst frequently come by. What there is of any formal authorities, live by a don't ask, don't tell policy and tend to ignore "squabbles and disputes," especially if they only involve other transients. Unless a visitor causes a serious disturbance or interferes with one of the crime bosses or government, they are ignored as another no-name drifter. Consequently, most transient visitors use an alias and most inhabitants (but not all visitors) know better than to ask questions or announce that they know who an individual really is. (Saying something like, "Hey, I know you. You're Zax Red Beard of Sirus Five," is likely to get one killed quick, even if the individual isn't Zax, namely because it just brought the fugitive unwanted attention.) Many of those who come to a hell hole like Plesus Euphia only do so because they are trying to lay low or have some ill-gotten loot to fence or dangerous contact to make. Those who have money to spend and want to party will be the ones making all the noise and sponsoring parties, and even they may hide behind an alias or thin disguise. Those who cause trouble for such rogues and cutthroats either disappear or meet with a "deadly accident," like a laser through the back of their skull.

The real law is as transient as the criminals, killers and fugitives who visit the planet. Given the nature of the city and planet, the most powerful factions run it and they impose their own set of rules. There is always an uneasy truce between these factions, but outside a strong handful of crime families and associations, the power structure of Plesus Euphia changes hands regularly, and gang wars are not uncommon. Things settle down after one side or the other gains the upper hand or snuffs out the competition. Lesser factions and independent operators tend to serve one of the current larger powers or those plotting to be; such is the way of politics here. Given the open state of the planet's defenses, no one really sneaks onto Plesus Euphia; a lot of people come and go without ever registering or visiting the city. They simply find an isolated spot someplace on the planet and lay low for a while (a few days to several months). Of course, hiding out in the remote wilderness has its dangers too, and those who are not careful can get bushwhacked by desperadoes, killed, robbed or hunted down and captured by lawmen or bounty hunters without anyone being the wiser. Characters trying to sneak onto the planet have no penalties, unless they have enemies there, in which case the characters will successfully land on Plesus Euphia, but their old enemies find out about it a short time later and may seek them out for a little pay back.

The streets of Plesus Euphia are mostly gravel and cheap concrete. Filth and rubbish is everywhere and indigents panhandle for food, booze and money. Only the main strip is nicely paved and kept clean, probably due to the fact that the largest and prosperous businesses are located here on "The Strip." These establishments are reminiscent of the casinos, nightclubs and hotels along the Las Vegas Strip on Earth, only sleazier. The Strip is a lane of decadence with no shame or tact. Garish and offensive, it does its best to reach out and grab the passerby (quite literally sometimes — as recruiters do their best to bring people into their place of business). Businesses are slick and brightly lit by neon lights that advertise everything one could imagine, from live sex shows with alien beauties, brothels, bars and drug dens to weapon dealers, doctors, bionic shops and full contact fighting arenas. "Murder houses," where one can practice with weapons on live targets, are the newest rage. The Strip is also the home of many criminals that are too dumb or overconfident to know better than to steal from other criminals and murderers. Pickpockets and con artists are as thick as flies here, while the muggers and killers tend to roam the streets and stalk the dimly lit dives behind and away from The Strip. Despite the flash and brazenness, the city is a rough and tumble place run by heavy hands hiding under a veneer of glitz and false security. The entire place is little more than a seedy slum that has none of the class or real civilization of, say, *Grymdin*.

As a visitor moves from The Strip in either direction toward the edges of the canopy, the streets become less crowded and impressive. Away from the sparkle are the homes of the losers, recluses, the desperate, the destitute, and the outcasts (yes, even criminals have those they do not want to be around). These are the really dangerous streets of Plesus Euphia. While The Strip can be hazardous, the strength of the big bosses keeps it basically under control and organized. In the back streets, there is often no semblance of law and life is a free-for-all where the strongest or most cunning survive and prey on the weak and unsuspecting. The powers that be rarely pay any attention to the happenings outside their profitable enterprises on The Strip. That is not to say they have no influence here. The larger criminal organizations run fencing operations, chop shops, gambling, vice and other underworld enterprises away from the public eye.

Besides The Strip, the *Circle of the Spine* is the most organized and developed area and organization. As an area, it is a collection of stout buildings arranged around a circular walkway of stone set into the sand. The buildings are the homes of the members of the mercenary and assassins' guilds who collectively share the area's name. Many of the mercs and hit men that come to the planet are independents, but the guilds have enough support, organization, and members to make them one of the powers in the city. The guilds have agreements with the people in power on Plesus Euphia to do off-world work for them, but the Circle of the Spine will not become tangled up in local politics or wars of any kind. They use the planet as a safe base of operations where they can meet with any of their clients and have no fear of interference from the authorities. Note that the guild members here are, in general, the types of people that prefer assignments that involve bloodletting, torture, extortion, brutality and carnage, from private jobs to full-scale military operations.

Away from the canopy of the big city are scattered homesteads, shacks and tiny shanty towns (rarely more than a couple hundred people). Many have signs warning that visitors of any kind are not wanted and will be shot on sight. Only one in a hundred is a well funded hideaway or base camp for interstellar crooks and space pirates.

Plesus Euphia is a grim reminder that much of the Milky Way, because of its vastness, has practically no law enforcement. Sure, there are organizations like the TMC spread across the galaxy, but all told, they only cover a minuscule percentage of the galaxy's space ways. This situation makes it easy for criminals to hide and evade capture, particularly on the fringes of "civilized space." There are countless places where might makes right and justice lays in the hands of the corrupt, evil and powerful. Remote trading outposts, distant worlds, unclaimed planetoids, asteroid belts, private space stations, primitive cultures, and forgotten colonies as well as countless remote sectors of space are havens for outlaws and renegades. The vast openness of space with hundreds of millions of miles between solar systems is a dream for the space faring criminal. Even if they do not have a spacecraft to make a run for uncharted space, they most likely know where to book passage on one.

A Gallery of Rogues

Theft, smuggling, assault, con games, vice, gambling, and civil disobedience, as well as more serious crimes, all exist to some degree even among the most enlightened civilizations. The following are some of the more notable professional criminal occupations one can encounter in the Milky Way galaxy.

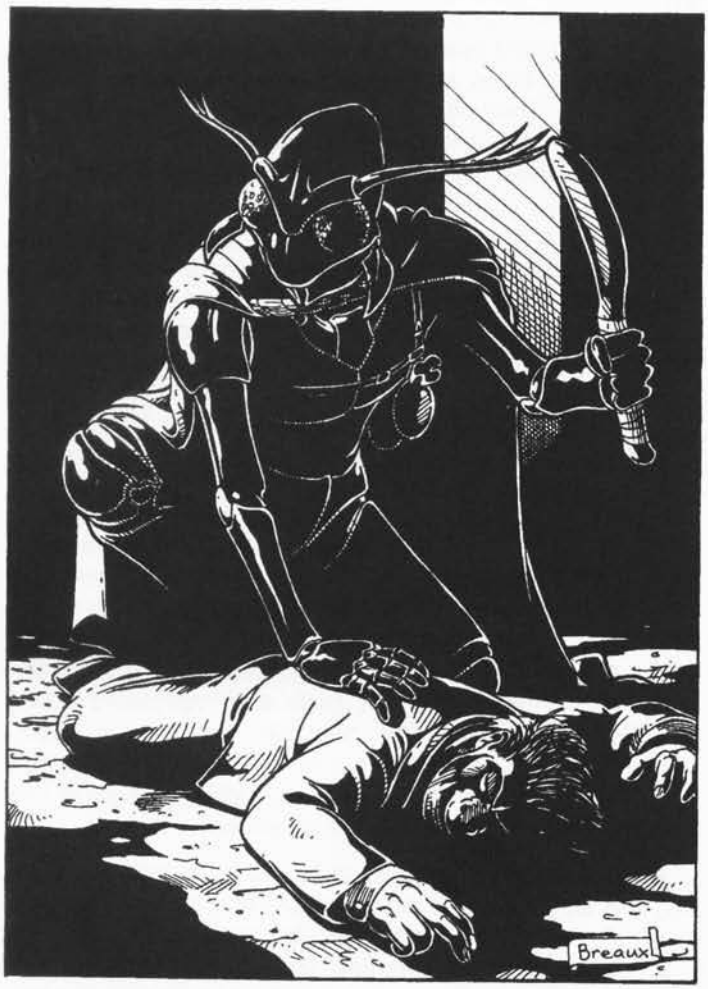
Understanding a criminal is often the key to defeating or capturing them, as well as avoiding them. All established law enforcement agencies will have a doctor or specialist in psychology and behavioral science to offer insight and profiles on the criminal mind. Large police forces like the TMC retain and specifically train agents in the arts of magic and cultivate psychics. Such special operatives not only sweep crime scenes for tangible clues, but also look for evidence, clues and info that may lay hidden in the crime scene. They can help ferret out the truth, extract information from witnesses and accomplices, and even glean clues and insights from objects and emanations.

Just as any villain does not have to be all bad, so too are criminals a varied lot. Many are despicable thieves and murderers without any redeeming value. Some are diabolical psychopaths who live to hurt and kill, while still others are power-mongers and megalomaniacs who live only to win and acquire power. Then again, there are those who aren't all bad but have fallen on hard times and have made mistakes, or have been led astray by a manipulative true villain, or by their sorrow, hate or prejudice. A few may be Robin Hood types or condemned for their unpopular political stance or opposition. Then there are pirates, Raiding Clans, and degenerates who have been raised as criminals and see nothing wrong with the crime they commit or the people they hurt. And even vile scum, like many Syndicate bosses, can be charming, charismatic, friendly and kind, feigning innocence or (mock) sincerity with amazing warmth, guile and impressive acting skill. Remember, guile, lies, deception, trickery and misdirection are all part and parcel of the criminal occupation and often key to pulling off a scam, tricking someone into helping them, and making good an escape.

Assassins are professional "contract" killers, meaning they will target and kill an individual for money. Most are experts in setting up ambushes, traps and killing a target in a number of ways. Most are skilled with handguns and rifles, and about half are versed in the handling of poisons and/or explosives. Some limit their handiwork to a specific political or theological agenda, i.e. only take contracts against a particular government or organization like the TMC, FAR or the Atorian Empire. However, most are professional hit men who will take down anybody if the price is right. The only other killing most engage in is done in self-preservation against witnesses, stoolies, and lawmen.

Drug lords are an aspect of organized crime that combines many of the baser aspects of the other criminal groups presented here. They are wealthy, successful, and frequently operate large gangs or criminal networks, but rely on a more volatile source of income and brute force than what we refer to as "organized crime." Even the best drug lord networks invariably suffer from or engage in street violence, intimidation tactics, murderous retribution,

internal discord, competition from rival drug gangs, excess and the general degradation of society, earning them a separate classification from the Syndicate. Drug lords are often pitted against rivals and upstarts in a constant power struggle to hold onto their "turf" and client base. Only the most experienced and organized may band into cartels to protect the heart of their vast income, opposing anyone who attempts to slow or stop the flow of raw materials and finished product. More often than not, the drug lord's organization is characterized by a slick appearance and flash in the pan success. Few drug operations last longer than 4-8 years, but are quickly replaced by new drug lords and their gangs of thugs and dealers.



Murderers and other familiar criminals abound in the galaxy, but that shouldn't be surprising. There are fairly few cultures that have managed to completely eliminate such criminal elements from their ranks. Except for serial killers and assassins, *professional murderers* tend to kill people in association with other crimes. Some simply have no regard for life and kill whomever gets in their way, others can't control their rage or enjoy hurting and killing. Such brutes frequently serve as enforcers, hit men, revenge squads, interrogators, and bodyguards for other crime lords, gangs and syndicates. However, most pros are career criminals who engage in all sorts of criminal activity from robbery and hijacking to extortion and racketeering. They see themselves as "soldiers" in war, and as "soldiers," they need to kill to accomplish their goals and stay alive and free. They are not homicidal maniacs, but have no or little regret killing anyone who tries to stop or arrest them. They will also threaten and kill witnesses, take hostages and do whatever it takes to protect themselves. It's just all part of the job.

Organized crime and its masterminds are just as common in a galactic setting as they are on Earth. Though these entities may resemble some of the other organized gangs and bands discussed here, there are significant differences between them, including a code of honor and a more refined control and profit structure. Organized crime, also referred to as the Syndicate, is presented in more detail later in this section.

Pirates (Space Pirates). Just like the cattle rustlers and train robbers of Earth's "old west" and pirates of the Carribean, these gangs attack vulnerable looking spaceships, cargo transports, freighters, merchant ships, luxury liners, and any other spaceship that looks vulnerable and might hold enough loot worth taking. Space pirates may also raid space stations (or dock and engage in a crime spree onboard or on the planet below, before blasting back into space), poorly defended colonies, deep space mining operations, trading posts, and exploratory expeditions, as well as steal orbiting satellites and entire spaceships, stranding the pilot and passengers on a floating asteroid or life raft and calling for help on their victims' behalf only after they have made good their escape. The worst pirates also engage in slavery, in which case they will regularly take captives to sell to slavers or to serve the pirates as servants and slave labor.

Most pirates are masters of ambush, surprise attacks and the old "snatch and run." This means they are only interested in easily liquidated items like gold, gems, jewelry, weapons, electronics, information, and cash. It also means they don't hang around. They make their score, tie up the crew and make good their escape. Only true blackguards kill without reason or for fun, most are just roving gangs of thieves. Space Pirates may operate in large crews and have as many as two dozen spaceships in their armada, but most pirate bands rarely number more than a hundred with a handful of small spacecraft and/or fighters and one medium to large crew or cargo ship as their flying base of operation. Many pirates target a particular sector of space or travel lane, moving on only when the law gets too hot to handle or new travel routes are established to avoid them. Others are wolf packs following their prey to wherever hunting looks best (i.e. well traveled, but poorly protected space lanes, boomtown space colonies and mining operations, etc.).

Raiders operate much like pirates and robber gangs, but they rarely ever remain in one general location for long and use the profits and materials from their raids to support a nomadic lifestyle. Raiders also tend to operate in large, military style groups and go after large targets, including food storage facilities, manufacturing facilities, full scale mining operations, merchant convoys, well defended outposts, the occasional armory or military outpost, and even small fleets of ships. Raiders tend to be much more violent and militant, blasting their way into a compound, shooting up the place, setting fires, destroying property and shooting anybody who makes a sudden move, let alone those who get in their way. Many are large opera-

tions and average about 100-200 men, but they can number into the low thousands and command an entire fleet of spacecraft (see the *Raiding Clans* for an example of such large groups). The largest of the raiding groups will break into smaller fleets to raid and often rendezvous at predetermined points.

Robber gangs that operate in space are very much like pirates, but they are only interested in easy money and more money, just as long as they can grab it and go. They aren't likely to take a spacecraft unless it is a real easy steal, but unlike most pirates, they will ransom important prisoners, steal cybernetics (often killing their victim to get it), rape women and tend to be more bloodthirsty than the average pirate or thief. Robber gangs are seldom large and average one or two dozen.

Serial killers are also found in a galactic setting. In fact, they are more common in a space setting than they are on Earth. Why? A number of reasons. One, space faring serial killers have a wider hunting ground that can include a planet or a planet and dozens of spaces stations to dozens of worlds. Moreover, there is a greater number of potential victims to hate and target, i.e. a serial killer who stalks only aquatic aliens, or human females, or Atorian males, or vegetation aliens, and so on.

Another factor is the number of rampaging monsters. Demons and monster are not serial murderers in the traditional sense, but they are often categorized as such until there is good evidence of the killer's true nature or the monster is actually caught. The multitude of undiscovered monsters roaming through space makes it quite common that such creatures should go unidentified for most of their killing spree. Planet based civilizations will not have so much of a monsters-mistaken-for-serial-killers problem, but space stations, remote outposts, and any other settings in space will.

Smugglers specialize in getting illegal and contraband goods (and sometimes people) in and out to market. From weapons and vehicles to drugs and literature, the smuggler makes a living slipping them past the laws that restrict them and the agents charged with enforcing those laws. Many smugglers specialize in one or two kinds of cargo and have their spacecraft outfitted for such goods, and that may include freezer bays, heated bays, passenger accommodations, armored bays, etc., all well hidden from most inspectors. Gun runners would be a highly specialized form of the smuggler. The Black Market relies on smugglers to move documents, information, weapons, and goods for them in and out of most territories. Smugglers are usually well educated and reasonably good thieves and/or forgers and con artists.

Space gangs are very much like their terrestrial Earth counterparts, predominantly composed of angry, violent youths in trouble with the law and mad at the world. Gangs usually operate in very localized areas, such as a specific neighborhood, city streets, street corner, park or establishment. This is their "turf," a parcel of land (usually urban) they claim as their own. In the case of interstellar societies, that "turf" may be a particular level or area of a space station, docking bay, old warehouse or hangar, to a specific asteroid, moon, or sector of space. Once their turf is established, the space gang tends to recruit heavily from the local solar systems. Small gangs may claim an outpost or sizable asteroid, while larger ones can spread their influence over several solar systems and will have their own spacecraft (though rarely larger than 100 tons) and an arsenal of weapons. Space gangs thrive on quick money, trafficking in drugs, robbery, muggings and other violent crimes. Most gangs demand their members to be fanatically loyal and are unforgiving of those who try to leave the gang or depart from its twisted code of honor. Ultimately, the rules and code of a gang are made up by the leader and enforced by his most trusted henchmen. Most include some level of secrecy, initiation rites, and social levels within the gang, not unlike the pecking order of a wolf pack. Outsiders are not to be trusted and the law and government is the enemy (making gangs anarchist organizations). The typical gang relies on a primitive, but effective system of fear and intimidation to keep order.

Spaceway barons are people, businesses or organizations that use the tenuous connection an open space route gives a remote location or several remote locations along the route to build a power network. The very space lane or route brings travel to the region and makes the places along the way viable as rest stops, trading posts and tourist destinations. By using that connection as leverage against the people dependent on it, spaceway barons build themselves little empires of thriving businesses and kickbacks for those they help to "hook up." In most cases, the baron owns either the spacecraft, gateway structures, gravity generators, defense force, communications network, or the company that provides any or all of these vital links to the galactic community and uses the threat of removing them to coerce the locals into giving him a kickback, discounts, special deals and/or doing things his way. The remote location of the communities or the baron's own monetary or political power makes it very difficult, if not impossible, for ordinary people to throw off the baron's yoke. It also means there are no local authorities to prevent the baron and other rich opportunists from taking power (and advantage of the underprivileged) in the first place. In many cases, it is the space baron who owns the local authorities. Spaceway barons tend to be petty bullies, tyrants and ruthless entrepreneurs looking to build an empire on the misfortune and backs of the common man. They are rarely subtle and prey on the weak and vulnerable. Like organized crime, they are well funded, have a network of operatives and support systems in place and many will ignore, bend, and break the law when it suits them. All have bodyguards, thugs and underlings to do their dirty work for them, and some employ mercenaries, criminals and murderers to deal with problems.

Terrorists abound in the politically charged arenas of the galactic community. Their causes vary by race, religion, government, and group, but their tools are the same, fear through violent intimidation, murder and mass destruction. Spacecraft are vulnerable to depressurization, even if they can't be totally destroyed, and a suicidal pilot can ram a starship into a planet at light speed, disrupting the weather and killing thousands upon impact. Likewise, all the usual weapons of the trade are deployed: kidnaping and extortion, taking hostages for demands, sabotage, smear campaigns, computer viruses, making false and

real threats, sniper attacks, suicide raids, assassinations, and attacking public, government and heavily populated sites with explosives, biological agents, poison and gas, as well as unleashing dangerous monsters, summoning demonic entities and causing other sorts of peril and disaster. All done for some cause, belief or revenge.

White collar criminals are as common in space as they are in a terrestrial setting. Racketeering, embezzlement, money laundering, labor and real estate scams, and computer crimes are all somewhat ethereal crimes when compared to rape, murder, theft, assault, and other violent crimes. Many criminals use these difficult to notice activities to generate income, but they are most often associated with the Syndicate and similar organized criminal operations because few of them can be easily pulled off by a single person. Unlike other crimes, these paper and electronic crimes commonly stretch across local boundaries, either into other states and nations, onto other planets, or into separate quadrants. These trails can lead authorities on a merry chase as they track down one small clue or paper trail after another.

Raiding Clans

The infamous Raiding Clans are composed of close-knit family groups, or clans, of several different races. Like space faring gypsies, they travel the spaceways plundering and enjoying total freedom. They are in constant trouble with the Atorian Empire, the TMC and other law enforcement agencies. The Atorians and TMC both offer bounties with large rewards on key members of the most notorious space raiders. Most bounties are for "dead or alive" but positive identification is a must!

Although Clan Raiders are bold and conniving thieves, smugglers and fighters who are a constant thorn in the side of the Atorian Empire and TMC, most do not kill indiscriminately. For example, they never knowingly attack vessels with women (aside from Atorians) and children, nor engage in torture, rape, or the slave trade. Wanton acts of cruelty and murder are not tolerated and the perpetrators are tried and executed or driven from the clan. Likewise, Raiding Clans never steal from, betray, abandon or harm other members of the clan. When it comes to these rogues, there is (at least some measure of) honor among thieves. It's what keeps the Raiding Clans strong.

Their numbers are expanding through the birth of their own children and by recruiting new clans to join them. If a group of people prove themselves to be trustworthy, hard working, loyal raiders, and the majority of the band (80%) are all related, or at least the same race, they may be allowed to join the Raiding Clans as a new member clan.

It is rumored that there are other Raiding Clans scattered across the galaxy, which suggests there may be a home world where the Raiding Clans originate. Perhaps it is a world of honor bound criminals like Grymdin.

All Clan spacecraft use microwave sails combined with antigravity engines and stealth coatings to make them nearly invisible to sensor systems. Their main base of operation and residence is a 50 mile (80 km) long planetoid with two other nearby planetoids half that size used by some of the other clansmen. Each of these planetoids is outfitted with massive nuclear drives that can move them through space at 20% the speed of light. Normally, they are accelerated to a certain speed, then the drives are shut down and the great rocks allowed to drift in a particu-

lar direction. This gives them the appearance of being uninhabited and nonthreatening (the drive cones are concealed). Hidden amid the rocks are a variety of long-range weapons, some of them battleship class, and concealed docks and hangars for attack spacecraft and crews of bandits.

Typical alignments are Anarchist (38%), Aberrant (35%), and Miscreant (20%).

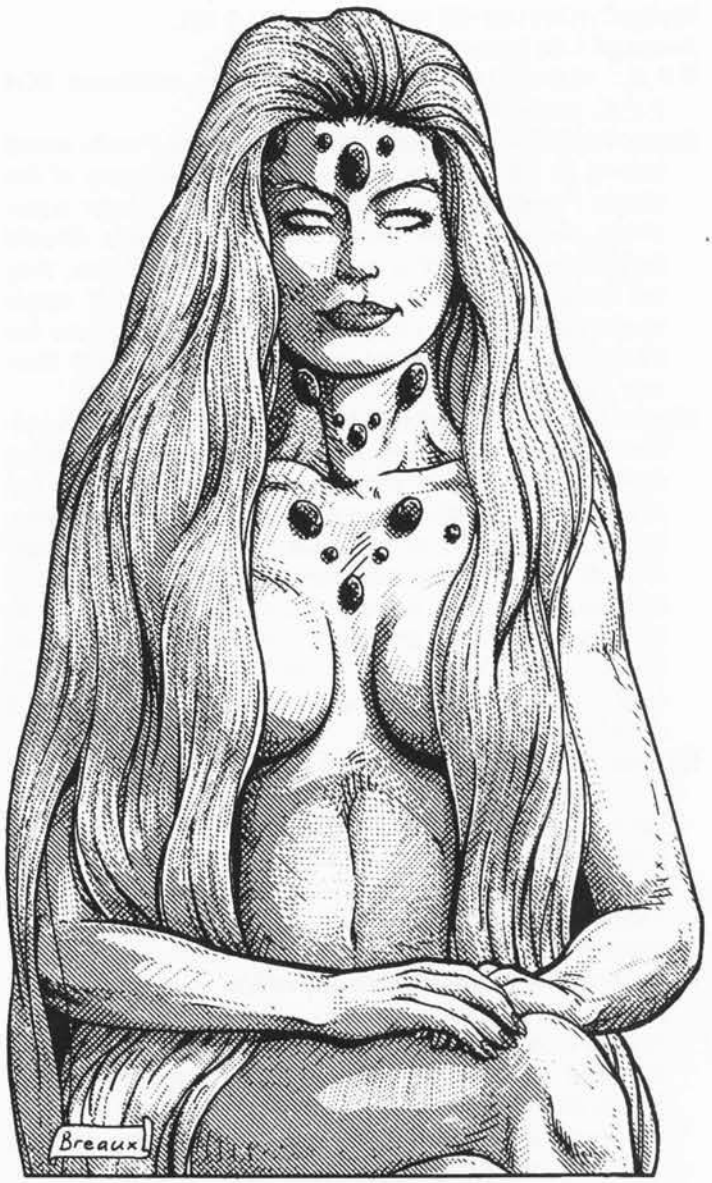
Rol

Rol is the home world of the Perola, a people who represent the ultimate in racial harmony. Perola have attained a highly advanced state of cooperation and peace. There are no wars among the Perola and each of them treats every other person and race as an equal. The Perola have no secret potion or magic solution for their enlightened state, saying that it took many millennia of hard work, understanding, tolerance and awareness to attain their present state of peace and wisdom. Rumors about divine influence and powerful alien intelligences are common among off-worlders.

The Perola are a driving force in the FAR and have the greatest number of representatives on the Security Council. Their influence and power comes from what can only be called a peaceful Empire or Empire-by-choice. For centuries, the Perola have reached out to help and guide anyone who would let them. This has resulted in hundreds of planets that either willingly allow the Perola to govern them or rely on their advice. One bit of common advice offered by the Perola is to join the FAR, making the Perola the organization's greatest enrollment boosters. The strong but benign influence of these gentle aliens gives them a connection to hundreds of different people and planets, most of whom think of them with fondness and high regard. Many even follow their lead in voting on issues, or ask for their advice.

The Perola themselves are nearly as beautiful as the society they have created. They are tall, thin, elegant humanoids with pale skin, delicate features, delightful voices, warm dispositions and friendly character. They never carry weapons and would have a hard time hiding them if they did for Perola rarely, if ever, wear more than a loincloth or simple wrap of clothing. Nearly all of them have extremely long hair that touches their knees, ankles, or even the floor, and clothing is worn only for political or social reasons on behalf of those who feel uncomfortable with nakedness. (The Perola see the body as a thing of beauty and form, not a thing of lust or shame.) These aliens rely upon their natural abilities for defense and/or escape. They will only fight when necessary to save themselves or others from death or suffering, but such conflicts will always be their last resort and last only long enough to effect an escape or resolve, never to the death for any reason. Dead men, after all, can never find enlightenment and peace. Perola who are asked to surrender will usually do so, and they will honor it until it becomes apparent that they are to be tortured or killed. At that point, escape becomes an option, but not if so doing will kill others or place innocents in jeopardy.

The Perola possess technological skills equal to those of the Atorian Empire (Galaxy Age tech level)! They could likely duplicate any of the items of the Empire, except to do so would disrupt the natural flow and evolution of intelligent life in the Milky Way, and they refuse to make weapons and machines of war. Thus, the Perola will not give nor sell their technological secrets to other races and will die under torture before breaking that solemn vow. This stance angers many of their fellow FAR members, but the Perola are adamant. The only technology they will allow others ready access to is of a life saving nature, but even then only under Perola supervision. Some of the most sought after doctors and medical treatments are from the Perola's home world, and the best planetary defense systems outside of the Empire are found at Rol. Defense systems that knock out guidance and navigation systems, neutralize nuclear devices and warp energy weapons (reducing their damage capacity and range by half), as well as energy deflection systems and tractor arrays that stop invading vessels in their tracks like flies caught in a spider's web. Force fields and other systems are also part of Rol's defense and why the planet has never been invaded



in its six thousand year history as a modern galaxy spanning civilization.

The Perola are one of the powerhouses within the FAR because of their reputation, peaceful outlook, support (both direct and indirect) and widespread influence. The Perola are possibly the most admirable members of the FAR, although aggressive militants see them as peace-loving fools whose good intentions will doom them all. The Perola respond with arguments for compassion, tolerance, peace and enlightenment. They are always glad to debate human nature, philosophy and the pursuit of cosmic awareness with all life in the universe.

Perola

Alignment: Principled or Scrupulous only.

Attributes: I.Q.: 3D6+2, M.E.: 3D6+4, M.A.: 3D6+6, P.S.: 2D6+2, P.P.: 2D6+4, P.E.: 3D6, P.B.: 3D6+2, Spd.: 3D6

Hit Points: P.E. attribute plus 1D6+2 Hit Points for each level of experience.

S.D.C.: 4D6+40

M.D.C.: On Mega-Damage worlds, combine the Hit Points and S.D.C. and turn them into M.D.C.

A.R. (Natural): 9

Height: Five feet +1D6 feet (1.8 to 3.3 m).

Weight: 1D4x100+50 lbs (67.5.to 202.5 kg).

Average Life Span: 500 years.

P.P.E.: 1D6x10 +P.E. attribute and an additional 2D4 P.P.E. per level of experience.

Super Abilities: In the strictest of terms, the Perola would belong to the *Mystically Bestowed* sub-category of the Magic Power Category. They receive the major super ability, *Karmic Power*, and a selection of spells. Should they make a habit of engaging in violent activities, they will loose their Karmic powers and half of their magic spells, just as if they had performed evil acts (see the Karmic ability description in *Heroes Unlimited™ Second Edition* for details).

Magic: The spells available to Perola include only non-violent or non-damaging (usually healing and helpful) spells. These spells are instinctive so Perola do not possess any mystic knowledge or special Wizard-like abilities. Perola are able to select eight spells from levels 1-6 and gain one additional spell for each level of experience which is selected from a spell level equal to the character's level of experience. Thus a second level Perola would instinctively know a new second level spell, while third level would confer a new third level spell, and so on.

Natural Abilities: In addition to their gentle, compassionate, peaceful natures, all Perola possess *Empathy* (same as the Major Psionic Ability) and *Resistance to Cold and Heat* (half damage and can tolerate exposure to a wide extreme of temperatures, from 200 degrees Fahrenheit/93.3 Celsius/366.5 Kelvin to minus 200 degrees F/-128 C/144.3 K).

Education: Any non-combat education is available. Any Perola that studies or actively engages in regular combat will loose their Karmic Power, whether that combat was evil or not. The powers that have blessed the Perola do not tolerate any kind of unnecessary violence and they (and most Perola) consider studying combat as a precursor to fighting.

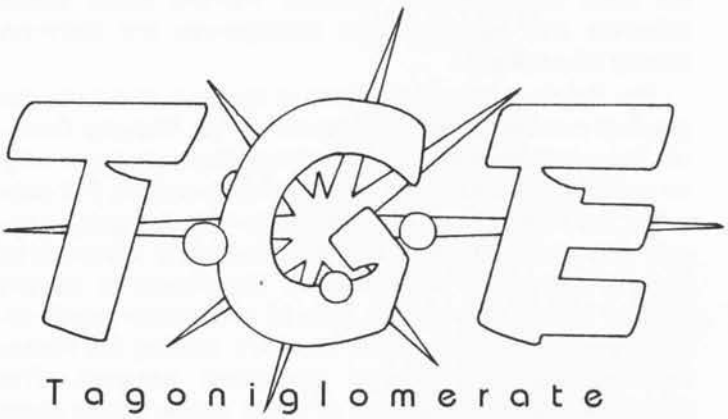
Special Weapons: None. Those who find it necessary to do so will only carry stun type or restraining weapons.

Special Vehicles: Any kind of anti-gravity vehicle or transportation is available, though rings and medallions are the most common.

Preferred Armor: Normally none. Light armors or environmental suits will be worn when absolutely necessary, usually because of a hostile environment.

Familiarity With Earth: None as of yet.

Rifts® Notes: The Perola can easily pass for humans and would likely be able to avoid any troubles with the Coalition, at least until they learned about the Coalition and decided something had to be done to enlighten them and bring about peaceful acceptance and tolerance of all life forms. In the *Phase World®* setting, the Perola would be well liked and enjoy much of the status they do in the **Aliens Unlimited** setting, with their divine enlightenment and powers possibly coming in some part from the Cosmic Forge!



The galaxy's single largest "company" is the Tagoniglomerate, or TGE. It produces nearly 9% of the galaxy's mass market technological goods, has a strong presence on 22% of the civilized worlds, and is a socio-economic entity in and of itself. It is owned and run by **Tagonican aliens** and employs almost 85% of that one race, as well as billions of aliens from other worlds. It is the largest corporation in the Milky Way galaxy with operations in *all* four quadrants and on nearly one million planets scattered across 2100 sectors. The famous galactic corporation enjoys this widespread exposure due to an unparalleled diversity of goods, services and superior distribution, with thousands upon thousands of TGE owned companies operating through local and galactic space channels. When anyone in the galactic community thinks of marketing, big business, or economics, they think of the TGE. In sheer size, it is larger than the TMC and the FAR combined, and rivals the Atorian Empire in sheer scope. However, it has substantially less significance than any of these galactic powers when it comes to raw military strength or political clout. The TGE is very staunch in its stance against unduly influencing the politics of others and makes a point of staying out of the government and affairs of other worlds — influencing their economics, however, is often another matter. Unlike the centralized structures of the FAR and the Atorian Empire, the TGE is widespread and economic, not political or military. In fact, the TGE of-

ten claims to be a *neutral party* selling and trading with all sides of a conflict.

The most recognized face of the TGE is that of super-manufacturer and galactic distributor. The TGE logo is synonymous with quality products, superior service and affordable prices. It also owns and operates numerous planet-based stores, distributors/suppliers, factories and businesses. The TGE and its holding companies are involved with the distribution, sales, design, development, production, and manufacturing of all kinds of goods. Energy weapons, exoskeletons, robotics, bionics, electronics, computers, computer chips, software, communication systems, optics, nano-tech, spacesuits, spaceships, space stations, machine parts, hover cars, military systems, missiles, plastics, appliances, textiles, paper, rubber, metal alloys, fuel and energy systems, entertainment, chemicals and medicine, and scores of others are part of their vast range of products. They also provide such services as security systems, private investigators, police, private research and development, counseling, transportation, cargo hauling, broadcasting, and distribution, among many, many others. Among their widespread operations are numerous mineral and chemical mining projects, farming enterprises, planet terraforming, medical and genetics research, biological development programs, and space exploration. If it has to do with making, selling, promoting, marketing and distributing consumer products, or finding and reaching new customers, and boldly going where no entrepreneur has gone before in the Milky Way, it's a sure bet that the TGE has its fingers in it somewhere to some degree.

One of their best known businesses is "bringing civilization and the wonders of the universe to you!" They do this by building massive space stations that serve as orbital retail malls, centers of entertainment and space ports. These retail space stations are especially welcomed in remote areas of space where people can enjoy the "wonders of the TGE and advanced civilization without leaving the orbit of your own planet." Many like the idea of not having to travel light years to get what they want, making the TGE Space Malls both convenient and desirable. The TGE logo prominently displayed on their hulls has welcomed trillions upon trillions of miners, spacefarers and people of remote planets to shop, dine, get away, have fun, and find lodging at these retail meccas. Even the people of advanced worlds will come to shop at TGE space stations in search of exotic, hard to find imports from distant worlds, as well as many of the well known TGE products. These orbital shopping malls vary in size and are found in nearly every section of the galaxy where intelligent life with money to burn is found. Most of these stations are large, all purpose facilities providing retail stores, transportation, entertainment, dining, hotel accommodations, medical facilities, bionics, robotics, repair services, the sale of spacecraft (and where allowed, weapons) and a variety of other goods and services. These stations are

especially popular around planets that are comparatively low-tech or not very pleasant or hospitable for visitors. **Note:** The TGE is one of the galaxy's foremost manufacturers of spaceships, drive systems, satellites, space stations and heavy machinery. These products may not be the most advanced, but they are comparatively inexpensive, well made, and very reliable, and the TGE bangs them out at an amazing speed.

The Tagoniglomerate was formed in 815 M.V. by the merging of nine Tagonican mega-corporations on the planet **Agika**. They quickly consolidated their new company into a giant and nurtured its continuing growth, absorbing most of Agika's other corporations. Within a generation the TGE had expanded the stars.

Recognizing that the people of other planets would never accept outsiders moving in to monopolize their economies, the TGE has established a masterful marketing and PR strategy. One in which they seem like innocent, well-intentioned, down-home entrepreneurs, and wait for people to open the doors to their economy and beg them to sell TGE products to them. It is a strategy that works 5 out of 10 times and has made them an economic power throughout the galaxy. Of course, the TGE business leaders insist it is their superior quality, service and unbeatable prices that attract people to them. They also point out that they franchise much of their business to "off-world partners" rather than sweep in like some hostile invader.

The mega-corporation does not govern any planet other than its own home world, Agika. However, this is (deliberately) misleading, for the TGE has tremendous economic influence over many of its "off-world partners." Many are so reliant or indebted to the TGE that the corporation gets whatever it wants. Even those who retain strong independence and autonomy (and there are many) feel the leverage and insidious influence of the TGE. For those most reliant on the TGE, the mere suggestion (threat) of a TGE *boycott* rattles the economy, causing inflation and economic panic. The real thing can plunge an entire planet into a depression, and sometimes collapse the economy, cause riots, topple governments and ignite wars. Of course, the TGE does not have this kind of power everywhere. Only a few dozen sectors of the *Liloqua quadrant* are in that kind of stranglehold, while most other planets have moderate to minimal involvement with the TGE. Just because they have a corner store on Zeta Prime doesn't mean the mega-corp can or will apply all the pressure of the conglomerate on that small market.

Years ago, the Atorian Empire gave several key contracts to the *Struthio* race (including the matter/anti-matter research that ultimately destroyed them). The TGE wanted those contracts badly and felt they were the only choice for the necessary research. They eventually came to realize that the Empire had wanted to keep the powerful matter/anti-matter research away from their still growing operation. Apparently wary of the TGE's size and growing influence, the Atorians had made a strategic decision to keep the Tagoniglomerate at arm's length and it is NOT one of their business "partners." As a result of that incident and several key disagreements over economic issues in the *Les Iban quadrant*, the TGE has boycotted the Atorian Empire and sided with the FAR for generations. In addition, they have used their influence to foster fear and hate toward the Atorians and supported their enemies, like the FAR. Of course, this has had no economic impact on the completely independent Empire, but it does send a message to other galactic people. For many, if the TGE says the Atorians are bad, dangerous, or evil, then they are. Perhaps needless to say, this has, in the eyes of the Atorian Empire, made the TGE a hostile enemy to be hated and destroyed. Given the escalating situation, the TGE has more spies in the Atorian Empire than any other galactic power! Information gathered by spies is shared (often delivered anonymously through mutual contacts, and rebels) with the FAR and other enemies of the Empire. One of the major factors in preventing an outright war between the Atorians and the TGE is that the conglomerate is smart enough to know that they can not win such a battle and that it would force one of the Empire's *galactic expansions* and interstellar war with the FAR and thousands of other civilizations, which is bad for profits. Likewise, the Atorians realize that the TGE's power base is cleverly spread throughout the galaxy and that destroying its home world would do little to disrupt its operations and only ignite an interstellar war it is not yet ready for.

The TGE Organization

The Tagoniglomerate is huge. Keeping an economic giant of its size and scope running is a daunting task, but the Tagonicans have managed to do it for the last 400 years. It is run by a board of directors, all of them Tagonican aliens and each with a duly impressive history of corporate achievement. Each board member for the TGE is the chairman of the board from one of the various TGE branches, the boards of which are made up of chairmen from other smaller branches and on down the line. Board members at the upper levels can be appointed by the main TGE Board of Directors, but such placements are rare. Instead, the Tagonicans prefer to have their people work to earn their position by proving their worth along the way. It will be rare, however, that any player characters will come in contact with the top corporate moguls and powerhouses at the core of the Tagoniglomerate. It is more likely that they will find themselves dealing with one of the major or minor branches of the TGE rather than the heart of the titanic organization, even if they are operatives for the company itself. This massive chain of command and off-world partnerships is one of the ways the TGE protects itself, with associates, partners and rogue branches taking the fall for "inappropriate" behavior.

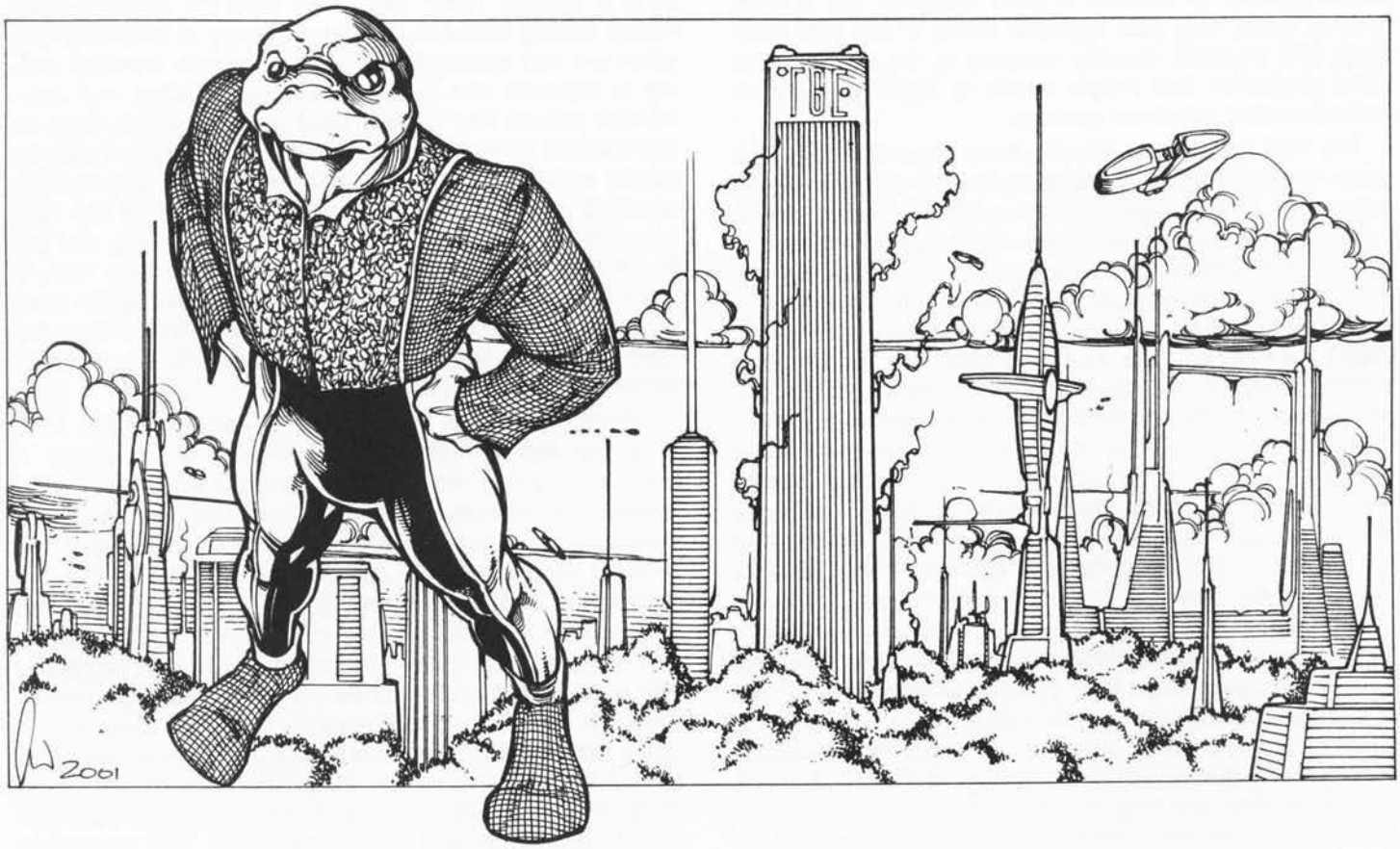
Just as with any corporation, the mega-conglomerate is organized into divisions and branches. A **division** functions as a separate corporation, conducts business pretty much on its own and sets much of its own policy. A division is typically a complete business in and of itself, in charge of operations on a particular planet or sector of space. In most cases, a division has its own corporate leadership, budget, a certain amount of autonomy (at least as long as profits are up or consistent) and departments for research, development, marketing, analysis, sales, distribution, internal security and all other aspects of a mass market corporation. They have their own facilities and sep-

arate networks. While fairly autonomous, in the end, a division must ultimately answer to the brass at the top of the TGE.

Branches have even less autonomy and usually answer to a regional division who oversees the operations of all "branches" under its jurisdiction. The branch is still owned and run by the TGE, but it is allowed to function on its own as long as it makes a profit and does not violate any of the TGE's mandates and procedures laid down by the parent company, including guidelines for establishing and conducting business, rules on political and economic interference, mandates on boycotts and hiring practices, among others.

Espionage. Employing and countering industrial espionage are two of the most important activities of all TGE divisions and branches. Competition is fierce, and the Tagoniglomerate does everything in its power to stay on top. If that means scrutinizing the activities of the competition, stealing their secrets, beating them to market or launching counter advertising using ill-gotten information, and even extortion and sabotage, so be it. All's fair in love and war, and the TGE "loves" to do battle with their competitors and win. They employ some of the best "spies" and "market enforcers" (code for industrial spies) in the business. Agents who answer directly to division heads and the main office, and who spy not only on the competition but the millions of branch offices, "off-world partners" and even regional governments and civil organizations that might have an impact on their doing business. The Tagoniglomerate's fiercest rivals and detractors have accused the organization of being nothing short of a corporate mafia, although the TGE counters, insisting all of its business holdings are "legal and legitimate." In fact, the TGE avoids any business that might be considered "unwholesome" such as gambling and nightclubs, and denies any allegations of wrongdoing. They can't help it if their market strategies, advertising, promotion and distribution are superior to the competition. They just offer the consumer a better product and service. Or so they claim.

Spying and leveraging and undermining the competition is so ingrained in the corporate culture of the TGE that the branches and divisions spy on each other, and even the main office to get a foot up on one another for the purpose of personal advancement and merger. Inter-office politics and infighting can be fierce within the TGE, with the most ruthless often rising to the top. Surprisingly, the backstabbing and cutthroat tactics for advancement have done little to hurt the TGE as a whole and the powerful super-corporation continues to grow and spread its business tentacles throughout the Milky Way. On the other hand, not everybody at the TGE is a megalomaniac or business whiz kid. The organization is so immense that the majority are just happy workers, dutiful grunts doing what they are told without asking questions. This means two thirds of those involved in spying for the TGE are little more than accountants reporting what they see and hear. Many TGE operatives monitoring, digging, researching, infiltrating, and undermining the competition and rivals simply gather and report *information* that they don't understand or know how it is used or disseminated. Only a third are true "spies" – secret espionage agents who are skilled in surveillance, subterfuge, lies, theft, sabotage and



other illegal activities. Those spies who operate within the Atorian Empire are the best of the best, and are often trained in combat and military style operations.

The Tagoniglomerate has its own moon, purchased from the Tagonican government before they actually took over the governing of the planet. The natural satellite is used as TGE's galactic headquarters and center for research and development. It is densely populated and has nearly 70% of its surface and sub-surface area covered by structures of one kind or another. The TGE's executives and a large portion of their highest ranking personnel reside on the moon or home world. Some of the most important and sensitive work in the company takes place on the moon. It is a top security base of operation (-65% to any attempts to sneak onto it undetected) with better security than many military bases. It is equipped with laser, gravity, and tachyon communicators (which almost no one knows they have) and protected by an army of security people (including robots) and a fleet of spacecraft in moon orbit. Important research is begun here and finished at other secured sites on distant planets or moons. This dispersal is to prevent the concentration of company assets (i.e., executives, scientists, investigators, researchers, etc.) in one place.

Security & Military Capabilities. The TGE always protects its corporate interests with some of the best security in the galaxy. All space stations have at least two squads of (12-24) fighters and a pair of satellites for protection and most will have a small cruiser permanently docked or patrolling close by. Manned mining operations will have similar protection, while robot operations will be equipped with automated defense systems and a handful of robot piloted fighters. In addition to pure firepower and a large security force, they also maintain some of the best electronic and mystical security systems in the galaxy, from astral protection and magic wards to high-tech sensors and automated response systems.

The TGE maintains a security force larger than that of a dozen planets combined, including its own space fleet with millions of cargo vessels, transports, passenger liners, various scout and assault craft, destroyers, and several dozen giant battleships. This fleet is, of course, spread across nearly a quarter of the galaxy and no more than a dozen or so will be seen in one place at any given time. Unlike the FAR and the Atorian Empire, the TGE is not a military entity. It maintains a private "security force and space fleet" for the protection of its investments and commercial assets, resulting in an armed force only large enough to do its job effectively with a minimal reserve force. Only in this case, that "security force" is effectively one of the largest military forces in the Milky Way. Unlike the governments and worlds of the galaxy, the TGE does not have to be prepared to repel the offensive of some enemy army, or protect borders. All it needs to protect is its home world, the perimeters of its various other holdings and its merchant ships from pirates. Moreover, as a valued private business to its "trade partners" (i.e. other planets), these "partners" are expected to help support, maintain and defend private, commercial TGE operations on their worlds; and they do. The TGE is far too important to the economics and interstellar trade of most worlds not to protect. Some worlds even hire the TMC for additional protection of TGE holdings. In turn, the TGE *security force* regularly supports and cooperates with local law enforcement and the TMC. The bottom-line is that the TGE does not need a standing army. However, if there were ever the need, they could gather and supply a large space fleet and troops that match even that of the FAR, but such extreme measures would only be taken in case of a mass invasion of one or more quadrants that contain significant TGE holdings. The only foreseeable case for this would be an Atorian invasion.

Despite the Tagoniglomerate's unparalleled resources, security force and private space fleet, the super-corporation maintains an unshakably *neutral* and completely *non-aggressive* posture with all worlds, including those who refuse to do business with them. Thus, the TGE security force operates almost strictly as a defense force that protects TGE operations and space lanes (used by all), and actively supports the police to keep the space ways safe for everybody. Although the TGE's security force does actively hunt down pirate enclaves and raiders that infringe upon TGE operations and holdings, they always try to work within the confines of the regional governments and laws, often coordinating their efforts and sharing information with the locals. The Tagoniglomerate *NEVER* provides military assistance to any nation, world, political power or trade partner, although it may flex its economic muscles to help negotiate (or force a) peace or some suitable (for their business purposes) resolution.

Mineral Resources & Mining

One of the TGE's most lucrative and low profile operations is mining. These can range from the massive automated mining factories that pound away at asteroids and other ore rich space debris, to the carefully handled mining of minerals and fossil fuels from inhabited and uninhabited planets and moons. Most space mining is done on uninhabited asteroids, debris fields and planets, usually by robots and automated factories. Some of the factories are modified cargo craft that fly from one site to the next where they land, or grapple with ore laden debris, and begin mining away. Coordinates for such sites are sent to the robot mining craft from a scouting and evaluation team who electronically "tag" candidates for drilling. When the craft arrives, it uses geologic sensors to detect ore deposits and begins the mining process.

Mining planets is much more involved, for the TGE must first ensure that it has some rights to the planet. A long-range probe with geologic sensors notes potentially mineral-rich planets, then legal searches are made for ownership and probes are sent to the planet to see if any sentient life exists. Once ownership turns up negative, the corporation lays a claim on the planet for future use and mining. Such planets can lay for decades or even centuries waiting to be mined (Jerrick Seven is an example of one such planet waiting to be mined). If the legal search turns up an owner, the company will begin talks to discover the extent of mineral resources and the possibility of buying the rights to exploit those reserves. When everything falls into place, mining teams and equipment are sent to the planet and operations begin. This process is

complicated by the innate rights of any *indigenous people* as outlined and enforced by the Federation of Allied Races and other galactic powers. The premise is simple, even if the indigenous race is Stone Age people or barely more than slobbering animals, the planet can not be touched, and must be allowed to "develop" naturally on its own. No one, especially not the TGE, is to interfere with the race's evolution, nor exploit the resources of their planet (mining, lumber operations, colonization, etc.) in any way. The TGE has mineral rights to thousands of tagged planets, planetoids and moons, so the law is just annoying, it doesn't hurt business.

The TGE & Magic

No galactic entity the size of the Tagoniglomerate can ignore the implications, applications, and usefulness of magic. There are admittedly only limited uses for it in the everyday operation of a business, but in specialized applications such as security and research, magic can be particularly useful. The combat effectiveness of magic makes it a valuable offensive and defensive tool and the proper applications of wards and enchantments can greatly add to the security of any facility. TGE operative groups and security complements almost always include a practitioner of magic (except in the smallest or least important of facilities), and the most important facilities are protected by several of them. Research, surveillance and espionage are also greatly enhanced by magic. Spells can create gravity, darkness, heat, weightlessness, and scores of other effects in the blink of an eye, and can usually be controlled or precisely directed.

The TGE even sells a few spell formulas as well as offers training in mystical study to those with high aptitudes and the money to enroll. They are very careful to screen applicants, and their courses (and formulas) are very expensive (availability is left entirely to the G.M.). When it does sell magic spells, the TGE limits its offerings to spell levels one and two for 4000 credits and 6,000 credits per spell. Level three spells and higher are NOT sold, but can be learned by Wizards enrolled in one of the TGE's elite and limited magic training programs. The course takes eight years of study before the student reaches level one and can actually cast a spell. Tuition costs a half million credits a year and annual enrollment is limited to under one thousand. Political issues and liability concerns have prompted the TGE to consider closing its institute of magical study entirely.

Magic is outlawed on some worlds, and feared on many others, and can be devastating in the hands of madmen and criminals. Thus, magic is a political hot potato that gives the TGE reason for caution. In fact, their own operations and defenses have fallen prey to magical intervention. As a result, the teaching and sale of magic is highly restricted and marginal. Ninety percent of all magic operations are internal within the TGE itself. Eight percent is directed at magic-based societies, and 2% to non-magical markets. Even then, rather than selling magic spells and such to those uninitiated in the ways of magic, the TGE leans toward hiring out "magic specialists" and mystically empowered "troubleshooters" to do a job for a client, rather than sell magical goods or resources to them. So

far, this has worked out reasonably well, and the TGE may slowly expand that aspect of the magic market.

Good or Evil

The TGE as Villain and Savior

Thus far, the information shows the TGE in a questionable light. They are primarily a mega-business whose bottom line is profit, expansion and new markets. Like far too many big corporations, their concern for people, society and peace often comes in a distant second. The TGE has done a great deal of good, sometimes on purpose, often by accident. They help unite alien people, bridge culture gaps and help service many worlds who could not exploit their resources on their own. On the other hand, the TGE is the epitome of the corporate machine on a cosmic scale, which means some level of collateral damage to an ecosystem or the long term health of the people, or deterioration of a culture or civilization is an *acceptable* "price of doing business." The exact extent of that "damage" will depend on each division and branch, as well as the laws of each individual planet or interplanetary consortium. This means the TGE will try to get away with whatever it can. If pollution standards are strict on one planet they will obey them to the letter, but if the law is lax on another world for the exact same operation, the TGE will take shortcuts and cost cutting measures that fall within the parameters of the law, even if they know their actions are hurting the environment or the people. That's not to say they will deliberately poison or pollute — the TGE has a surprisingly admirable record in these areas — but it does play fast and dirty to make or save a credit.

In other cases, it is a regional branch or division manager who will break the law, hurt others, cheat, rob, steal, sabotage competitors, and engage in illegal activity. The company is so huge, it is impossible for it to completely police itself or its affiliates, and villains, cheats and power-mongers take advantage of this. Likewise, for those operations in remote areas where the law is minimal or nonexistent, the "bosses" sometimes become tyrannical and/or corrupt authorities unto themselves. Then again, it participates in thousands of high-profile (often PR inspired) humanitarian efforts to bring peace and prosperity to the galactic community.

With so much flexibility, the G.M. has a perfect tool for adventures involving the TGE. Player characters could be employees or agents of the company or *freelancers or heroes* hired to help them in some particular matter, from rescue to research, to spying or matters of security. The TGE uses mercenaries and independents all the time. It's good for business because it's easy to pin trouble on incompetent, negligent or crooked "outside help." Hiring outsiders can also circumvent internal security, spies and interoffice politics. The player characters, in this case, may not even realize the company or individual hiring them is owned or in partnership with the TGE, or that they are on TGE business until it's too late. Of course, such manipulation is not always for some nefarious purpose. The TGE boss who hired the player group could be a good guy trying to save lives and help people, protect his people or innocent folk from pirates, raiders or other villains, right a wrong, prove corruption or crime by members of his own company or competitor or third party, and so on. Or the TGE character is absolute scum *using* the player characters to cover up a crime, steal from or destroy a competitor, strong-arm the local government, locate spies, stoolies or police so he can eliminate them, and a thousand other possibilities. Use them for a zillion different adventures. The alignments and motives of the various TGE branches and divisions will shift from planet to planet, let alone sector to sector, some good and caring, others self-serving or downright evil. The level of corruption and villainy will depend on who's in charge and what they want.

Hey, and don't forget scenarios where the TGE sponsors a special event or humanitarian project and similar ventures that go awry and may need heroes to step in and save the day. Things like a TGE special event being raided by bandits, a TGE corporate officer or celebrity(s) getting kidnaped, robbed or killed (and the heroes need to rescue him or bring the villains to justice), a noble experiment (genetics, robotics, etc.) goes wrong and lives are in danger, a TGE exploration team vanishes, and so on.

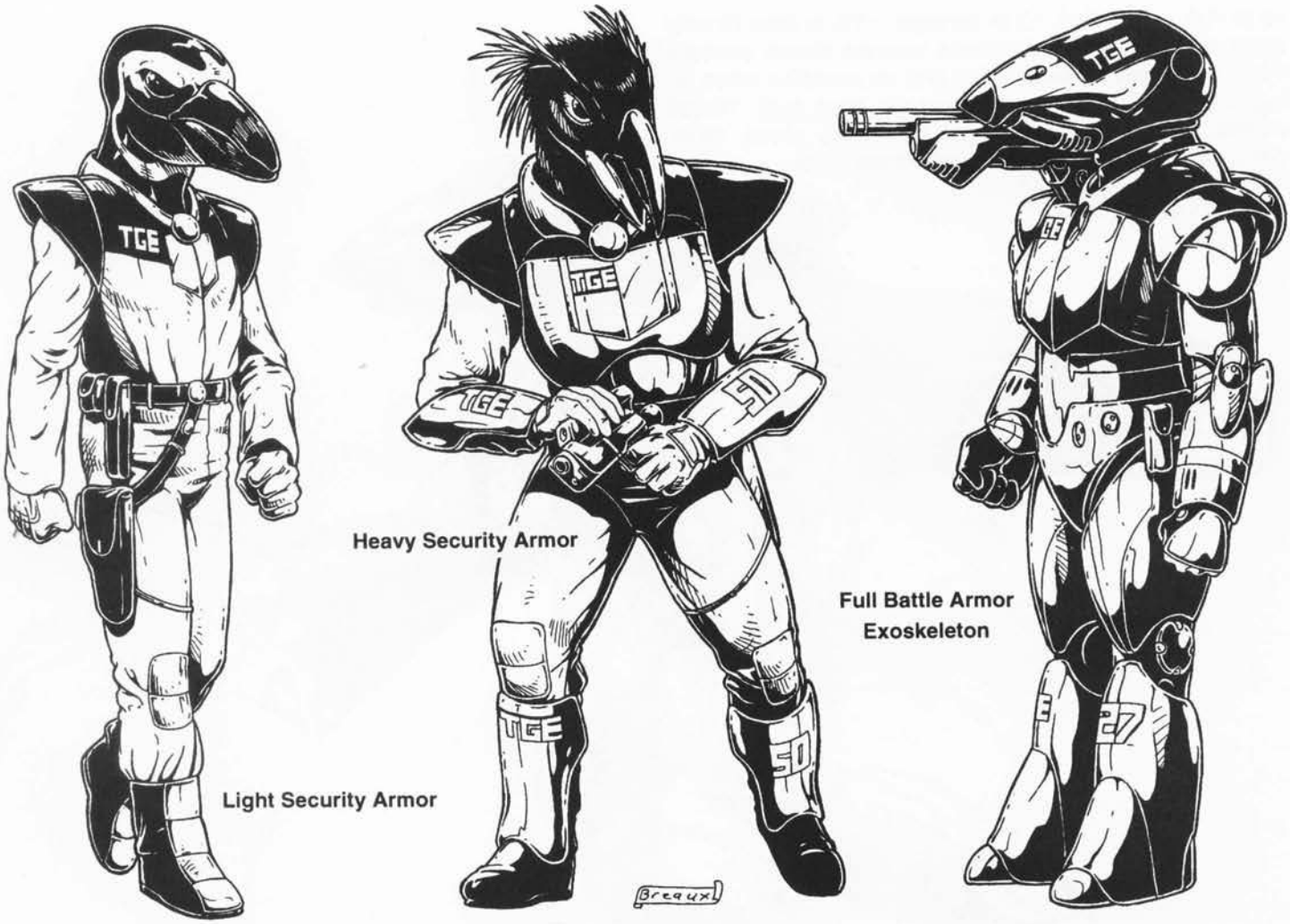
TGE Equipment & Vehicles

It has been noted before that the TGE produces just about everything in one form or another, so instead of taking up valuable book space with an extensive TGE catalog of items, this section will focus on the equipment used by the TGE's own operatives and security personnel. The equipment sold by the TGE and presented in its various catalogs can be found in any equipment list in **Heroes Unlimited™**, including the basic equipment and weapons list in **HU2** (pages 340-351), the expanded weapons and vehicles list in the **HU2 G.M.'s Guide** (pages 199-223), the galactic weapons, equipment, and vehicles in **Aliens Unlimited, Revised** (pages 175-203), and the weapons and equipment of Fabricators Inc. from **Villains Unlimited** (pages 79-89; price adjustments will be necessary), as well as items in this book. All TGE equipment is sturdy, reliable and of good to very good quality, but nothing exceptional.

TGE Light Security Armor

Issued to all security personnel in normal to moderate risk situations, this armor consists of a padded uniform with layers of armor placed in strategic locations of the body (effectively a half suit of armor). Very comfortable and flexible, this armor is sold to nearly every security organization in the galactic community and is a common sight on many security guards. The armor comes in nearly any color and color combination.

Armor Rating (A.R.): 12, S.D.C.: 65 (25 M.D.C. in Mega-Damage settings), Cost: 1600 credits outside the TGE, but issued free to all TGE security personnel (it is emblazoned with the TGE logo and colors). Add 600 credits for an armored environmental (space) suit. TGE employees can purchase the equivalent of this armor in "plain clothes" (can't be distinguished from normal clothes) for 2500. Note: Both types offer excellent mobility; no prowl or movement penalties.



TGE Standard Security Armor

Issued to security personnel in high risk or light combat situations this, armor is the standard combat armor for TGE security personnel. It consists of the same kind of soft armor under-suit as the light armor with hard armor plating on the chest, forearms, and lower legs. The helmet has environmental seals, ten mile (16 km) built-in communicator, connections for emergency atmosphere (but none is included unless assigned or purchased separately), and HUD display for any computer or optics (though none are standard, must be purchased separately).

Armor Rating (A.R.): 14, S.D.C.: 95 (40 M.D.C. in Mega-Damage settings). Cost: 2300 credits outside the TGE, but issued free to all TGE security personnel (it is emblazoned with the TGE logo and colors). Add 2000 credits for basic sensor and optic systems. Note: Excellent mobility; no prowl or movement penalties.

TGE Heavy Battle Armor

This is an armored environmental suit used for hazardous conditions and combat. It includes a full set of hard armor plating for the chest, back, shoulders, arms, elbows, hips, thighs, shins and head (helmet) over a dense weave of padded flexible fabric similar to the other armors. Suitable for space and combat operations, and assigned to special operatives, exploration teams, security at classified TGE installations, combat escort personnel and those working in combat situations. It comes standard with a helmet, radio setup (range of 15 miles/24 km) and basic environmental capabilities.

A.R.: 15, S.D.C.: 150 (70 M.D.C. in Mega-Damage environments), Cost: 20,000 credits. Note: -15% movement penalty to prowl, swim, climb, acrobatics, gymnastics and similar skills.

TGE Augmented Battle Armor (exoskeleton)

Reserved for the heavy hitters, special operatives, classified TGE installations, hostile outposts and heavy combat situations, this suit of full environmental battle armor is the top of the line in combat armor without crossing into actual powered armor. It comes standard with basic exoskeleton enhancements and impressive firepower capabilities plus a built-in kinetic suit, eight hour oxygen supply (72 hour air purification and recycling system), radiation shielding, thermolate lining, telescopic and infrared optics, passive nightvision optics, ammo drum back mounts and a recoil diminishing mount on the right shoulder that will hold any rifle-sized weapon. Most TGE facilities will have one or two of these suits locked away for emergencies and TGE space stations will have enough to equip the full security staff depending on the level of security and hostilities in the region.

Armor Rating (A.R.): 16, S.D.C.: 235 (110 M.D.C. in Mega-Damage environments), Bonuses: The armor adds

+2 to P.S., +4 to Spd, +2 to damage, +5% to Zero Gravity skills, and the recoil diminishing weapon mount provides +1 to strike with an aimed shot and no penalties when firing a burst. Cost (full environmental hard suit): 70,000 credits. Note: -10% movement penalty to prowl, swim, climb, acrobatics, gymnastics and similar skills.

Targesspa Security Power Armor

Targesspa is the Tagonican word for a "strong support" or "pillar." The Targesspa is a powerful, light support combat unit (Type Three Exoskeleton). When deployed in pairs or small squads, they can be more than a match for the standard band of pirates, light infantry and even soldiers in heavy combat armor. Few TGE office buildings have more than one or two, if any, but a squad to a platoon are standard issue on most space stations, cargo transport ships, and combat escort teams and defenders. The strength and capabilities of the PA also make the Targesspa suitable for emergency rescue or as a repair unit. The model below is a standard issue Targesspa with no wings or flight capabilities.

Name: Targesspa XS-4 (Targesspa XS-6 with wings)
Model Type: TGE Standard Security Powered Armor
Class: Light Power Armor/Exoskeleton
Crew: One; worn as a suit of armor.
Armor Rating (A.R.): 18

S.D.C. by Location:
* Head/Helmet — 50
Arms (2) – 40 each
Legs (2) – 70 each
** Main Body – 275

* This is a small target and requires a called shot at -3 to the die roll. This penalty does not apply to the modified called shot rules against A.R. for Heroes Unlimited. In the latter case, the die result would remain unmodified for determining if an attack defeats armor or not.

** Depleting the damage capacity of the main body will shut the armor down, rendering it useless scrap metal.

M.D.C. Note: For use in Mega-Damage settings, turn the S.D.C. point for point, into M.D.C. (i.e. Arms 40 M.D.C. each, Main Body 250 M.D.C., and so on. A.R. no longer applies).

Speed

Running: The Targesspa can run approximately 60 mph (88 Speed/96 km). The act of running still tires the user, but at only one quarter the normal fatigue rate.

Leaping: The XS-4 does not have full flight capabilities unless modified accordingly. Ground units are outfitted with jump jets and can leap 100 feet (30.5 m) straight up or 200 feet (61 m) across. It also has directional jets in the back, hip and lower legs. Together with the jump jets, the Targesspa can function in outer space (and underwater) without a jet pack; the built-in jets provide all the thrust it needs. Maximum speed in space is 30 mph (48 km).

Flight Capable Modifications: Units assigned to space stations and reconnaissance, as well as combat and situations where flight is required or a distinct advantage, will have folding wings and back mounted jet thrusters. (Otherwise, same as the XS-4.)

Flight speed: 200 mph (320 km). Maximum altitude: 5000 feet (1524 m). The wings each have 90 S.D.C.

Underwater Capabilities: The pilot inside the Targesspa can survive depths of up to 1000 feet (305 m) and can swim or jet around at a speed of 30 mph (48 km or 26 Knots).

Statistical Data

Height: Adds 8-10 inches (0.23 m) to the height of the wearer.

Width: Adds 18 inches (0.46 m) to the width of the wearer.

Length: Adds 20 inches (0.53 m) to the length of the wearer.

Weight: 245 lbs (110.25 kg); 300 lbs (135 kg) with flight capabilities.

Physical Strength: 26 (Superhuman P.S.).

Cargo: None other than spare ammo and hip/belt pouches.

Power System: Typically super-solar or high performance, compact battery systems (10 hour operating time, but can be plugged in with a direct line to recharge and conserve batteries).

Cost: 550,000 credits for the standard XS-4 unit, 720,000 for the XS-6 with flight capabilities. Add an extra 125,000 credits to get an extra 100 S.D.C. for the main body of either unit (increase all other S.D.C. by 20%) and an extra 175,000 to boost the A.R. to 19.

Weapon Systems

1. **Electrical Discharge:** This is a close quarters weapon and is usually quite handy within the hallways and small rooms of enclosed buildings and space stations. The system also has a setting to act as a stunner, thus adding some versatility to it and greatly increasing the option of capturing intruders for questioning, punishment, or handing over to the proper authorities.

Damage: Each hand of the power armor has a separate system, one is damaging and the other acts as a taser to stun targets. The damaging discharge does 4D6 damage (M.D.C. in Mega-Damage settings) and the *stun setting* will make victims -10 to strike, parry, and dodge, and -60% on skill performance for 2D4 melee rounds. Also reduce the victim's number of melee attacks/actions to two, and reduce speed by 80%. If the victim saves against the stun attack (roll of 16 or higher) reduce penalties by half and speed and melee actions are not reduced.

Rate of Fire: Each can discharge twice per melee (at the beginning and the middle of the round).

Effective Range: 30 feet (9 m) for both systems.

Payload: Effectively Unlimited.

2. **Chemical Spray:** The chest of the power armor has a spotlight and a chemical spray system. The system comes standard with blinding chemicals and CO2 foam (see page 207-208 of HU2 for full details). Other chemicals are never substituted in the standard security models used by the TGE.

Damage: None. The mace-like chemical will blind targets (-10 to strike, parry and dodge) for 3D4 melee rounds and the foam will extinguish small fires.

Rate of Fire: Single shot/sprays only.

Effective Range: 10 feet (3 m) for both.

Payload: Six sprays per chemical.

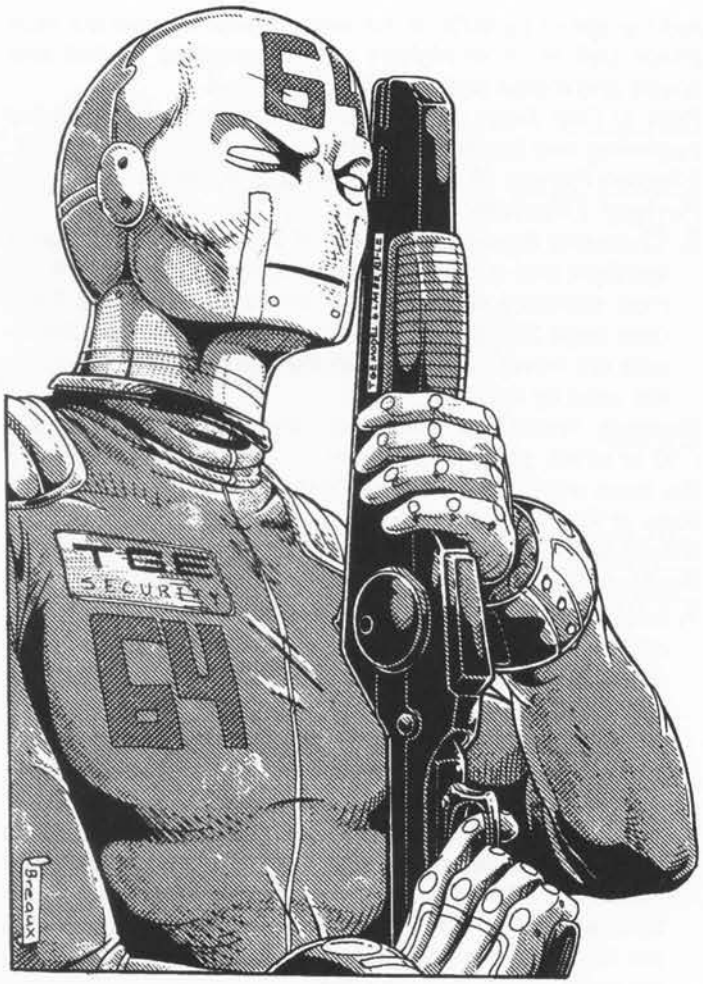
3. **Large Tearing Claws:** Intended for use as a tool in demolition and climbing rather than a weapon, these claws function quite well as melee weapons. When the claws are used to tear or pry at doors, walls, or other solid, inanimate objects (including deactivated robots and vehicles), the damage they do is *doubled*. Damage: 4D6 per hand (M.D.C. in *Rifts*®).
4. **Hand-Held Rifles:** The Targesspa has no built in long-range weaponry. Instead, the pilot can employ any hand-held rifle as a means of ranged firepower. Precision weapons with lower collateral damage potential are the most common standard issue weapons, including pulse lasers and ion rifles.
5. **Hand to Hand Combat:** The power armor is also quite capable of engaging in unarmed combat to both subdue and damage opponents. Specific maneuvers and capabilities such as body flips and special kick attacks will vary with the pilot's skill level.

Damage: Normal punches do 2D6+11 damage and normal kicks do 3D6+13 damage (both include P.S. damage bonus). Special kicks that have increased damage do their normal damage plus an extra 2D6+13 damage bonus from the power armor's superhuman P.S. rating. Power punches and kick do double damages but use up two attacks.

6. **Special Systems and Bonuses:** All TGE power armor suits and piloted robots have the following systems standard: basic listening system, radar signal detector, wide-band radio receive and transmitter, audio recorder, advanced optic system, video receiver and transmitter (always running while active), camera, and searchlight.

   In addition, all piloted TGE robots and poer armor will also have the following: bio scan, motion detector and warning system, radiation detector and complete environmental systems for the pilot.

The Targesspa comes with the following added systems standard: radio signal scrambler, loudspeaker, targeting sight, combat computer, and micro-radar (only in the XS-6 flying models). Targesspa Bonuses: In addition to the pilot's bonuses from training and P.P., the Targesspa armor is +3 on initiative, +2 to strike, +2 to parry and dodge, +2 to roll with impact, +3 to pull punch, +3 to disarm, and +1D6+11 to damage.



TGE Class One Security Robot

This is the standard, TGE security robot with artificial intelligence (AI). Its AI is limited and the robots are commonly put into squads commanded by a human officer or directed from a remote station by one or more technicians. Class One Security Robots are deployed for guard duty (they never tire) and patrols (they don't tire and remain alert), and dispatched into dangerous situations (burning buildings, areas contaminated by radiation, flood zones, etc.) in place of humanoids, as well as to supplement living troops and defenders. Some prefer to use robots in place of humanoids, especially for restricted and top security areas because they can not be bribed or become disgruntled and steal or commit sabotage. On the other hand, the robots are much less adaptable or resourceful, relying entirely on their programing.

The TGE sells a variety of robots in its catalogs for security work, labor and as personal bodyguards, but they all have a slightly less refined intelligence, 20% less S.D.C., and minimal augmentation/upgrade capabilities (half the range listed under cost), and sell for 25% less.

These robots can come in a generic humanoid form (reduce cost by 10%) or specifically modified to resemble a specific race or species, but all of them have the same statistics and most are produced with either white or powder blue skin pigments or large, bright numbers and/or symbols emblazoned on their head, chest and/or back. Most people want to distinguish robots from real living creatures, and some planet governments require it by law. The robot may be programmed to act as realistically and naturally as possible or in a cold, machine-like voice and demeanor.

The models used by the TGE have the following skills (percentages are lower due to a smaller AI than those available to player character robots and androids, which keeps costs down): Mathematics and basic laws of nature/science 90%, Computer Operation 80%, Law 50% general and 98% TGE rules and guidelines, Radio: Basic 85%, TV & Video 45%, Read Sensory Equipment 70%, Basic Military Etiquette and weapon recognition 70%, Hand to Hand Combat: Basic, plus one pilot skill (normally hover car) at 90%, three W.P. of choice (commonly includes energy pistol, energy rifles and blunt; all are at 5th level of proficiency), and four language skills (Tagonican at 98%, the Pilian trade tongue at 75%, and two other local languages at 60%). **Note:** Domestic models (not for security) do not have the combat, military or W.P. skills.

Name: TGE General Security Robot
Model Type: TGE Class One Security Robot
Class: Realistically modeled light security robot
Crew: None, automated.
Armor Rating (A.R.): 11; effectively natural A.R., so any attack under 12 does no damage.
S.D.C. by Location
* Head/Helmet – 60
Arms (2) — 40 each
Legs (2) – 55 each
** Main Body– 215
* This is a small target and requires a called shot at -3 to the die roll. This penalty does not apply to the modified called shot rules against A.R. for Heroes Unlimited. In the latter case, the die result would remain unmodified for determining if an attack defeats armor or not. In the TGE Class One robot, all sensors and sensitive systems are located in the chest, so destroying the head will have no effect on the operation of the robot.
** Depleting the damage capacity of the main body will shut the robot down, rendering it useless.
M.D.C. Note: For use in Mega-Damage settings, turn the S.D.C., point for point, into M.D.C. (i.e. Arms 40 M.D.C. each, Main Body 175 M.D.C., and so on. A.R. no longer applies).
Speed

Running: The Class One robot has a speed attribute rating of 45 and can run at speeds up to 30 mph (48 km). The act of running does not tire out the robot and can be maintained indefinitely. Can leap six feet (1.8 m) high or 10 feet (3 m) across.

Swimming: 80% skill level at speeds of up to 25 mph (40 km or 21 knots). Maximum depth tolerance is 600 feet (183 m).

Flying: None, unless an additional skill program includes jet pack or other piloting skill.

Statistical Data

Height: Same as the race emulated in appearance.
Width: Same as the race emulated in appearance.
Length: Same as the race emulated in appearance.
Weight: 250-300 lbs (112.5 to 135 kg).
Physical Strength: 18 (Superhuman P.S.).

Cargo: None other than what can be put into pockets, packs, or carried bags.

Power System: Typically super solar or high performance, compact battery systems (4 hour operating time, but can be plugged in with a direct line to recharge and conserve batteries).

Cost: 975,000 credits for the standard Security Robot. Add an extra 125,000 credits to get an extra three W.P. or Military or Piloting skills (the latter two are at 80%), 120,000 for an extra 100 S.D.C. for the main body (increase all other S.D.C. by 20%), 100,000 for one additional attack per melee (can only upgrade once), and an extra 250,000 to boost the A.R. to 15.

Weapon Systems

1. **Taser:** Built into one of the robot's hands is a taser-like stun weapon designed to disorient and incapacitate troublemakers. It is not intended to be a damaging weapon system and does not have any kind of additional settings.

Damage: Temporarily short-circuits the nervous system of life forms who have one. The attack will make a victim -10 to strike, parry, and dodge, and.60% on skill performance for 2D4 melee rounds. Also reduce the victim's number of melee attacks/actions to two, and reduce speed by 80%. If the victim saves against the stun attack (a roll of 16 or higher) reduce penalties by half and speed and melee actions are not reduced.
Rate of Fire: Once per melee round.
Effective Range: By touch or 10 foot (3 m) blast.
Payload: Effectively unlimited.

2. **Hand-Held Weapons:** The robot can use any human-sized hand-held weapon from guns to melee weapons. Standard issue weapons for TGE Class One Security Robots are one energy pistol (sometimes two), one energy rifle, and a billy club or mace, but any melee weapon (sword, spear, staff, etc.) can be used. Damage: 3D6 or 4D6 for the pistol, 5D6 or 6D6 for the rifle (both are M.D.C. in Mega-Damage settings) and 2D4 to 2D6 damage for the melee weapon. Rate of Fire: Single shot only; each pull of the trigger shoots an energy blast. Effective Range: 800 feet (244 m) for the pistol, 2000 feet (610 m) for the rifle. Payload: 20 blasts per E-clip.
3. **Hand to Hand Combat:** The Class One robot can engage in both armed and unarmed combat just like any other character.

Attacks per Melee Round: Four (may get one additional attack at an additional cost).
Damage: 2D6+6 from punch, kick or head butt due to its Superhuman P.S. Power punches are not possible.
Bonuses (includes robot attributes and skill): +1 on initiative, +3 to strike, +5 to parry, +3 to dodge, +3 to disarm, +5 to pull punch, +1 to roll with impact. All the usual combat rules and damage are the same as always.

4. **Special Systems and Bonuses:** As previously noted, all TGE robots have the following systems standard: Basic listening system, radar signal detector, wide-band radio receive and transmitter, audio recorder, advanced robot optic system, video receiver and transmitter (always running while active), camera, and searchlight.

TGE Cyborgs and Security Applications of Bionics

Just as with robotics, the TGE applications of bionics in their security are extensive, but the actual bionics are only moderate, with partial conversion cyborgs being the most common. Full conversion cyborgs are uncommon because of cost and the psychological stress on the recipient, but they do exist. One would hardly notice, however, for almost all bionic enhanced security personnel in the TGE have realistic replacement parts, making them indistinguishable from most people unless inspected very closely. The TGE makes extensive use of composite components that look very real. The statistics for these cyborgs are as normal, the only difference being their alien appearance — they look like their original race. The only exception is when they don bionic body armor, but even then they look like heavily armored soldiers. Only those who recognize the TGE bionic body armor for what it is will realize that they are up against cyborgs. The full conversion variety of corporate cyborg will most commonly be found as bodyguards to important people. Many are loyal bodyguards who have been in the line of fire before and suffered greatly, earning as their reward, a new lease on life as a bionic operative. Most executives bind these loyal people to short contracts, effectively giving them the expensive bionics as a reward for their sacrifice and loyalty. At the end of those contracts, most of the cyborgs choose to stay and work as freelancers, possibly earning them free upgrades as they further demonstrate the loyalty they have for the TGE.

TGE Spacecraft

The TGE employs a vast fleet of spacecraft. Most of them are civilian cargo transports and a select portion are luxurious transport craft. The cargo craft of the TGE are a common sight in almost any port as they deliver goods to one place or another or from warehouses and orbiting storage facilities to retail outlets. Their security craft are not military vessels and only a handful of them will have battleship armor or weapons larger than anti-ship class. Even heavy armor is rare except in the larger cruisers and the small number of battleships the company employs. Combat ready TGE spacecraft will be moderately armed for their class with firepower equivalent to that listed for the production line packages. Overkill is not good business practice and the TGE finds it far more effective to use several adequately armed and armored craft than a single heavily outfitted one. The use of more than one craft at the same cost as a larger one is also more versatile and useful to the practical minded corporate executives. In order to conserve space, no specific examples of TGE spacecraft will be given in this supplement.

A Final TGE Note

Though the TGE may certainly be the largest, it is by far not the only mega-conglomerate operating in the Milky Way. Hundreds and thousands of other corporate entities ply their trade amongst the galactic community. In some areas, these smaller corporations hold a monopoly all their

own, untouched by the shadow of the massive TGE. In other areas, companies compete head to head with the Tagonican titans. By the same token, the TGE has more than its fair share of monopolistic markets. The TGE is only one example, and a bit of an extreme one, of the kind of corporate and business organizations that space faring characters may encounter in the galactic environs of **Heroes Unlimited™** ("We were sure he was a TGE spy. Who the heck's Almadricon Inc.?"). Or help stop them from shaking in their boots ("Please tell me the guy we just aced doesn't have a TGE security badge!").

Te Tool

Te Tool's native civilization, the Toke Tuul, are one of those races that have a checkered past of dark catastrophes and revered achievements. Though their good deeds and achievements far outweigh the bad, those black stains are dark, indeed, and forever mar the galactic community's perceptions of these people. Their civilization advanced quickly, assisted by a natural predisposition to psionic abilities. With *psychometry, clairvoyance and telepathy* being the most frequently occurring psychic abilities, subterfuge was impossible and the Toke Tuul learned to cooperate with one another, and openly share their thoughts, hopes and ideas. This kept crime low and achievement high, with the civilization reaching scientific heights and eventually the stars at a rapid pace. Contact with the galactic community went well, and the Toke Tuul were graciously accepted as great scientists, free thinkers and arbitrators. Their natural abilities made them prized advisors, negotiators and diplomats. It was this exposure

to other races, notably those with no psionic abilities of their own, that would lead to the *black mark* on the Toke Tuul's otherwise sterling reputation. For there was a brief period where several groups found their psionic powers to be an ever present temptation to deceive and manipulate those without them. For a handful of Toke Tuul opportunists, the temptation proved to be more than they could resist. Abuse of their psionic powers would lead to tragedy and scandal.

The positions of trust earned so quickly by the Toke Tuul in alien courts and the political arena gave them tremendous influence and power over those who trusted them. Normally this would not be a problem, but all past experiences had been with their own people in the controlled environment of Te Tool's psionic community. Let loose on the defenseless and often psionic-less peoples of the galaxy, Toke Tuul were like children left to keep watch over a candy store. Those inclined to abuse their power found it all too easy to do so, and many surprised themselves at how alluring it was to make a bid for personal power and glory. A few short generations after their explosive appearance on the galactic scene (and before the FAR would allow them membership), a planet known as **Lollilor** was laid to waste by an extensive nuclear exchange. Many Toke Tuul were involved in the subsequent investigation, for they were eager to prove themselves to the Federation of Allied Races, and Lollilor had been a member planet. Ironically, it would be the Toke Tuul who discovered that some of their *own* had intentionally orchestrated the war. It was all part of a twisted scheme to win world domination by tricking third party nations into war and thus remove several political rivals. This was accomplished through lies, treachery and manipulation made easy by the rogue Toke Tuul's psionic powers. Unfortunately, the Toke Tuul masterminds behind this plot underestimated how rapidly emotions would get out of hand and the resulting war decimated the planet, the psychic instigators of the tragedy perishing in the nuclear maelstrom along with much of the planet. A handful of similar and equally frightening events cropped up over the next ten years, delaying the admittance of Te Tool into the FAR for almost twenty years. The trials of the Toke Tuul as they struggled to become part of the galactic community were far from over.

Seventy years after their admittance into the FAR, the Toke Tuul and their fellow federation members would be shocked by the declaration of the Zerulliat peoples that their holdings would hereafter be known as an Empire. The announcement would have caused little ruffling of feathers, for member planets occasionally leave the FAR, but the announcement came a few days after the Zerulliat had forcibly annexed a dozen planetary systems to their new Empire. The FAR tried negotiations for the relinquishment of the captured planets, but to no avail. During these negotiations, it was learned that the new Emperor's advisors were a conclave of *Toke Tuul*. It was they who suggested, planned, arranged and pushed through the expansion plans. The "emperor" was nothing more than a puppet on their strings. A long, bloody war was needed to set things right. It would annihilate the Zerulliat peoples and cast a shadow across the Toke Tuul that reaches across a century to shade even today's perceptions of these people. While the majority of these natural psychic masters are good hearted people dedicated to helping others and restoring their good name, there are still those among them who use their powers for personal gain and evil intent. The result is that while many trust the Toke Tuul, a good number do not, and some outright fear, segregate and persecute them.

All Toke Tuul are tall and lean, with soft, but wrinkled skin that displays a rainbow of pastel colors from sky blue to lavender to a soft lime green, with white or pale grey chest and facial tones. A large, single eye is in the center of their long, bony head. It is a glassy black or dark blue, green or purple orb with no detectable iris or pupil. They have no discernable nose and their ears are located on the top of the head at the end of bony protrusions that resemble a pair of tiny volcanic craters. A pair of small horns grow on both sides of the chin, and a series of small spines grow from the base of their skull and down the back of their neck. Some males show similar growths on the arms and/or back, although such spines are usually much smaller than those on the neck. The mouth is long and thin, their skin wrinkled and craggy. Tall and thin, the limbs of the Toke Tuul are rather spindly, their arms and digits long and delicate. Flowing gowns, cloaks and robes are by far the preferred clothing of this proud race, and even when armored for battle, many will adorn themselves with capes, cloaks, scarves and ribbon-like streamers. Dark colors that complement and bring out their pale skin are popular in both clothing and interior decorations. Flowing, elegant forms dominate their artwork, architecture, technology, and vehicles. Their buildings sweep in graceful curves, some resembling flowers or waves, and even their sophisticated computers look more like sculptures than machines. Toke Tuul spacecraft and vehicles are likewise akin to moving art forms and are highly priced by many other races, fetching high prices on galactic markets where they are modified to accommodate the physiology of other races.

Toke Tuul (pronounced as "toke tool")

Alignment: Any, though the home world can be considered Principled in general. Most Toke Tuul gravitate toward Principled and Scrupulous and many struggle to redeem their good name. However, many find the rest of the universe to be too intoxicating and corrupting, turning them into villains of the worst kind. When a Toke Tuul goes bad, it's usually really bad: Miscreant or Diabolic.

Attributes: I.Q.: 3D6+1, M.E.: 3D6+5, M.A.: 3D6+3, P.S.: 3D6, P.P.: 2D6+4, P.E.: 3D6, P.B.: 2D6, Spd.: 3D6.

Hit Points: P.E. attribute x2 plus 1D6 per level of experience.

S.D.C.: 1D4x10+20

Height: 7 feet, 6 inches plus 4D6 inches (2.37 to 2.89 m).

Weight: 200 to 400 lbs (90 to 180 kg).

Average Life Span: 200-230 years.

Super Abilities: All Toke Tuul are psychic by nature. They use the normal rules for creating a *Latent Psionic* as detailed on page 190 of **Heroes Unlimited™, Second Edition**, but they receive a bonus of +20 to their base I.S.P. (M.E. attribute x2 +2D4x10+20). Toke Tuul

characters always have *psychometry*, *clairvoyance* and the super-psionic power of *telepathy* among their initial psi-powers. Select an additional *five* psionic powers from the categories of Healing, Physical or Sensitive at level one. Roll on the random table as usual to determine new psionic powers as the character grows in experience.

Education: Any, but tend to avoid physically demanding occupations (i.e. soldier, athlete, etc.) and naturally gravitate to careers as scholars, investigators, scientists, diplomats and public speakers. Those who go bad often become criminal masterminds or power-hungry maniacs who long to rule over or enslave others.

Special Weapons: Since firearms and energy weapons are often considered unacceptable in more genteel surroundings such as the diplomatic corridors of government, many Toke Tuul arm themselves with kisentite knives or daggers, since these weapons can often be concealed and do more damage than normal weapons. Typical Damage: 2D6. Weight: 1.5 lbs (0.67 kg), Length: 10-14 inches (around 0.3 m). **Note:** They are also fond of magic items.

Special Vehicles: Toke Tuul prefer hover vehicles and spaceships that have a sense of grace and beauty. They rarely ever find the designs of other races very appealing and will usually arrange to have their own vehicles transported to the places they live, work or visit. Player characters can have any reasonable hover vehicle of choice.

Preferred Armor: Toke Tuul are rarely violent, but do wear light to medium armor and half suits when necessary (A.R.: 12, S.D.C.: 65 is common). Likewise, evil Toke Tuul seldom wear heavy armor, preferring light armor, force fields, magical defenses and henchmen to protect them.

Familiarity With Earth: None.

Rifts® Notes: In a Phase World® setting, the Toke Tuul will be prized advisors, artists and psychic investigators with the same checkered past and shadowy image as given here. A standard Rift's setting would find them to be inhuman D-bees of questionable integrity. The Coalition will brand them as dangerous aliens who bend and manipulate the minds and emotions of humans.

Toke Tuul Robot Guards

Toke Tuul use robots as bodyguards and to police themselves. Robots are not vulnerable to their mind control and are thus a good method of handling psychic criminals. The same holds true of robot bodyguards, and since the Toke Tuul are not usually very physically powerful, the robots give them muscle. Moreover, there are a fair number of races and organizations who fear and/or hate the Toke Tuul, and see all, even those who have only ever lived a good life and strived to bring peace to the people of the Milky Way, as untrustworthy, evil monsters to be destroyed. Some zealots seek to punish the entire race for incidents like the Lollilor and Zerulliat affairs, while others seek to enslave and use them; Toke Tuul fetch 50,000 and up on the slave market. To surmount this, the aliens rely heavily on robots for protection.

Robots are immune to all forms of mental and emotional psionic attack (physical psionics will do normal damage) and are heavy enough to resist the effects of telekinesis from all but the most powerful psychics. The dignitary shown in the illustration is escorted by two such robots acting as bodyguards. Even ordinary Toke Tuul will own one or two robots, while those active as diplomats, investigators, explorers and adventurers will have 2-4.

Name: Toke Tuul Robot Protectors, more commonly known as "Tullies" or "Tully Guard."

Model Type: Security Robot

Class: Artificial intelligence, medium light security robot, artificial appearance.

Crew: None, automated.

Armor Rating (A.R.): 13; effectively natural A.R., so any attack under 14 does no damage.

S.D.C. by Location

* Head/Helmet – 80
Arms (2) — 60 each
Legs (2) – 100 each
** Main Body– 280

* This is a small target and requires a called shot at -3 to the die roll. This penalty does not apply to the modified called shot rules against A.R. for Heroes Unlimited. In the latter case, the die result would remain unmodified for determining if an attack defeats armor or not. In the Toke Tuul robot, all sensors and sensitive systems are located in the chest, so destroying the head will have no effect on the operation of the robot.

** Depleting the damage capacity of the main body will shut the robot down, rendering it useless.

M.D.C. Note: For use in Mega-Damage settings, turn the S.D.C., point for point, into M.D.C. (i.e. Arms 60 M.D.C. each, Main Body 280 M.D.C., and so on. A.R. no longer applies).

Speed

Running: The Tully robot has a speed attribute rating of 66 and can run at a speed of 45 mph (72 km). The act of running does not tire out the robot and can be maintained indefinitely. Can leap 12 feet (3.6 m) high or 20 feet (6 m) across.

Swimming: 80% skill level at speeds of up to 30 mph (48 km or 26 knots). Maximum depth tolerance is 800 feet (244 m).

Flying: None, unless an additional skill program includes jet pack or other piloting skill.

Statistical Data

Height: 8 feet (2.4 m).

Width: 3 feet (0.9 m).

Length: 2.5 feet (0.76 m).

Weight: 400 lbs (180 kg).

Physical Strength: 20 (Superhuman P.S.).

A.I.: 10 I.Q. equivalent.

Cargo: None other than what can be put into pockets, packs, or carried bags.

Power System: Typically a dual super-solar compact battery system (24 hour operating time; effectively unlimited) and a micro-fusion power supply with a 20 year life.

Skills: Basic Mathematics 98%, basic laws of nature/science 90%, Computer Operation 80%, Law (general) 80%, Radio: Basic 80%, TV & Video 70%, Read Sensory Equipment 70%, Basic Military Etiquette and weapon recognition 70%, Hand to Hand Combat: Basic, Prowl 45%, Surveillance Systems (and Tailing) 60%, Pilot Hover Vehicles 90%, two other piloting skills at 85%, and W.P. Energy Pistol, W.P. Energy Rifles and W.P. Sword; all are at 5th level of proficiency. A special language computer/translator enables the robot to understand and speak 600 different languages (can only *read* 12, including Toke Tuul, Atorian, and the Pilian trade language at 75%).

Cost: 1.4 million for the standard Guard Robot without weapon systems. Add an extra 125,000 credits to get an extra three W.P. or Military or Piloting skills (the latter two are at 80%), 120,000 for an extra 100 S.D.C. for the main body (increase all other S.D.C. by 20%), 100,000 for one additional attack per melee (can only upgrade once), an extra 150,000 to boost the A.R. to 15, and 500,000 for the complete weapons package below.

Weapon Systems

1. **Taser:** An idea borrowed from the TGE, a taser is built into one of the robot's hands. A short-range blast or taser touch will momentarily stun and disorient troublemakers.

Damage: Temporarily short-circuits the nervous system of life forms who have one. The attack will make a victim -10 to strike, parry, and dodge, and -60% on skill performance for 2D4 melee rounds. Also reduce the victim's number of melee attacks/actions to two, and reduce speed by 80%. If the victim saves against the stun attack (a roll of 16 or higher) reduce penalties by half and speed and melee actions are not reduced.

Rate of Fire: Once per melee round.

Effective Range: By touch or 10 foot (3 m) blast.

Payload: Effectively unlimited.

2. **Forearm Laser or Ion Blaster (2):** Each forearm has a built-in laser or ion blaster, or both (laser on one arm, ion blaster on the other). The laser has superior range, the ion blaster superior stopping power.

Damage: Laser: 3D6 – Ion Blaster: 5D6

Range: Laser: 1000 feet (305 m) – Ion: 500 feet (152 m).

Rate of Fire: Single shot; each blast counts as one melee attack.

Payload: Effectively unlimited.

3. **Retractable Kisentite Blade (2):** A sword is housed in a compartment in each forearm.

Damage: 3D6 +8 from P.S. damage bonus; blade never dulls.

Range: Hand to hand combat; roughly a 6 foot (1.8 m) reach with blade extended.

4. **Hand-Held Weapons:** The robot can use any human-sized hand-held weapon from guns to melee weapons. Standard issue weapons for the Tully Robots are one energy pistol (sometimes two), one energy rifle, and a billy club or mace, but any melee weapon (sword, spear, staff, etc.) can be used. Damage: 3D6 or 4D6 for the pistol, 5D6 or 6D6 for the rifle (both are M.D.C. in Mega-Damage settings) and 2D4 to 2D6 damage for the melee weapon. Rate of Fire: Single shot only; each pull of the trigger shoots an energy blast. Effective Range: 800 feet (244 m) for the pistol, 2000 feet (610 m) for the rifle. Payload: 20 blasts per E-clip.

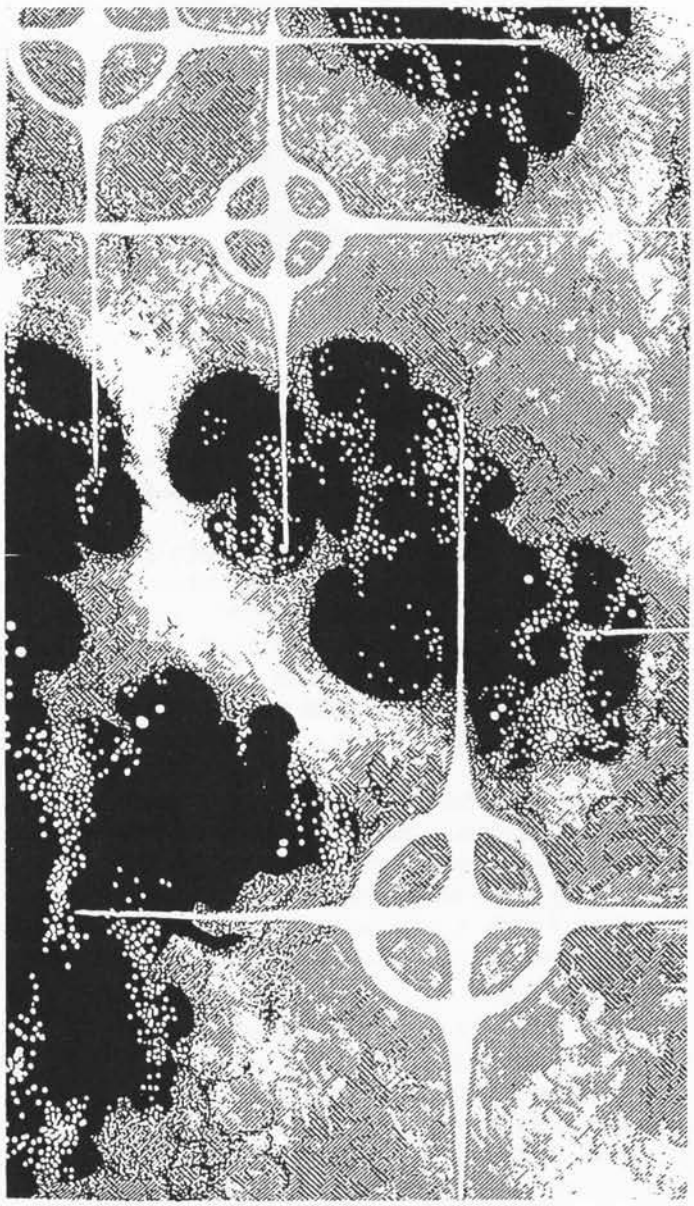
5. **Hand to Hand Combat:** The Tully robot can engage in both armed and unarmed combat just like any other character.

Attacks per Melee Round: Four (may get one additional attack at an additional cost).

Damage: 2D6+8 from punch, kick or head butt due to its Superhuman P.S. Power punches are possible upon command by its owner and inflict double damage, but count as two melee attacks.

Bonuses (includes robot attributes and skill): +3 on initiative, +4 to strike, +6 to parry, +4 to dodge, +4 to disarm, +6 to pull punch, +2 to roll with impact. All the usual combat rules and damage are the same as always.

6. **Special Systems and Bonuses:** Has all the same basic systems as TGE robots, including basic listening system, radar signal detector, wide-band radio receiver and transmitter, audio recorder, advanced robot optic system, video receiver and transmitter, camera, and searchlight, plus amplified hearing, motion detectors, heat sensors and passive nightvision.



Thissera-Micean Cooperative (TMC)

The Thissera-Micean Cooperative (TMC) is a space policing force created by the reptile-like *Thisseras* (see their first appearance in **Aliens Unlimited™**, page 148) and the rock-like *Miceans* (**Aliens Unlimited™**, page 137). It contracts with individual planets to get patrol and law enforcement jurisdiction in the local space around that planet and within that sector of space. The planetary laws of a contract holder are enforced in the space around it, and anyone breaking them is arrested by the TMC and turned over to the planetary authorities. The laws they enforce govern the whole gamut of crimes, including murder, assaults, rape, theft, smuggling, confidence games, scams, kidnaping, extortion, sabotage, destructive or life threatening vandalism, piracy, terrorism, conspiracy, mining claim infringements, etc..

Initially, all members of the TMC were either Thisseras or Miceans, but as their reputation grew, and contacts became more plentiful, aliens from other races began to apply for positions in the interstellar "police force" by the hundreds. In its infancy, such requests were denied, but as it prospered and expanded across the galaxy, the TMC has become a multi-racial organization. Currently, Thisseras and Miceans comprise a little less than 40% of all field operatives, but many of them remain as team/squad leaders, officers, and administrators.

The TMC currently holds contracts with 964 planetary systems covering 435 sectors in the Ilta quadrant, compared to the FAR which has a mere 50 sectors in that same quadrant (it has a stronger presence in other quadrants). As the number of contract holders grows, and the TMC patrol sectors overlap, the organization is becoming a strong, though unofficial, uniting force in the Ilta quadrant. They have no political power unto themselves, but as a third party supported by locals, it is often in their best interest to do what they can to settle interplanetary disputes and maintain relations between clients who are rivals. To this effect, the TMC is often successful in getting planets to cooperate with one another, as well as brokering extradition, trade and peace deals.

They always have a waiting list for clients because the Thisseras and Miceans steadfastly refuse to rush the training and screening of new law enforcement officers, resulting in a constant shortage of manpower. More police officers are being trained than ever, and the TMC has started accepting partial contracts in which they offer minor protection in the way of sporadic patrols and flybys to planets waiting for a full protection contract. The Thisseras and Miceans would never deliberately overextend themselves and are rarely short of manpower for their existing contracts. Demand has simply overtaken available supply.

Because of several factors, such as the variety of crimes and number of different laws they enforce, the overall size of the TMC itself, and the fact that many of the criminals they face are often wealthy and/or well equipped with an extensive membership (organized crime, raiders, space pirates and spies among them), TMC training, organization, and operations are similar to the various specialized Earth government agencies such as the CIA, FBI, DEA, ATF, and so on. Their training, tactics, and equipment include a variety of combat/military skills, weapons, explosives, espionage, stealth, and teamwork necessary to engage space criminals in any situation from a head-on battle to a silent raid that frees hostages. Each branch or division is trained in a specialized field and agents from different divisions work cases together in an attempt to combine that expertise. Helping out is a special group of diplomatic business people called Interdivisional Liaisons or "ILs."

Each TMC officer undergoes extensive training in police procedure, basic laws (including what the TMC calls "Universal Galactic Laws" or UGLs), and the etiquette of dealing with civilians. Additional training includes combat skills, and exposure to crime scene footage and other possibly shocking images that will eventually be encountered in the field. Proper handling of evidence and the criminals themselves, and dozens of other skills and procedures are ingrained in all of these lawmen. Besides the usual police training, TMC officers receive basic military-style experience in space and hostile environment survival, robot and terrorist combat training, and some drill practice for proximity awareness. In addition, all officers must have a solid

understanding of the laws and customs of the sector they patrol, which can contain as many as 5-10 different inhabited planets.

Though the TMC produces the vast majority of its own weapons and equipment, additional guns, equipment, spacecraft, financing and auxiliary manpower can be provided by each of the planets that contract with them. Most contracts require a planet to allow the placement of either a Thissera or Micean factory complex on a moon, space station, or on the planet to produce TMC boarding vehicles, weapons, and/or small spacecraft. These factories are run and directed by TMC overseers, but also include natives of the planet whenever possible. Regardless of other options, all contracts require a planet to provide the TMC with a set amount of financial support, a base of operation, basic supplies and ammunition, and general cooperation from the local authorities and government(s). Depending on the circumstances and needs of the specific planets, contracts can specify other conditions and promises from the planet signing them, especially when the TMC is to patrol not only the space around a planet, but also to help police the planet itself. Despite the costs involved, those that can afford to pay find the comfort of having a private army of interstellar police in their backyard very comforting. Planets with unique weaponry, equipments or resources can provide them to the TMC in exchange for a contract cost reduction.

The Thissera and Micean races also have scores of companies who produce and provide standard equipment for the organization. Remember, this operation started as a kind of bi-racial business venture, and many members of each founding race are profiting by gearing their products and services to supporting the TMC. Also note that all of that support from the mineral-reptile coalition is not entirely technological or combat based. The two races provide the TMC with a great number of secretaries, psychologists, forensics and medical personnel, lawyers, technicians, mechanics, pilots, shipping personnel, etc. Even though less than 40% of the field operatives in the TMC are Thisserans or Miceans, nearly 60% of the TMC's overall employees are from those races.

Organization of the TMC

Each sector (as the TMC regards them) is approximately 200 light years in each direction and usually has from 1-12 client planets in it. (The closer one gets to the center of the galaxy, the more planets there are in a sector.) Patrolling all of that space requires a lot of organization. The TMC uses a centralized dispersal that spreads its forces outward from one strong central base to numerous smaller ones. Each base conducts patrols and operations that either overlap slightly or fall just short of each other, depending on the threat rating of the area in question and the number of contracts. The largest of the TMC space stations are the *Patrol Moon Class.* A TMC Patrol Moon Class space station, often called a "Moonbase," is a massive structure, housing nearly 10,000 personnel and hundreds of spacecraft. These Moonbases quite often function as the centralized base for the TMC patrol structure. Despite their enormous cost, the TMC has a dozen of them at key places in the overall contract areas. Unfortunately, that covers only 400 of their 964 sectors. To remedy this problem, the TMC uses a combination of smaller, *Satellite Class space station* and *moon outposts* (base camps actually located on a moon or asteroid) in conjunction with regular and long-range patrols to allow for maximized coverage of the contract areas. Placement of *Gateway structures* also helps to relieve some of the burden of patrolling the vast areas between posts and planets under contract. However, Gateway transit structures are expensive, so they too are widely scattered over the contract areas. This means there are holes in the immense net of TMC controlled space, but they still do a good job overall and make certain local space around client planets is as safe and secure as possible. It is in deep space where the TMC must hunt down the pirates, murderers and thieves that the greatest lawlessness reigns.

The TMC command structure begins at the top with the Thissera-Micean Directive Board, or simply "The Board" or "DB." It is composed of several elected representatives from each of the two founding races. They have little direct authority except for political maneuvering and are mostly responsible for setting policy and approving/assessing contract applications. However, each of them is, by practice, the Chief Commander of their division which grants them authority outside the Board. Chief Commander is the highest rank in the TMC and is very similar to the Earth rank of General. Each of the six divisions has one Chief Commander who gives orders to a whole string of officers who command the lower ranked peace keepers and law officers — all personnel are called "TMC officers" by civilians, just as most policemen on Earth are called "officer" or "police officer."

TMC Ranks (from highest to lowest)

Chief Commander (One per division)
Lieutenant Commander (3 under each Chief Commander)
Division Commander (6 under each Lieutenant Commander)
Major
Captain
Lieutenant
Master Sergeant
Sergeant
Squad Sergeant
Unranked Patrol Officers (Ironically referred to as "Officers" even by higher ranks)

Each Patrol Moon space station will normally have one or two Division Commanders as its commanding officer(s). The Board of Directors, Lieutenant Commanders, some Division Commanders and other high ranking officers are stationed on a large Moon Outpost located on a planetoid roughly halfway between Minas and Ansim, the home worlds of the Thisseras and Miceans. The command structure branches out normally from the top to the bottom, until it reaches the squad sergeant and his six to eight officers which make up the standard operating unit of the TMC. Things get a bit complicated when actual cases turn up that are not cut and dry within a single division, such as when pirates are discovered running guns on the side. In those cases, units from each division temporarily merge to pool their skills and expertise.

To facilitate easier merging of units as well as perpetuate the spirit of competition that originally founded the TMC, special **Interdivisional Liaisons (ILs)** are hired by the TMC to act as go-betweens and mediators. In reality, the ILs are more like "sports agents." Each IL is assigned a number of units, often from separate divisions. It is the IL's job to handle the relations of those units when they merge with others, but also with the acquisition of case assignments for their units. Each IL does his best to get his "clients" assigned to important or high profile cases in an effort to advance not only their careers and status, but his own. Continuing with the sports analogy, the ILs even trade units and barter them away for specific assignments. Some ILs arrange to have all of their assigned units from a single division, while others jockey for all of their units to get along with each other and work grand maneuvers to get as many of them assigned to specific cases as possible. Often, a team's IL will issue their orders and preside over briefings in the presence of, or in place of, the commanding officer. This helps to give free time to the officers, while giving the IL opportunities to motivate and inform his troops. In this respect, ILs can be thought of as *civilian officers* within the TMC. Ixitulsa, the Shissan IL, is quite famous and respected for getting all six of his successful teams (from four different divisions) assigned to the Quintina Malaee luxury liner hijacking case. Everyone involved came out shining like a star when the pirates where tracked down and taken out without any of the surviving hostages being harmed (40 people died when the craft was hijacked, but none in the TMC raid to free them).

Each of the TMC divisions is described in some detail in the following entries. As mentioned before, they specialize in one or two fields of law enforcement, but training stresses flexibility because their investigations and operations often overlap with other divisions. The TMC puts a large amount of time and effort into interracial and interactive awareness to minimize friction and maximize cooperation between the divisions, and the diversity of races that make up the organization and the people they protect. In addition to the specified areas of each division, all officers have common duties like the prevention of crime and the protection of civilians. While those under contract come first, the TMC is concerned about all sentient life forms and will intercede to protect and rescue anybody in danger. They also have common powers including the ability to confiscate or commandeer civilian items or vehicles, the authority to make arrests and incarcerate suspects and perpetrators, and forced entry *with just cause* for the intent of arresting a suspect or protecting the innocent. Division members not currently working cases are assigned to *support roles* for officers working other cases or on patrol duties. All divisions handle murder cases as related to their particular area of focus, with Vice catching those from domestic disputes and which don't fit cleanly in one of the other categories. Unless stated otherwise, approximately 10% of each division includes officers with super abilities and 10% are psychic.

Piracy Division (PD): The Piracy Division, often referred to simply as "Piracy" or the "PD," is charged with stopping, preventing, and investigating instances of piracy as well as recovering stolen goods, and tracking and apprehending space pirates, kidnappers, spies and raiders. They also spend much of their time simply sweeping space in search of suspicious craft, space stations, squatters (who could be pirates, spies or other criminals), derelict spacecraft (often used as traps by pirates and raiders) and pirate bases while waiting for distress calls. During these periods of routine patrol, the PD helps the Contraband Division to police the space ways and enforce travel ordinances (much like galactic highway patrol officers). Depending on what kind of cargo or persons are taken or targeted by pirates, other divisions like Contraband, HS&D, or SOD may be called in to help with a piracy investigation.

Piracy is one of the best outfitted divisions in terms of vehicles, because they deal primarily with opponents in armed spacecraft. Piracy officers also have access to or are issued spacecraft, environmental suits, full environmental battle armor, explosives for hull penetration, and boarding vehicles among other specialized equipment. Other specially issued equipment includes weaponry with low penetration for combat in a spacecraft, like sonic, freezing, and incendiary sidearms. Environmental battle armor with magnetic boots and a jet pack are almost always issued for raids or boarding maneuvers.

Contraband Division (CT-D): Commonly abbreviated to simply "CT-D," this division is one of the largest in the TMC. They are responsible for policing the space ways by enforcing travel laws and ordinances set out by the planets of a particular sector. This is their normal, daily duty,

but it is not the primary reason for the division's existence. CT-D is charged with preventing the transport and smuggling of illegal substances, goods, aliens, spies, and fugitives. Nearly anything can be considered illegal to transport through certain space ways, and varies greatly from planet to planet.

Contraband Division is most sensitive to the nuances of the laws of the varied races that contract to the TMC. They have to be aware of specific substances that most would consider harmless, but could prove deadly to certain races. In any other sector, such items would be perfectly legal to transport, even by the ton, but in the space lanes of races susceptible to them, such cargoes are deadly and banned. TMC officers of many races would balk at incarcerating a shipment of tuning forks, but if they affect a crystalline race like drugs do a human, then a ship trying to secretly land on a crystalline world is definitely up to no good. Of course, most of the contraband handled by this division is more traditional shipments of weapons, drugs, outlawed technology, and vice.

Depending on the cargos involved in a smuggling operation, CT-D can receive help from one or more other divisions. If drugs or illegal electronics are involved, HS&D will help; the vice division will aid investigations into cargos of prostitutes or slaves; the SOD or Dangerous Situations Division may help investigate weapon or vehicle cases as well as terrorism and assassinations and, of course, if more than one type of illegal cargo is in question, a number of other divisions may join the case.

Contraband officers have access to some of the most sensitive sensor systems in the TMC, including metal, heat, and chemical detectors, ultraviolet and infrared optics, ABS detectors, and chemical or atmosphere analyzers. **Note:** Officers in this division get a bonus of +5% to the Find Contraband and Detect Concealment skills.

Vice Division: This division has perhaps the most diverse crime investigating duties of all TMC divisions. Vice is entrusted with investigating crimes against people and laws of decency (which, of course, vary from civilization to civilization). This includes prostitution, sex crimes (rape, etc.), the slave trade, illegal entertainment involving sex and/or violence including blood sports/gladiatorial games, as well as racketeering, fraud, and murder involving any of the above. Vice officers regularly participate in other TMC investigations because of their expertise and overlapping investigations. Vice also has one of the largest caseloads of the divisions. They regularly function as a support division for all other TMC divisions, much as SOD does, but on an investigative level rather than with weapons and special tactics.

Many of the crimes that Vice deals with are unique to certain races, much like those of the Contraband Division. What one race considers immoral, cruel or illegal may not be seen that way by another. For example, while most civilized races consider slavery a heinous crime, there are a few who endorse a legal (and booming) slave trade. Vice is one of the only divisions that makes it policy to offer its officers assignments in accordance to their racial or moral beliefs.

Vice officers have access to all TMC special facilities such as the morgue, crime labs, inter-division data files, and all the rest. They also enjoy complete use of all necessary computer systems for cataloging, analysis, and research. Many of the TMC's psionics are found in the Vice division, Toke Tuul among them; 35% of those on Vice have psychic powers. **Note:** Officers in this division get a +10% bonus to the Disguise skill and +5% to Escape Artist.

Harmful Substances and Devices Division (HS&D): Harmful Substances and Devices division (HS&D or HaSaD) is basically the drug enforcement branch of the TMC. The wide variety of illegal electronic enhancement devices and most addictive substances and devices available in the galaxy also fall under their jurisdiction. HS&D operatives frequently coordinate their investigations with Vice because half of the crimes investigated by Vice are linked somehow to harmful substances and devices. Likewise, they frequently work with Contraband Division for obvious reasons. HS&D officers rarely pull patrol duties and spend most of their time investigating cases, researching, setting up undercover stings and working on prevention. In order to better protect their agents from criminals with supernatural means of ferreting out infiltrators, many of HS&D's undercover agents are psychics, practitioners of magic, or superhumans. It is common for new recruits in powerful, organized criminal organizations to be mentally or magically scanned for their intentions and/or loyalties to the organization, and some even have periodic checks.

HS&D has much the same access to TMC files and facilities as Vice division. They also have access to hard armor, heavy weaponry, and manpower for raids on farms, factories, or labs producing illegal substances or devices. A full 20% have super abilities, 20% are psionic and 6% wield magic. **Note:** Officers in this division get a bonus of +8% to the Streetwise skill.

Dangerous Situations Division (DSD): The primary mission of the Dangerous Situations Division (DSD) is monitoring, controlling and stopping the smuggling and sale of illegal weapons, bombs, bionics and robotics, and their use in crime (cyber-snatching, the use of robots or bionics in a robbery, piracy, raids, murder, etc.). In that capacity, they have a strong presence at all space stations and space ports within their patrol sectors, and often share investigations with Contraband officers who discover illegal shipments of weapons, cybernetics and robotics. The DSD is also trained in dealing with powerhouse criminals augmented by bionics or exoskeletons, or commanding robots. This means they can conduct surgical strikes and counter terrorist threats, hostage and bomb situations, cyborg raiders, rampaging robots and even super beings. Their duties and operational procedures are very much like the S.W.A.T. or superhero teams of Earth, using advanced training, speed, and superior weapons (or powers) to convince a perpetrator or gang to surrender, or direct intervention to stop and capture said perpetrators quickly with minimum danger to civilians.

DSD officers are trained in negotiations, interrogation, and criminal psychology, and many of them are actually Hardware, Special Training, Cyborg, Robot or Weapon specialists themselves. 10% are partial cyborgs, 10% full

conversion cyborgs, 20% robots (typically of the power armor/exoskeleton variety, but includes some androids and advanced AI), 10% psychic, 2% magic and 15% are super beings. Non-superhuman officers (Hardware and Special Training) in the DSD possess numerous weapons skills and the best can identify most weapons with but a glance (**Bonus:** +10% to *Recognize* Weapon Quality and Contraband). Spotting customized hardware and contraband is also a common trademark of the experienced DSD officer. Their technical knowledge often goes as far as identifying manufacturers from design elements and quality.

DSD has access to advanced optics, electronics, and surveillance systems, heavy body armor, power armor, most categories of weapons, jet packs, small, fast vehicles, light spacecraft, and robots or drones (mostly for bomb disposal and decoy situations). They frequently work with the SOD.

Special Operations Division (SOD): This division is the military tactical division of the TMC. They are skilled in military tactics, weapons and vehicles as well as standard TMC investigative and procedural abilities. SOD can be thought of as an auxiliary division that provides help, support, and extra manpower to the other divisions. They can be assigned to any case that is short of manpower for any reason but their real strength is paramilitary operations in which they engage space pirates, raiders, terrorists, invaders, threats to national or planetary security, super beings, monsters and armed conflicts. They are the heavy-hitters called upon when raw firepower is needed. One can think of them as S.E.A.L. or Commando teams or a superhero team who often do standard police work when things are quiet, but jump into action when there is a military or other serious crisis. Needless to say, SOD has a reputation for getting things done, but they also have a darker reputation of drafting "gung-ho yahoos" and "psychos." As a matter of fact, many SOD officers are former Bounty Hunters, police officers, military personnel, or even reformed criminals; 25% possess super powers, 12% psionics, 10% full bionic conversion, and 3% magic.

SOD is one of the busiest divisions, spending a lot of time helping out DSD, HS&D, and Piracy divisions on raids and investigations. Developer's note: The original play-test group for Aliens Unlimited was made up of SOD officers, and they never got to rest on their laurels. SOD is the only TMC division with easy access to any of the organization's heavy equipment, including most types of spacecraft, space fighters, heavy weapons, explosives, power armor, tanks and other armored vehicles. Their equipment is some of the best and includes optics, electronics, and weapons. **Bonus Note:** +1 on initiative, +3 to save vs Horror Factor.

Operating Procedures

TMC operating procedures are very similar to those of other policing agencies, including the ones on Earth. They spend much of their time patrolling or doing paper work and similar necessary and inglorious work until a crisis arises, a criminal operation is discovered or a crime requires investigation. If an officer is on hand, arrests are made on the spot according to the laws of the client planet under whose jurisdiction the crime occurred. If no officer is present, the proper division is notified and they report to the crime scene to investigate. Once there, they perform an "immediate assessment" to see if other divisions need to be called in. After all necessary personnel are on the scene, an intense investigation begins. The assigned officers track down leads, talk to contacts and snitches, and pore through files doing research on possible links with other cases or suspects. If all goes well, they will eventually track down the suspected perpetrator(s) and hopefully apprehend him. The cycle then starts over. Officers can, of course, be assigned to work several cases at once, especially if they are small, old or moving slowly, or the officer is an auxiliary investigator or advisor on the case (like SOD helping Piracy).

As mentioned before, the basic operating unit of the TMC is a squad made up of six to eight members (often with two or three squads from different divisions working in concert). Space is a dangerous place, and the squad size ensures that no officer has to act alone. There should always be one of the other squad members available to back up any one teammate, and the team is encouraged to work as a unit and try not to divide themselves into smaller subgroups. During certain assignments, like walking a beat on a space station, the squad may be broken up into pairs of officers, and during investigations, they can separate to cover more ground, but only in secure areas and situations. Interviews are rarely ever allowed to be done solo, especially if the individual is of questionable allegiance or character. On top of all this teamwork, the TMC officer is required to constantly keep in touch with someone. Whether it is central command when they are zipping by in a spacecraft, their fellow officers in a landing ship when exploring suspicious areas, the local authorities or their squad mates when walking a beat, someone should know where the officer is and what he is doing. Officer safety is one of the prime operating goals of the TMC.

Although the TMC has holding areas and a variety of cells for prisoner detention, they do *not* maintain any kind of permanent prison for criminals to serve time. The TMC is only a policing force, not a judiciary one. All criminals are turned over to the regional government or planet where their crime was committed for judgement and punishment. Once they have been apprehended, the TMC passes custody over to the proper authorities, along with evidence and other case materials. Once the criminal's trial begins, the officers involved will be called in to testify, but that is all. Liloqua quadrant benefits from the presence of the FAR and has numerous interplanetary laws, but the Ilta quadrant has little or none of those laws. This is only a problem when an apprehended criminal has committed crimes in more than one planetary system and violated the laws of multiple contract holders. When this kind of situation results, the TMC generally decides who the criminal is turned over to, a decision that often requires a great deal of diplomacy and political maneuvering on the part of all involved. Luckily, the TMC has two major factors in their favor. The first is their own council of lawyers and diplomats to handle the situations, and the second is a general contract clause that allows the TMC to decide when and to whom criminals in their custody are released. The author-

ity of the TMC in such matters is highly respected and seldom challenged.

Jurisdiction

The TMC is a space policing entity. Their contracts generally protect the local space around a planet from its outer atmosphere to a range of half the distance to the nearest inhabited planet. Moons, asteroids, debris fields, space stations and space colonies clearly owned by the contract signer are all included in the TMC's official jurisdiction and may extend the overall "space" in which the lawmen operate. Uninhabited and unclaimed moons, planets, and other heavenly bodies are not usually included in their overall jurisdiction, although colonies, mining operations, and exploration camps may be. Likewise, the TMC may pursue and apprehend space pirates and brigands into these "free ranges" unclaimed by any government, but do so at their own risk. Unless the contract specifically specifies it, however, the TMC are NOT allowed to pursue a criminal down to the planet's surface. Regional authorities usually take over the moment desperados dip into the inner atmosphere of an inhabited planet. Of course, the TMC can offer their help to the local authorities, but if they decline, the officers must retreat into space and hope for a satisfactory resolution. The TMC always radios ahead to let local governments and police know about criminals fleeing to their planet so the terrestrial authorities can intercept and apprehend the suspect. On planets without a contract with the TMC, they have no jurisdiction and must turn away or risk an interstellar incident, the only exception being when the "locals" agree to allow them to pursue or request TMC support. The Board enforces this strongly, throwing out arrests made on non-contract planets, as well as leveling stiff fines and punishments to those who break this rule. This also applies to space stations, moons and spacecraft within the normally accepted borders of an independent planet. Unless a villain is in a free, open range of space or a sector under contract, the TMC has no jurisdiction and must abandon their pursuit. However, TMC officers sometimes bend this rule when their quarry is only on the outer border of that region and there are no regional space powers to offend or see them. Note that the TMC has no official authority outside of its contract sectors, but the Board allows arrests of fleeing suspects as long as another entity of true authority (such as the FAR or local planetary government) sanctions their action or does not disapprove and protest such actions within its borders.

The TMC is well respected as a trustworthy and well intentioned police agency, and they have a surprisingly high approval rating among those who do not employ them. Consequently, most people and many governments and organizations in the galaxy do not oppose or rebuff them when they pursue or capture suspects outside their jurisdiction, and often cooperate with their investigations. In a sense, this pursuit and capture of fleeing criminals is no different than bounty hunting, and bounty hunters can legally operate almost everywhere in the galaxy. The big difference between the TMC and the typical bounty hunter is these lawmen respect local authorities and (almost) always try to work with them and operate within their laws. A courtesy that is greatly appreciated and frequently (not always) earns the TMC their cooperation. Of course, criminal refuges like *Plesus Euphia* and the crime world of *Grymdin* NEVER ask the TMC for assistance and insist they stay out of their space borders. The apprehension of any "alleged" criminal within their space borders will be hotly contested. Fleeing to such havens for crooks, pirates and terrorists is to escape the TMC, at least for the moment.

As noted previously, the TMC does not generally patrol or enforce laws on a planet, but it offers special contracts and options where it can serve as a terrestrial police force or agency in charge of special operations that assist local authorities. Likewise, the TMC may agree to assist a government in times of crisis as a special envoy, strike team, advisor or negotiator. TMC troops remain under the command of TMC officers but will be directed by the planetary government to where they are most needed. These activities are covered by strict stipulations in the contract to avoid abuse or jeopardize the TMC. Serving as the police for an entire planet is extremely rare and strains the TMC because it lacks the manpower. The TMC are policemen, not mercenaries, and avoid getting involved with war, espionage and intelligence gathering between rival nations or planets. To prevent any of its operatives from being trapped on a planet for any reason, especially in a hostile situation, planetary contracts are never signed without some form of space patrol contract that includes a space station with shuttle traffic to the planet.

Note: The TMC is far from the only policing or protection agency in the galaxy. It is simply the largest, best trained, best organized and most famous of the lot. There are hundreds of other similar, smaller organizations, which may or may not resemble the TMC in any way. They range from small bands of superpowered heroes, vigilantes, mercenaries, bounty hunters, and adventurers to entire companies of government or organization sponsored police, knights, advocates or warriors. Sometimes even an entire race may be committed to fighting crime and bringing justice. Their professionalism and tactics may be gruff and direct, cool and professional, friendly and compassionate, condescending and elitist, sloppy and lazy, extreme and brutal, focused on revenge and punishment (rather than true justice), fair but stern, or any combination or number of others. Some are no better than criminals and extortionists while others are noble and sincere cavaliers. All of these factors can be mixed-and-matched by the Game Master to create other police or security/protection organizations and groups.

Magic & Psionics in the TMC

Magic and psionics are powerful tools for law enforcement, especially in the areas of investigation, surveillance and countermeasures to terrorists, supervillains and well equipped opponents. Psychics with Object Read and other sensitive abilities are highly valued as detectives in all divisions, and the ability to stop someone dead in their tracks with but a word or magical spell is a boon to apprehension. Although the TMC does have a number of metaphysical units filled exclusively with mystics or psychics (or super beings), they are small and special units trained to

deal with deadly psionic or magic threats. The majority of TMC officers gifted with these abilities function as *regular officers* within the usual divisions. As always, teamwork and pooling resources are important to the TMC. Regardless of the usual treatment of officers, there is often a great deal of additional respect for those with unique abilities who work with their teammates.

The TMC has specific training for both sorcerers and psionics. These courses teach them how to best apply their skills to police investigations, law enforcement and protecting innocent bystanders, as well as combat applications.

Access to the spell libraries and new spells is granted as part of special advancement programs. If the magically capable officer continues to perform admirably and is dedicated to the TMC, he may be allowed access to learn more spells (no more than two at a time and NEVER before 4th level).

Training Bonuses: The special training and focus confers certain bonuses. Psychics: +2 to save vs Horror Factor, +1 to save vs mind control and illusions, +2D4 I.S.P. and one additional psionic power from the following list (pick one): See Aura, Sense Evil, Sixth Sense, or Total Recall.

Wizards get an extra 1D6+1 P.P.E. points, +1 to save vs possession, and learn three extra spells: Tongues, Extinguish Fire and either Paralysis Bolt or Befuddle.

TMC Equipment, Vehicles & Armor

Sensors, Optics and Life Support Systems

These are the standard packages used by the TMC for its vehicles and robots. The bonuses are in addition to those listed under each specific vehicle or robot. Each entry will also say if the vehicle/robot has sensors other than or different from these. If some of the ranges seem long, remember that the TMC operates primarily in space.

Radar: Range: 400 miles (640 km) in space, 200 miles (320 km) in atmosphere, 30 miles (48 km) on the surface of a planet and 90 feet (27 m) in a spacecraft or space station.

Thermal Sensors: Range: 10,000 feet (3,048 m).

Night Vision: Range: 1,600 feet (487 m).

Radio Communications: Range: 2,500 miles (4,000 km).

Targeting Computer: Range: 100 miles (160 km). +1 to strike; identifies and tracks 30 targets simultaneously.

Combat Computer: +1 to strike. Robots and power armors are also +1 to dodge.

Independent Atmosphere/Sealed Environment: 16 hour supply.

Air Purification and Circulatory System: Pretty much indefinite on spacecraft and space stations, barring a mechanical breakdown. For environmental suits and power armor: 72 hours worth of breathable air, any time beyond that exceeds the suggested safe parameters of the system, but will usually continue to work perfectly for 1D6+2 days.

Heat and Radiation Shielding: Up to 1000 degrees F (537.8 C/810.9 K), but will still burn up on re-entry unless specifically identified as a trans-atmospheric craft.

Internal Temperature Control. Tuned to the specific requirements of the user.

TMC Armor, Weapons & Equipment

The TMC maintains its own production facilities through numerous Thissera and Micean companies. When a contract requires a planet to provide certain items of equipment or vehicles, the TMC provides the specifications, blueprints and other design information to ensure both quality and compatibility. This results in a certain level of uniformity and reliability of equipment. As can be imagined, the TMC takes advantage of opportunities and has different races produce equipment that satisfies their own unique physiology and officers like them.

Every officer is issued a sidearm of choice, energy rifle, a stun club, and light combat armor. They are expected to always be armed, armored, and ready to defend themselves and their fellow officers. Weapons and designs unique to a particular race are allowed to be carried in uniform, even such things as the Manarr energy sickles, and other small melee weapons are allowed. Heavy and special equipment, additional weapons, supplies and vehicles are issued on a case by case basis.

Note: The purchase price listed is the discount price for TMC police officers. A comparable weapon or piece of equipment normally costs 3-5 times more on the open market.

Standard TMC Weapons

TMC weapons are pretty standard fare. They are of top quality and construction, but receive no additional bonuses. The fact that officers are allowed to choose their sidearms means that no real standard exists for what weapons a given officer will be armed with. Other approved weapons can be found in the **Aliens Unlimited™** sourcebook. All do M.D.C. in a Mega-Damage setting like **Rifts®**.

TMC Laser Pistol: Range: 1000 feet (305 m). Damage: 4D6. Rate of Fire: Single shot. Payload: 20 charge energy clip. Cost: Free to TMC officers as issued sidearm or can be purchased for 2500 credits. Not generally sold outside the TMC.

TMC Ion Pistol: Range: 400 feet (122 m). Damage: 5D6. Rate of Fire: Single shot. Payload: 10 charge energy clip. Cost: Free to TMC officers as issued sidearm or can be purchased for 3200 credits. Not generally sold outside the TMC.

TMC Particle Beam Pistol: Range: 800 feet (244 m). Damage: 6D6. Rate of Fire: Single shot. Payload: 6 charge energy clip. Cost: Free to TMC officers as issued

sidearm or can be purchased for 5,500 credits. Not generally sold outside the TMC.

TMC Automatic Pistol: Range: 200 feet (61 m). Damage: 4D6. Rate of Fire: Aimed or burst. Payload: 17 round magazine. Cost: Free to TMC officers as issued sidearm or can be purchased for 4000 credits. Not generally sold outside the TMC.

TMC Sonic Stunner Pistol: Range: 150 feet (45.8 m). Damage: 1 point plus save vs stun effect (16 or higher). Penalties: -5 to strike, parry and dodge, -30% to perform skills, reduce speed by half and attacks by one for 1D4 melees. A successful save means combat penalties are only -1 and the other penalties do not apply. Rate of Fire: Each shot counts as one melee attack. Payload: 15 charge energy clip. Cost: Free to TMC officers as issued sidearm or can be purchased for 3500 credits. Not generally sold outside the TMC.

TMC Stun Club: A hand-held weapon that resembles a billy club and which can be used as a clubbing blunt weapon (2D4 damage +P.S. damage if any), or charged to release a jolt of energy to stun an opponent. Damage: 1D6 damage (remains S.D.C. in Mega-Damage settings) and the victim of a stun is -10 to strike, parry, and dodge, and -60% on skill performance for 2D4 melee rounds. Also reduce the victim's number of melee attacks/actions to two, and reduce speed by 80%. If the victim saves against the stun attack (a roll of 16 or higher) reduce penalties by half and speed and melee actions are not reduced. Rate of Fire: Each stun blasts counts as one melee action. Effective Range: Touch; melee weapon. Payload: Two stun charges per hour; recharges within an hour. Cost: Free to TMC officers as issued sidearm or can be purchased for 2000 credits. Not generally sold outside the TMC.

TMC Strap Gun: Basically the same as the Explosive Strap Gun presented in **Aliens Unlimited**, page 181. It fires a large projectile with compressed straps that are released on impact to entangle and restrain the target to prevent them from fleeing an area. Range: 90 feet (27.5 m). Damage: 1D6 from the impact. Will completely entangle most human-sized targets (up to 8 feet/2.4 m tall) if a successful strike to hit is made. Intended targets can attempt to dodge (-2 to do so). Only a P.S. of 30 or P.S. 20 or higher of Superhuman or Supernatural Strength can snap the cords to get free. Victims ensnared by the strap gun are bound tight and can only wiggle away at a speed of 2, and have half their attacks per round (can still try to kick, head butt or bite), but no combat bonuses apply. Note: May be used to entangle the feet of larger opponents, but is -2 to strike and only causes the victim to trip, fall and lose initiative and two of his melee attacks. However, it will take 1D4 melee rounds to untangle his feet, requiring him to spend all but one melee action/attack per round to do so. While feet are entangled, reduce speed by 80%! Payload: Two (2) strap cartridges. Reloading must be done by hand and counts as two melee actions per round loaded (4 to reload both projectiles). Cost: Free to TMC officers or can be purchased for 200 credits (strap projectiles cost 100 each to the TMC, 300 each on the open market).

TMC Precision (Sniper) Laser Rifle: Damage: 4D6; single shot only. Range: 4000 feet (1,219 m). Rate of Fire: Each shot counts as one melee action. Payload: 24 single shots or 12 double per E-Clip. Cost: Free to TMC officers as an issued weapon or can be purchased for 5,000 credits. Not generally sold outside the TMC.

TMC Pulse Laser Rifle: Damage: 4D6 from a single shot and 1D4x10 damage from a rapid-fire twin shot. Rate of Fire: Single shot or twin blast only. Range: 3800 feet (1,158 m). Payload: 24 single shots or 12 double per E-Clip. Cost: Free to TMC officers as an issued weapon or can be purchased for 7,000 credits. Not generally sold outside the TMC.

TMC Heavy Ion Rifle: Damage: 1D4x10 S.D.C. Range: 2,000 feet (610 m). Rate of Fire: Each shot counts as one melee action. Payload: 16 shots per E-Clip. Cost: Free to TMC officers as an issued weapon or can be purchased for 6,000 credits. Not generally sold outside the TMC.

TMC Particle Beam Rifle:. Damage: 6D6+24 S.D.C. Range: 1,200 feet (366 m). Rate of Fire: Each shot counts as one melee action. Payload: 10 shots per E-Clip. Cost: Free to TMC officers as an issued weapon. Only available to SOD Division and special assignments. Not available for purchase or sold outside the TMC (black market sells it for 30,000 credits).

Note: See the equipment section for heavy weapons, rail guns, missiles, and other items, as well as the weapons section starting on page 175 of the **Aliens Unlimited™** sourcebook for plasma ejectors, cold and sonic weapons, and other good stuff.

TMC Police Equipment

Handcuffs: Restraint of criminals for the safety of both the officers and the public is a very serious thing to the TMC. They also do not like suspects being able to run off after they have been tracked halfway across the galaxy and apprehended. To these ends, good old-fashioned handcuffs more often than not fit the bill nicely. In their most basic form, they are compact, easy to carry, and quite simple to use. Such basic models come in human or giant-size, light or heavy-duty models, and electronic or key locking versions. Human-sized cuffs generally fit around the wrists of creatures three and a half to seven feet (1 to 2.1 m) tall. Giant-sized cuffs will normally fit creatures 8-20 feet (2.4 to 6 m) tall.

Light cuffs have 60 S.D.C. and heavy (and giant) ones have 200 S.D.C. Key locking cuffs can be picked with the lock picking skill, but electronic locks necessitate the Locksmith skill.

"Slipping out" of standard handcuffs requires an Escape Artist skill roll (-10% against electronic lock cuffs). The cuffs can be cut or shot through with a tool or weapon by doing damage equal to two thirds of its S.D.C., but trying to snap the cuffs with only the strength of one's arms in impossible unless the character has superhuman strength. Light cuffs can be snapped with an Extraordinary P.S. of 50 or greater, a Superhuman P.S. of 35+, or Supernatural P.S. of 18 or higher. Heavy cuffs can only be snapped by characters with a Superhuman P.S. of 45 or greater or a Supernatural P.S. of 30 or higher. In order to actually snap the cuffs, attack rolls must be made against an A.R. of 13. If the roll beats the armor rating, apply the character's

damage bonus to the S.D.C. of the cuffs. Only use the damage bonus, do not apply the punching damage for superhuman P.S. Once the cuffs lose two thirds of their S.D.C., they snap.

Handcuffs are widely available across the galaxy, but the TMC manufactured varieties are not sold outside the TMC. Multiply the listed prices by four if characters wish to purchase these bootlegged TMC cuffs, unless the character has a valid bounty hunting license, in which case they are only twice the price. TMC officers are issued two pairs of light key locking handcuffs and one heavy. They can request additional heavy ones as desired. Other types can be requested for specific assignments or purchased with the officer's own resources. **Cost:** Light Key Locking (Human-Sized): 35 credits, Light Key Locking (Giant-Sized): 80 credits, Heavy Handcuffs: 130 (add 60 credits for giant-sized), and Electronic Locking Cuffs cost: 300 credits.

Automatic re-sizing handcuffs: Are a set of heavy-duty handcuffs that are about three times the size of normal handcuffs. These cuffs can adjust to fit any size appendage, be it an arm, leg, tentacle or whatever, on any creature from 3-25 feet (0.9 to 7.6 m) tall. For the purpose of breaking or escaping from these cuffs, they are considered to be both heavy duty-cuffs (200 S.D.C.) and electronically locked. **Cost:** 600 credits.

Compact Long-Range Bio-Sig Detector: The TMC has contracted with a Struthio manufacturer to produce small, Aberrant Bio-Signature Detectors that can be worn as goggles with a small shoulder or hip unit, or built into a helmet. The unit uses a number of radiation and thermal based scans that are able to detect the possibility of *superpower energies* and *magic*, but magic can only be detected when a spell is being cast or magic energy is being expended.

The scan range of this new system is only 60 feet (18.3 m), but that is a vast improvement over the contact range of the original Bio-Sig Detector described in **Aliens Unlimited™**. In fact, this experimental version is "Top Secret" and only available to the TMC. The Struthios are allowing them exclusive use of it for extended field testing. As it is, the unit has been determined to fail completely 5% of the time, during which it shuts down and will not restart for at least an hour (this occurs on a roll of 95-00%). Other bugs are 10% incident of vastly false readings (this occurs on a roll of 85-94%) that show power ratings much lower than those actually present or obviously erroneous readings (72-84%). It will be at least five more years before the bugs are worked out and the range is increased to 100 feet (30.5 m), and an additional 2-5 years before the results are above 75% accurate. If the bugs can be worked out, the new system could be available on the open market in 15-20 years (at a cost of over 1.2 million). Until then, it is exclusive to the TMC.

After a full melee of scanning (15 seconds), the system produces a bio-signature profile that can predict the following data with 71% accuracy (roll percentile dice every time its is used. A roll of 01-71% means a fairly reliable reading, 72-00% means no reading or other problems.

1. Physiological base: Identifies the general structure and composition of the target, including mineral, vegetable, robot, bionic components, unusual traits (such as a lack of bone structure, unusual mass or intangibility, but the latter only when the power is activated and in use).

2. The presence of non-standard and recognized aberrant energies: Unusual energy readings can be recognized, charted and compared to provide a guess as to what the cause/source is or whether it is a super power signature. The sensor can detect the presences of *bionic* systems and *robotics* (especially if a third or more of the individual is artificial, although there is only a 01-30% chance of identifying Atorian Androids), the presence of significant *super abilities* (more than one minor power), and the *supernatural* (i.e. demons, gods, elemental beings, spirits, etc.).

Psionics can only be detected if the character is a Master Psychic or is using a Physical or Super-Psionic power.

Very few energy signatures can be pinpointed to identify a specific super ability(s), only that the character does have a "superhuman" signature (he could have any power, or it could be a mistake). Only a handful of super abilities can be "generally identified" by the device as follows.

Energy based. The device can pick up that a superbeing possesses some kind of "energy based" power and what type of energy is involved (fire, electricity, etc.), but that is the best it can indicate. Whether the ability is *Alter Physical Structure* into an energy being (comes up only as a general category of fire, electricity, or energy "based" power) or *Energy Expulsion, Control Static Electricity,* or *Bend Light* it can not determine. Note that the abilities to create a *Force Field, Control Radiation* and manipulate *Magnetism* and *Gravity* come up only as an aberrant "energy based" power, nothing more.

Power Channeling can only be detected when the power is being used. Kinetic energy, command over elemental forces or alter physical structure into an element (stone, ice, metal, plant, etc.) are NOT detectable as an "energy based" power.

Mass and density. Unusual mass, changing mass and molecular density *is* detectable, indicating the likely presence of *Intangibility, Invulnerability, Copy Physical Structure, Weight Manipulation, Shrink* or *Growth*, but it can not tell which ones.

Cost: Top Secret, experimental units are only available to select operatives in the TMC.

Compact Aberrant Bio-Energy Dampers: These aberrant biological energy dampers are identical to those detailed on page 193 of **Aliens Unlimited™**, except the compact versions (roughly the size of a set of automatic re-sizing handcuffs) are available along with the oversized boots and gauntlets units. These compact systems are produced under special contract with the same Struthios working on the Bio-Sig Detector. The new compact ABE damper negates super abilities and psionics as well as hampering bionics and magic, but they also act as a set of automatic re-sizing handcuffs (including the electronic locking and heavy handcuff features). These restraints are issued only for the express purpose of apprehending specific powerful criminals. **Cost:** 500,000 credits per pair of dampers (one set for arms and one for legs).

Compact radios: These small radios are issued to all TMC units in order for them to keep in constant contact.

The receiver fits into the ear, or attaches to the appropriate areas for those without them, while the transmitter wraps about the vocal region and transmits sounds quieter than a whisper. The range for the radio is two miles (3.2 km) over open terrain and half that inside a spacecraft or other cluttered environment, such as underground. **Cost:** 375 credits per radio.

Field Communicators: An oversized wristband with video and audio capabilities. The field radio has its own range, or can relay through the radio system of a vehicle or building, thus extending its effective range through linked networks. The communicator can be used in conjunction with the compact radio to provide hands-free operation and quiet conditions. Its video systems can be used to record external events, but the range of clarity and resolution is only about 60 feet (18.3 m). **Range:** 10 miles (16 km) for video, 60 miles (96 km) for audio. **Cost:** 1200 credits.

Signal Locators: Each TMC police officer has a signal transmitter unit implanted in his body armor, uniform, and guns. A signal locator will pick up the signal to trace the exact location of the officer or his vital equipment. The system allows officers to keep constant track of each other at all times and locate stolen weapons. It has a two mile (3.2 m) range (triple in the wilderness) and several options for reading the output. In one option, heads-up displays on goggles, visors, or helmets show high-contrast dots or markers indicating the relative location of teammates. Another choice uses wristbands, weapon mount or hand-held indicators with display and either a beep or flash to indicate range and proximity. Bionic and robot characters can have these systems feed into artificial eyes or ears. Psionic characters with Object Read can be trained to "read" off of a locator and receive mental images of the general location of their companions. This trick costs 2 I.S.P. and lasts for 3 minutes plus one minute per level of experience. **Cost:** 300 credits per locator and 80 credits per signal transmitter.

TMC Armor

TMC Armored Helmets: The TMC's primary operating conditions being in space and hostile environments, all TMC uniforms, jump suits, flight suits and body armor have full environmental capabilities (minimum A.R. 7, S.D.C. 20). This is an armored helmet with environmental seals on the neck and a small oxygen supply (30 minutes). A.R. of Helmet.: 19 and adds +1 to the armor rating of a half suit. S.D.C. of Helmet: 70. Full suits already include helmets in their ratings.

TMC Light Combat Armor: This is the standard issue body armor of the TMC. It is a combination of padded and hard armor designed for comfort while providing adequate protection. The suit consists of chest, shoulder, and groin armor with optional neck and thigh protection. The Axolotl illustrated in *Aliens Unlimited* is wearing a version of the TMC light combat armor. A.R.: 12, S.D.C.: 70 (30 M.D.C. in a Mega-Damage setting). Note: Excellent mobility; no prowl or movement penalties. Cost: 2000 credits to TMC officers.

TMC "Standard" Combat Armor: This is the standard issue medium weight environmental body armor of the TMC. It is a hard armor designed not to hinder movements while providing more than good protection for everyday situations. It is a flexible environmental suit and helmet with protective plates located on the chest, back, shoulders, forearms, thighs, lower legs and groin. A.R.: 15, S.D.C.: 125 (65 M.D.C. in a Mega-Damage setting). Note: Good mobility; -5% on prowl, climb, swim, acrobatics and similar physical skills. Cost: 3,500 credits to TMC officers.

TMC Heavy Battle Armor: This environmental suit is a heavy version of the standard body armor. Numerous harness clips and mounting brackets are built into the armor for the attachment of equipment and extra clips of ammunition. A.R.: 16, S.D.C.: 200 (90 M.D.C. in a Mega-Damage setting). Note: Fair mobility; -10% on prowl, climb, swim, acrobatics and similar physical skills. Cost: 6,000 credits to TMC officers.

TMC Heavy Assault Armor

This suit of full environmental hard armor is used for very heavy combat situations such as repelling invaders, full-scale raids of a large pirate base and for combat in space or light gravity environments. It comes with an attachable jet pack and various micro-maneuver rockets are built-in, making it maneuverable in space and underwater. Other features include a light exoskeleton, laser targeting, mounting brackets for the attachment of equipment and extra clips of ammunition, and a hip mount for ammo drums (for heavier, belt-fed weapons).

Model Type: TMC-HAA-04
Class: Augmented Body Armor
Armor Rating: 18 (includes helmet)
S.D.C. by Location:

* Helmet — 70
Jet Pack — 70
Maneuver Jet Boots (2) —20 each
Arms (2) — 50
Legs (2) — 70
** Main Body — 260

* This is a small target and requires a called shot at -3 to the die roll. This penalty does not apply to the modified called shot rules against A.R. for Heroes Unlimited. In the latter case, the die result would remain unmodified for determining if an attack defeats armor or not.

** Depleting the damage capacity of the main body will render the armor useless and eliminates all protection.

M.D.C. Note: For use in Mega-Damage settings, turn the S.D.C., point for point, into M.D.C. (i.e. Arms 50 M.D.C. each, Main Body 260 M.D.C., and so on. A.R. no longer applies).

Speed:

Running: Equal to the speed attribute of the character wearing the armor. Leaping: Based on the strength of the character wearing the armor.

Flying: The jet pack has a speed of 95 mph (152 km) in an atmosphere, maximum altitude: 5200 feet (1585 m), and 500 mph (800 km) in space.

Underwater: The suit is full EBA and functions underwater; maximum depth tolerance is 800 feet (244 m). Maximum swimming speed is 10 mph (16 km or 8.6 knots).

Statistical Data:

Height: Adds 6 to 8 inches (.15 to .2 m) to the height of the wearer.

Width: Adds 8 to 10 (.2 m to .25 m) inches to the width of the wearer.

Weight: 25 lbs (11.4 kg), The jet pack adds an additional 20 lbs (9.1 kg) to the weight.

Physical Strength: The light exoskeleton adds +2 to the P.S. and +4 to the speed of the wearer.

Bonuses: +2 to damage from enhanced P.S. The jet pack provides +1 to dodge when flying. Targeting sight adds a +1 to strike. The boots provide +1 to dodge in gravity and underwater or +2 in zero-gravity.

Penalties (compensated to some degree by exoskeleton): -5% movement penalty to prowl, climb, acrobatics, gymnastics and similar skills when in an atmosphere and under the effects of gravity. No penalties in zero G.

Cargo: Detachable hip pouches, backpack, belts and harnesses worn over the armor.

Power System: Self sustaining, electric micro-generators.

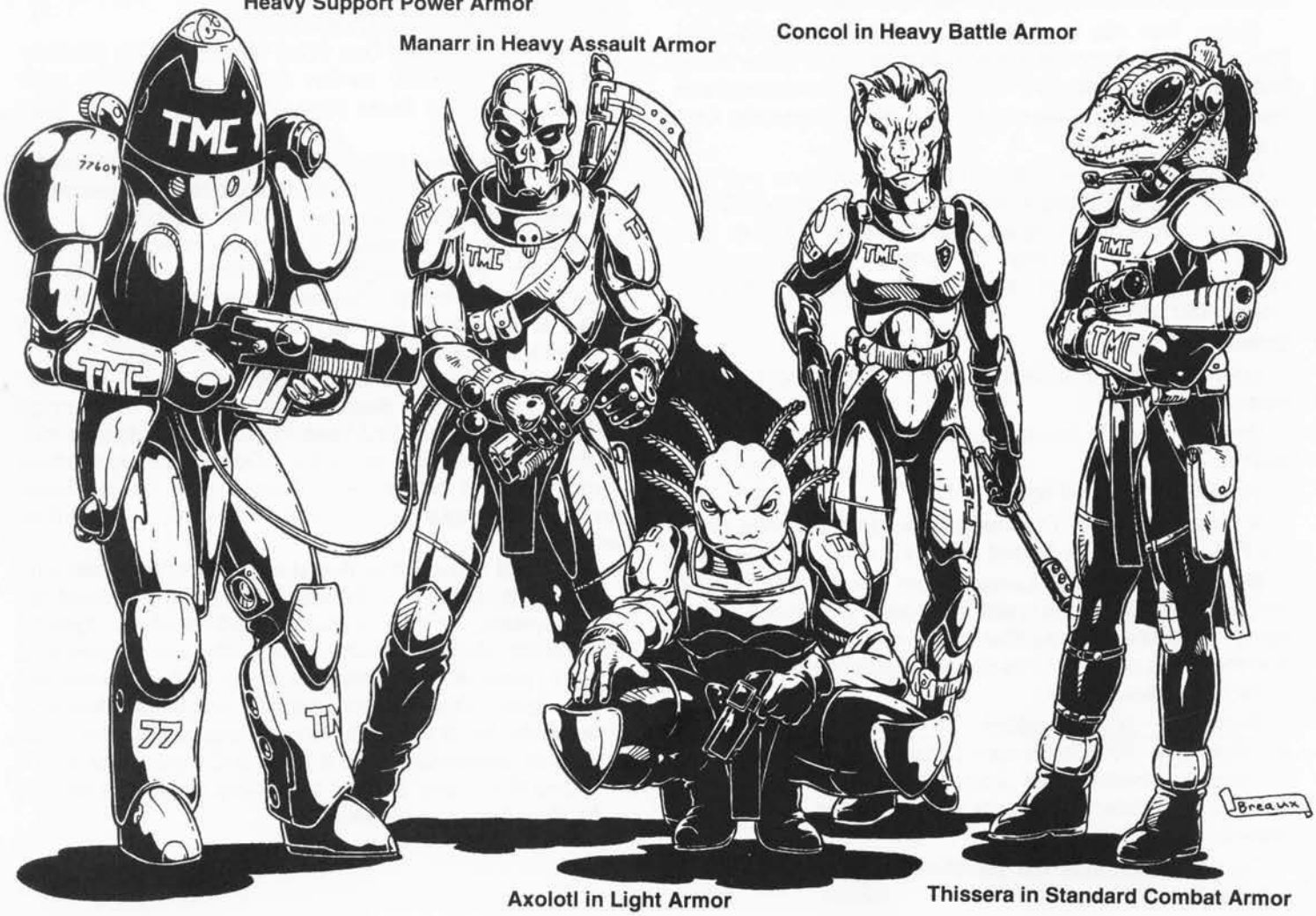
Cost: 200,000 credits (the cost to the TMC is only about 30% of that).

Weapon Systems: None. The HAA is a suit of jazzed up body armor and has no built-in weapon systems. The wearer can use any hand-held weapons, and the light exoskeleton allows the use of only slightly heavier weaponry.

TMC Combat Support Power Armor (CSPA)

This is the only "standard" powered armor used by the TMC, but other "outside" models may be used, especially when undercover. Cost limits its deployment, and only DSD and SOD have regular access to it. It is a full environmental battle armor reserved for surgical strikes, raids, battles with superhumans, and against the supernatural, monsters and other powerful opponents.

The CSPA is compact and not too much larger than the heavy assault armor, though it is notably bulkier. This unit has an integrated helmet with no neck. The large helmet closes and seals directly to the chest plate. HUD readings and virtual camera displays provide a 270 degree field of vision inside the helmet. The chest is rather barrel-like, providing optimum armor protection, and the shoulders are rounded. The boots are lined with small thrusters to provide extra thrust and maneuverability in space and underwater. The CSPA is magnetic particle coated and has a detachable jet pack. Its moderately heavy exoskeleton compensates for its bulk and weight. The CSPA has a few built-in weapons, but they are small and a larger hand-held rifle or light rail gun is normally carried into combat.



Heavy Support Power Armor

Manarr in Heavy Assault Armor

Concol in Heavy Battle Armor

Axolotl in Light Armor

Thissera in Standard Combat Armor

Name: TMC Combat Support Power Armor
Model Type: TMC-CS-PA-02
Class: Light Power Armor
Armor Rating: 18 (helmet included)
S.D.C. by Location

* Helmet – 120
Jet Pack — 70
* Shoulder Mounted Strap Gun (1) – 25
* Maneuver Boots (2) — 40 each
Shoulders (2) – 115 each
Arms (2) — 80 each
Legs (2) — 100 each
** Main Body – 320

* These are small targets and require a called shot at -3 to the die roll. This penalty does not apply to the modified called shot rules against A.R. for Heroes Unlimited. In the latter case, the die result would remain unmodified for determining if an attack defeats armor or not.

** Depleting the damage capacity of the main body will render the armor useless and eliminates all protection.

Speed:

Running: The power armor can run at speeds up to 60 mph (96 km). The act of running does tire the user, but at only one quarter the usual rate.

Leaping: The powerful legs of the armor can propel the wearer 20 feet (6.1 m) straight up or 40 feet (12.2 m) across. Thruster assisted leaps can cover up to 10 times the normal distance without achieving actual flight.

Flying: Can use the light jet pack described under the Heavy Assault Armor in a pinch, but standard issue is the heavy turbo-jet pack: 200 mph (320 km) in an atmosphere (max altitude: 10,000 feet/3048 m) and 500 mph (800 km) in space.

Underwater: The suit is full EBA and functions well underwater. Maximum depth tolerance is 3000 feet (915 m). Maximum underwater speeds: 10 mph (16 km or 8.6 knots) swimming, 60 mph (96 km or 52 knots) using turbo-jet pack, half that using only the boot jets and micro-booster jets.

Statistical Data:

Height: Adds 12 inches (0.3 m) to the height of the wearer.

Width: Adds 18 inches (0.46 m) to the width of the wearer.

Weight: 200 lbs (90 kg).

Physical Strength: The medium exoskeleton adds +6 to the P.S. and +4 to the Speed of the wearer.

Bonuses: Additional damage from enhanced P.S. and weighted gloves. The jet pack provides +2 to dodge when flying. Targeting and combat computer adds +3 to strike and the boots provide +1 to dodge in gravity and underwater or +3 in zero-gravity.

Penalties (compensated to some degree by exoskeleton): -10% movement penalty to prowl, climb, acrobatics, gymnastics and similar skills when in an atmosphere and under the effects of gravity. No penalties in zero G.

Cargo: Detachable hip pouches, backpack, belts and harnesses worn over the armor.

Power System: Self sustaining, electric micro-generators.

Cost: 1.1 million credits including weapon systems (the cost to the TMC is only about 30% of that). Add 120,000 credits to increase S.D.C. by 100 points.

Standard Weapon Systems:

1. **Forearm Heavy Stunner:** This weapon is built into the right forearm of the power armor. It is used to quickly disorient opponents during raids and to slow fleeing criminals. Just as with all stun weapons, each successful strike with this weapon requires the target to make a saving throw of 16 or higher or succumb to the listed penalties.

Damage: Victim is -10 to strike, parry, and dodge, and -60% on skill performance for 2D4 melee rounds. Also reduce the victim's number of melee attacks/actions to two, and reduce speed by 80%. If the victim saves against the stun attack (a roll of 16 or higher) reduce penalties by half and speed and melee actions are not reduced.
Rate of Fire: Each stun blasts counts as one melee action.
Range: 200 feet (61 m).
Payload: 10 shot clip. Changing the clip takes two minutes. Each power armor normally carries two extra clips.

2. **Shoulder Mounted Strap Gun:** Identical to the Strap Gun described earlier under TMC weapons. This weapon is used to restrain criminals and prevent them from fleeing an area.

Range: 90 feet (27.5 m).
Damage: 1D6 and entangles and restrains.
Power Armor Payload: One strap cartridge in the shoulder launcher, but typically carries 2-6 in a satchel or pack hung on the hip or lower back. Reloading requires three melee actions.

3. **TMC Heavy Ion Rifle:** Standard, but may be substituted with a laser or particle beam rifle (both described earlier under TMC weapons) or other weapon.
4. **Hand to Hand Combat:** The power armor can punch with its solid, weighted gauntlets and enhanced exoskeleton strength. Specific maneuvers and capabilities such as body flips and special kick attacks will vary with the pilot's skill level.

Damage: Normal punches do 2D6+10 damage and normal kicks do 2D6+14 damage (both include P.S. damage bonus). Special kicks that have increased damage do their normal damage plus an extra 1D6+12 damage bonus from the power armor's superhuman P.S. rating. Power punches and kicks do double the damages but count as two attacks.

5. **Standard Sensors & Features:** Advanced audio system, radio scrambler, loudspeaker, advanced robot optic system, motion detector and warning system, radiation detector, maneuvering thrusters, telescopic sight, passive night vision, infrared and ultraviolet optics, laser targeting and combat computer, mounting brackets for the attachment of equipment and extra clips of ammunition, and a lower back mount for ammo drums (for heavy, belt-fed weapons), as well as mounts for the attachable jet pack.

TMC Robot Assault Trooper

The TMC often operates in close quarters, making the use of large power armor, robots or heavy support vehicles limited at best. Consequently, the organization relies on modest armor and small, fast all-terrain vehicles suitable for ground, space, and close combat in an urban environment and aboard space stations and spacecraft. The same holds true for robots, which explains the small, but powerful TMC Robot Assault Trooper (RAT) robot. The RAT is an effective man-sized support unit packed with a reliable AI, sensor array and advanced hardware that its human counterparts can count on. It is ideal for squad support, rescue missions, search and capture, bomb disposal and hazardous conditions.

The most common application of the RAT is in high risk, life preserving situations. The Robot Assault Trooper is employed to prevent any avoidable loss of life among both TMC police and civilians. Squads of RATs often take the lead in charges against barricaded gunmen, raiders, and monsters, as well as drawing fire away from other officers. They are also ideal for handling explosives or other dangerous substances. The only down side to this is the cost of the robots. The AI of the robot is top of the line for mass production robot intelligence, but it is still simply a preprogrammed artificial intelligence and works best when under the direct supervision of a living officer. The RAT has a basic machine personality and they are treated like machines, tools and weapons, not people. They have no cosmetic modifications and are obviously mechanical constructs.

The TMC maintains a sizable force of RATs, numbering approximately one for every hundred flesh and blood officers, but replacing large numbers of them is costly, so half of the robots in any given precinct are held in storage for reserve. When the TMC discovers the location of a large pirate enclave, a drug lord's stronghold, or a weapon smuggler's base, the RATs are activated by the dozens and put into the front ranks, but otherwise only one or two are assigned to work with a squad as backup or used as robot guards and on foot patrols.

Model Type: TMC-RAT-02
Class: Human-sized Infantry Robot
Armor Rating (A.R.): 12; effectively natural A.R., so any attack under 13 does no damage.
S.D.C. by Location
* Head – 80
* Laser Rifle – 60
Arms (2) — 60 each
Legs (2) – 100 each
** Main Body– 420
* These targets are small or difficult to hit and require a called shot at -3 to strike. Also note that the head does contain the basic sensors, but not the AI of the robot, thus destroying it will blind the robot, but will not take it out of commission. The unit can continue to fight blindly or can be taken over by radio control (if the operator has line of sight) or other means to continue fighting.
** Depleting the damage capacity of the main body will shut the unit down completely.
M.D.C. Note: For use in Mega-Damage settings, turn the S.D.C. point for point, into M.D.C. (i.e. Arms 60 M.D.C. each, Main Body 420 M.D.C., and so on. A.R. no longer applies).
Speed

Running: The RAT has a speed attribute rating of 66 and can run at a speed of 45 mph (72 km). The act of running does not tire out the robot and can be maintained indefinitely. Can leap 10 feet (3 m) high or 16 feet (4.9 m) across.

Swimming: 80% skill level at speeds of up to 30 mph (48 km or 26 knots). Maximum depth tolerance is 1200 feet (366 m).

Flying: Flight is limited to outer space only. Maneuvering thrusters in the feet, legs, and back can safely propel the robot to a maximum speed of 90 mph (144 km). Unless an additional skill program is purchased that includes jet pack or other piloting skills, that's the extent of its capabilities. The jet packs available are the same as described under the Heavy Combat Armor and Power Armor.

Statistical Data

Height: 6.6 feet (2 m).
Width: 3 feet (0.9 m).

Length: 2 feet (0.6 m).

Weight: 400 lbs (180 kg).

Physical Strength: 20 (Superhuman P.S.).

A.I.: I.Q. equivalent of 10.

Cargo: Two storage compartments in the legs, approximately 3 inches (7 cm) deep, 4 inches (10 cm) wide, and 10 inches (25 cm) long, and whatever can be put into pockets, packs, belts, or carried bags.

Power System: Typically a dual super-solar compact battery system (24 hour operating time; effectively unlimited) and a micro-fusion power supply with a 20 year life.

Skills: Basic Mathematics 98%, TMC laws and procedures 98%, Command Structure Etiquette 90%, laws of nature/science 90%, Computer Operation 90%, Law (general) 80%, Radio: Basic 80%, TV & Video 70%, Read Sensory Equipment 70%, Surveillance Systems (and Tailing) 60%, Pilot Hover Vehicles 90%, and two other piloting skills at 85%. Hand to Hand Combat: Basic, Prowl 55%, and W.P. Energy Pistol, W.P. Energy Rifle, W.P. Heavy and W.P. Blunt; all at 5th level of proficiency. A special language computer/translator enables the robot to understand and speak 600 different language (can only *read* 12, including Thissera, Micean, Atorian, and the Pilian trade language at 75%).

Cost: 2.6 million for the standard RAT with full weapon systems. Add an extra 125,000 credits to get an extra three W.P. or Military or Piloting skills (the latter two are at 80%), 140,000 for an extra 100 S.D.C. for the main body (increase all other S.D.C. by 30%), 100,000 for one additional attack per melee (can only upgrade once), an extra 150,000 to boost the A.R. to 15. The TMC pays half that.

Note: Using this robot as a base for creating a player character robot would cost 4.5 million of the initial budget.

Weapon Systems:

1. **Eye lasers:** The RAT has a tiny laser built into each of its eyes. The damage has been increased above the normal by a TGE contractor, but payload does suffer.

Damage: 3D6 damage per eye (M.D.C. in Rifts). A simultaneous blast from both eyes does 6D6 damage.

Rate of Fire: Single shot or double blasts only.

Range: 250 feet (76.2 m).

Payload: Each eye can store 8 blasts per hour. Recharging is automatic and takes one hour.

2. **Stun Charge:** Same as the CSPA described previously, only the RAT must touch its opponent to stun him.

Damage: Same effects as the stun gun and TMC power armor.

Rate of Fire: Once per melee round.

Effective Range: Touch

Payload: 12 per hour.

3. **Laser Finger (1):** One of the fingers on one of the hands is a utility laser tool used for cutting, soldering and close combat

Damage: 1D4 or 1D6 damage per blast.

Rate of Fire: Each blast, regardless of damage, counts as one melee action/attack.

Effective Range: Touch or up to 20 feet (6 m)

Payload: Effectively unlimited.

4. **Wrist launcher and Towline:** A grappling hook or spike and towline is built into the wrist or forearm of the left arm. In addition to being used as a climbing rope and towline, it can also be used as a garrote to strangle. Weight capacity of the line is 2000 lbs (900 kg).

Damage: 1D6 damage from a launched spike or 2D4+1 from a grappling hook.

Rate of Fire: Each blast, regardless of damage, counts as one melee action/attack.

Range: Typically a 60 foot (18.3 m) length of cord, but can fire up to 120 feet (36 m) maximum.

Payload: One 60 foot length of cord; can be rewound and reused.

5. **Heavy Laser Rifle:** Described under the TMC weapons earlier.

6. **Hand to Hand Combat:**

Number of attacks: 4 or 5; most have five.

Normal Punch: 2D6+5

Power Punch: 4D6+10 (counts as two attacks).

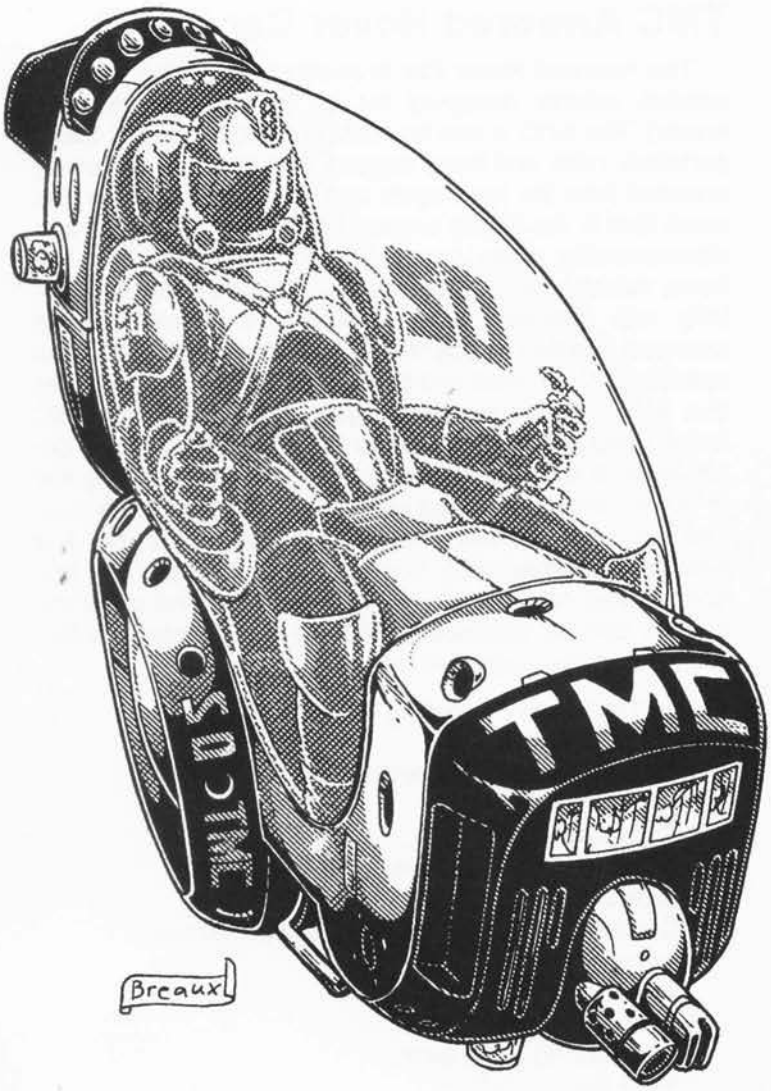
Bonuses (includes robot attributes and skills): +2 on initiative, +3 to strike, +4 to parry, +3 to dodge, +3 to disarm, +4 to pull punch, +2 to roll with impact. Bonuses with modern weapons include: W.P. Energy Rifle (+5 aimed shot, +3 burst firing), W.P. Energy Pistol (+5 aimed shot, +3 burst firing), W.P. Heavy Weapons (+5 aimed shot, +3 burst firing), and W.P. Blunt (+3 to strike and +3 to parry).

7. **Other Robot Systems:** Has all the same basic systems as TGE robots, including basic listening system, wide-band radio receiver and transmitter, external audio system, audio recorder, loudspeaker, single voice synthesizer, advanced robot optic system, targeting sight, passive nightvision, infrared and ultraviolet optics, thermo-imager (all with a 1200 foot/366 m range), external video and audio surveillance system, video receiver and transmitter, and searchlight.

TMC Comet (Heavy) Hovercycle

The vast majority of TMC police vehicles are small, fast and maneuverable, one- or two-man units suitable for terrestrial, space, urban and close quarter operations. Although many sizable space stations do have actual roads, paths or corridors for vehicles, the TMC must be prepared not only for a lack of such avenues, but tight corners and limited maneuvering space. Likewise, the terrain on planets is often rugged and harsh. For this reason, the TMC has made an art of using the hovercycle as an all-purpose vehicle. These vehicles are small, fast, maneuverable and well suited to ground operations in the wild or in the cities, as well as aboard space stations, spacecraft and in outer space itself. In addition, they are very affordable, and much cheaper than armored robots or power armors. TMC officers receive special training with the TMC model hovercycle and enjoy a special bonus when using it.

The TMC cycles are custom built and modified by TMC funded corporations. They have an enclosed canopy and independent air supply and purge and recycling system the same as environmental armor and spaceships. This means they are space worthy, and outfitted with additional maneuvering rockets to allow the cycles better movement and precision flight even when handling 90 degree corners or doing bootleg turns. As a result, when the cycle is oper-



ating in the cramped corridors of a spacecraft, cave, or similar environment, it does so with no penalties to combat or piloting rolls. Any other vehicles trying to navigate the cramped conditions at speeds faster than a crawl are considered to be performing stunts and must make rolls with the appropriate penalties. The TMC hovercycle can perform the same maneuvers without the penalty and only receive penalties when actually performing stunts at speeds in excess of 100 mph (160 km). This also means that in more open areas, the hovercycle has vastly improved handling, resulting in an additional +2 to dodge and a reduction of all penalties to piloting rolls from stunts or special maneuvers by 15% (i.e. the bootleg turn would be made at a -35% penalty instead of -50%). Part of this versatility of movement comes from the fact that the pilot lays back in the small craft instead of leaning forward, and it can thrust into an upright position and maneuver in a vertical state, thus making it taller than it is long and reducing the width of space it needs to maneuver corners.

Class: TMC Single Officer Boarding Vehicle
Model: TMC-HHC-04 – a.k.a. Comet.
Crew: One
A.R. 12 (vehicle)
S.D.C. by Location:
* Headlights – 10
Canopy/Windshield —50
* Mini-Missile Launcher — 75
*Weapon Turret — 40
*Main Thrusters (3) — 80 each
**Main Body — 225
* These targets are small or difficult to hit and require a called shot at -3 to strike. Destroying one thruster reduces the dodge bonus and pilot bonuses by 1/3 in open areas and imposes a -1 to dodge and -5% to pilot rolls in cramped conditions. Destroying two thrusters reduces bonuses and increases penalties by another 1/3 (-2 to dodge and -10% to pilot rolls in tight conditions), and taking out all three thrusters negates the flight capabilities of the cycle (and necessitates a crash-landing roll).
** Depleting the damage capacity of the main body will shut the unit down completely, rendering it useless.

Speed

Flying: The cycle doesn't actually fly, but instead hovers 3-30 feet (.9 to 9 m) above the ground. Its maximum speed is 220 mph (352 km), but in hallways and corridors, it can move at speeds as slow as 2 mph (3.2 km) or completely stop and hover stationary. Maximum speed down corridors and tight spots is not recommenced at greater than 60 mph (96 km) and penalties will apply at speeds beyond that. The cycle can operate continuously for 16 hours before the thrusters must cool for two hours. If periodic breaks are taken, it can operate indefinitely.

Space: Speed is tripled in space (beyond that maneuverability degrades and all combat rolls are made at -1 and skill rolls -10% for each additional 200 mph/320 km); range is effectively unlimited.

Underwater: The cycle is a full environmental unit and can operate underwater as long as its air supply holds out. Maximum speed is 100 mph (160 km) on the surface and 60 mph (96 km/52 knots) underwater. Maximum depth tolerance is 800 feet (244 m).

Statistical Data

Height: 4 feet (1.2 m) to top of closed canopy.

Width: 3 feet (.9 m).

Length: 6 feet, 1 inch (1.8 m).

Weight: 450 lbs (202 kg) fully loaded.

Cargo: Minimal. Pilot's personal equipment and body armor. Up to a 20 gallon storage container can be attached to the rear of the cycle for additional storage.

Power System: High efficiency electric turbines and solar energy system.

Cost: 95,000 credits, but rarely available. They are produced by the TMC for their own exclusive use, but the TGE does sell a comparable security vehicle without the missile launcher for 100,000 credits. Add 140,000 for an extra 100 S.D.C. for the main body (increase all other S.D.C. by 20%).

Weapon Systems:

1. **Weapon Turret:** The main armament of the Comet hovercycle is a two barrel weapon turret mounted in the nose of the machine. One barrel is a pulse laser and the other is an automated version of the Ridelly .560 firing "wheezers." Wheezers are gelatin bullets that stun a target by impact without doing any serious damage. They are named for the sounds most targets make

when hit by a perfectly placed shot to the chest or stomach. These rounds are effective against vegetation and insect aliens (but their hard armor gives them +4 to save), but not mineral life forms, undead, creatures with an A.R. of 12 or better, or anyone that does not breathe or can not be significantly shocked by the impact of the wheezer rounds, such as giants, invulnerable superhumans and those with great mass.

Damage: The pulse laser does 3D6 per single blast or 1D4x10+10 for a triple pulse.

Wheezer rounds do two points of damage and require a save vs 14 to resist the following debilitating penalties: -3 to initiative, -1 to strike, parry, and dodge and lose one melee action/attack for one melee round. Penalties and damage are cumulative. **Rifts Note:** Wheezers do come in a version made of flexible metals that can affect M.D.C. creatures, but they require a larger gun. The effects of the M.D.C. version are the same as for the S.D.C. variety, except they inflict 1D4x10 S.D.C. damage to any non-M.D.C. targets they should happen to hit.

Rate of Fire: Pulse laser: Single shot or triple pulse only. Wheezers: Can be fired one at a time or in short bursts of five. Hydraulics automatically pump the barrels to ready the next shot.

Effective Range: Pulse Laser: 4,000 feet (1,219 m). Wheezers: 600 feet (183 m).

Payload: Pulse Laser is effectively unlimited. Wheezers: 200 round ammo drum.

2. **Mini-Missile Launcher:** This partially retractable missile launcher is located behind and above the pilot at the rear of the vehicle, in order to conserve the sleek profile of the hovercycle and minimize any protrusions that might snag in tight quarters. The launcher only partially rises and contains six mini-missile tubes and four tubes modified to fire Strap Gun cartridges.

Damage: 1D6x10 or 2D4x10 for each mini-missile (5D6 or 1D4x10 M.D.C. in Mega-Damage settings); however, explosive missiles are rarely used inside *spacecraft or space stations*, replacing them with smoke, tear gas, knockout or nerve gas missiles (see the mini-missile chart in the equipment section for full statistics). See the strap gun for description of this weapon.

Range: One mile (1.6 km) for the normal missiles, but may be limited by the environment. 1000 feet (305 m) for the strap cartridges.

Rate of Fire: One at a time or in volleys of 2, 4, or 6. A volley of four strap cartridges *can* be dodged, but at -4. Such a volley can immobilize a creature up to 24 feet tall (7.3 m) as per the strap gun rules.

Payload: Six mini-missiles and four strap cartridges.

3. **Bonuses:** Like all hovercycles, the TMC Comet is very maneuverable, but it also has more systems and special modifications than others, plus the TMC are trained heavily in its expert use, all of which results in more bonuses.

+2 on initiative, +2 to strike, +4 to dodge, +5% on piloting skill, and -15% on piloting skill penalties.

TMC Armored Hover Car (AHC)

The Armored Hover Car is another low profile, maneuverable vehicle designed for all terrains (ground and space). The AHC is use for making patrols, general transportation, raids and troop support. It is much more heavily armored than the hovercycle and is the closest thing to a small tank in the TMC's arsenal. This hover car is slim and maneuverable when compared to most production line hover vehicles, and its design incorporates maximum mobility with minimum size to allow it to function in the cramped quarters of spacecraft and space stations. When operating in cramped conditions, the car has no penalties due to its maneuver rocket system (same as the TMC hovercycle) and VTOL (Vertical Take-Off and Landing) capabilities. It seats two in the front (a third can usually slip in but makes for cramped conditions) and two in the rear. The rear compartment is sectioned off from the front and padded for transporting suspects and criminals. To that end, it also has places where handcuffs and other restraints can be attached directly to the vehicle to effectively "lock" the suspect in place.

Class: TMC Heavy Boarding Vehicle
Model: TMC-AHC-03
Crew: Two, pilot and gunner/sensory technician.
A.R.: 12 (vehicle)
S.D.C. by Location:

* Concealed, Flip-Up Headlights (2) – 6 each
Police Light (top) –15
* Concealed (with headlights) Lasers – 20 each
Windshield — 60
Missile Pods (2) — 110 each
*Weapon Turret — 90
*Thrusters (6) — 40 each
**Main Body – 540

* These targets are small or difficult to hit and require a called shot at -3 to strike. Destroying one thruster reduces the dodge bonus and pilot bonuses by 1/3 in open areas and imposes a -1 to dodge and -5% to pilot rolls in cramped conditions. Destroying two thrusters reduces bonuses and increases penalties by another 1/3 (-2 to dodge and -10% to pilot rolls in tight conditions), and taking out all three thrusters negates the flight capabilities of the car (and necessitates a crash-landing roll).

** Depleting the damage capacity of the main body will shut the unit down completely, rendering it useless.

Speed

Flying: The hover car does not actually fly, but instead hovers 3-15 feet (0.9 to 4.6 m) above the ground (10x higher in low gravity). Maximum speed is 200 mph (320 km). Thrusters can be used continuously for 24 hours before a cooling period of 2 hours is required. Periodic breaks can extend the range indefinitely.

Space: The hover car is a full environmental vehicle and can travel in space for short periods (72 hour guaranteed air supply). Triple speeds in space but maneuverability degrades and all combat rolls are -1 and skill rolls -5% for each 200 mph (320 km) above normal; range is effectively unlimited.

Underwater: The hover car is a full environmental unit and can operate underwater as long as its air supply holds out. Maximum speed is 90 mph (144 km) on the surface and 40 mph (64 km/35 knots) underwater. Maximum depth tolerance is 800 feet (224 m).

Statistical Data

Height: 4 feet, 9 in (1.4 m)

Width: 6 feet (1.8 m)

Length: 12 feet (3.7 m)

Weight: 4600 lbs (2070 kg) fully loaded .

Cargo: Minimal; crew's personal belongings, armor and equipment, plus a small trunk area of approximately 2 ft x 2 ft x 6 ft (24 cubic feet; .6x.6x1.8 m). Extra missiles, ammunition, and armor are commonly stored in the trunk, but squeezing in a TMC assault trooper robot is not unheard of in special circumstances.

Power System: High-powered electrical turbines with a self-charging solar battery system.

Cost: 225,000 credits, but rarely available on the mass market. They are produced by the TMC for their own exclusive use, but the TGE does sell a comparable security vehicle with half of the missile capacity and 25% less armor for 250,000 credits. Add 160,000 credits to increase the S.D.C. of the main body by 130 S.D.C. (the other areas are increased by 30%).

Weapon Systems

1. **Weapon Turret**: The main armament of the hover car is a retractable weapon turret on the roof near the rear of the vehicle. The heavier combat use of most hover cars (when compared to the TMC's cycles) requires slightly more powerful and less incapacitating weaponry than the hovercycles. The weapon turret is thus outfitted with a heavy ion rifle for use against armored targets or vehicles. It can rotate 360 degrees and has an up and down 45 degree arc of fire.

Damage: 1D4x10 damage (M.D.C. in Mega-Damage settings).

Range: 3,000 feet (914 m).

Rate of Fire: Each shot counts as one melee attack.

Payload: Effectively unlimited.

2. **Concealed Forward Lasers (2):** When the Headlights flip up, there is also a pair of small, short-range lasers. They are in a fixed forward position so they can only fire directly in front of the vehicle.

Damage: 3D6 damage from one laser or 6D6 per simultaneous double blast (M.D.C. in Mega-Damage settings).

Range: 1,200 feet (366 m).

Rate of Fire: Each shot counts as one melee attack.

Payload: Effectively unlimited.

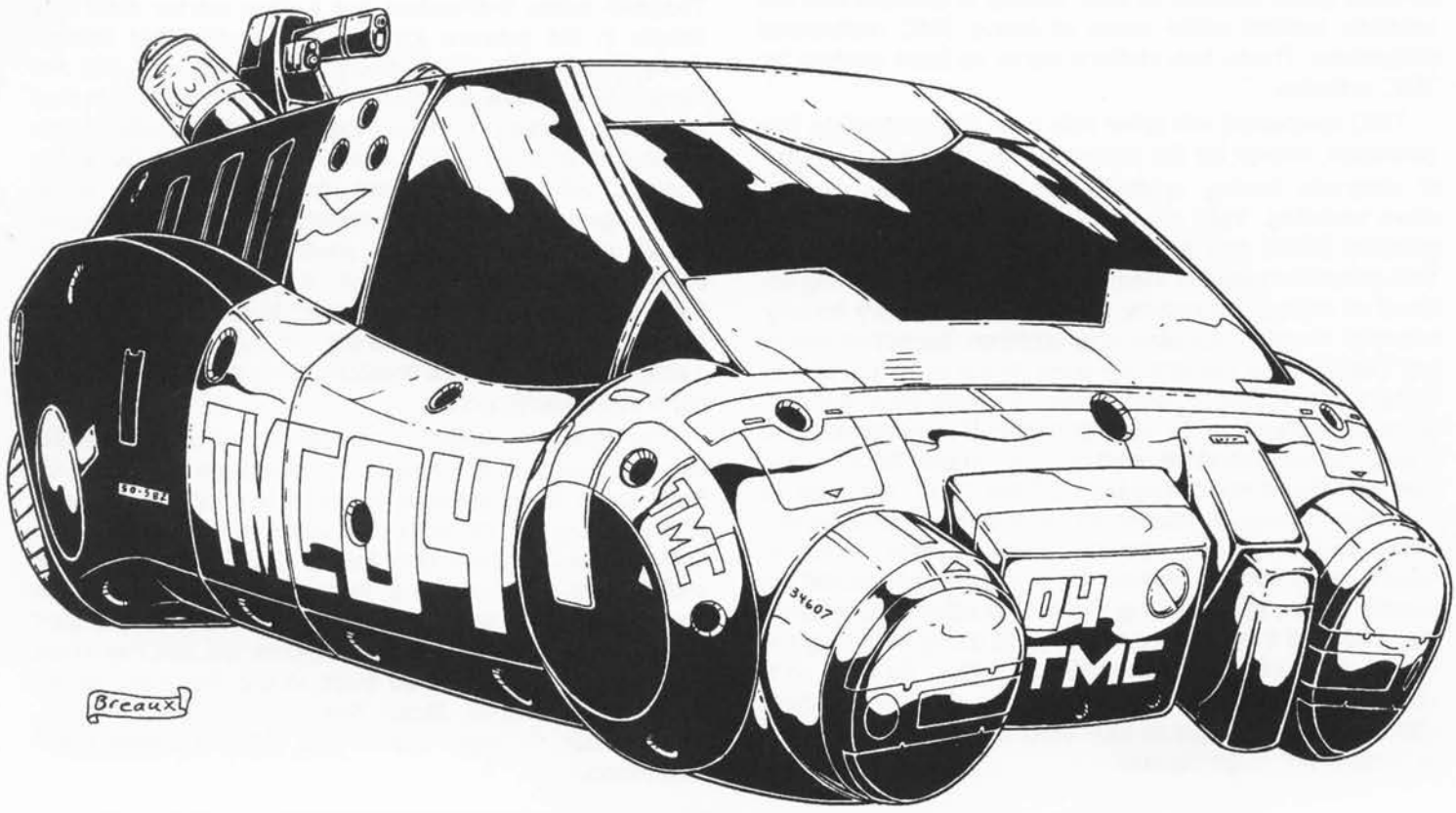
3. **Forward Mini-Missile Launcher Pods**: The two large cylinders on the front of the vehicle are mini-missile launchers. Each has a payload of damaging and crowd control missiles.

Damage: 1D6x10 or 2D4x10 for each mini-missile (5D6 or 1D4x10 M.D.C. in Mega-Damage settings); however, explosive missiles are rarely used inside *spacecraft or space stations*, replacing them with smoke, tear gas, knockout or nerve gas missiles (see the mini-missile chart in the equipment section for full statistics).

Range: One mile (1.6 km) for the normal missiles, but may be limited by the environment.

Rate of Fire: One at a time or in volleys of 2, 4, or 6.

Payload: Each pod holds four explosive mini-missiles and



six riot control missiles (two tear gas, two knockout gas, one paralysis gas, and one smoke), for a total of 20 mini-missiles.

4. **Bonuses:** +1 to strike, +2 to dodge and -10% on piloting penalties in open conditions.
5. **Standard Features:** Has all basic sensors, radar, environmental and optic systems common to military vehicles and robots. Also has flashing lights, siren, loudspeaker, and a winch and cable/towline in the front and back undercarriage. Ten ton towing capacity (x5 in space), but reduce speed by 60% when pulling a maximum load (otherwise 40%).

TMC Spacecraft

Spacecraft are the lifeblood of the TMC. Their mainstay is patrol and enforcement of their clients' laws in the space lanes and space around their contracted worlds. The bulk of the TMC space fleet is made up of long-range *fighters and interceptors* (such as Cavalier- or Barbarian-class interceptors) used as patrol and combat vessels, but they also use armored shuttles and cargo craft. Spaceships larger than small *destroyers* (such as the Gladiator-class destroyer) are uncommon within the TMC. They simply do not need vessels that large. *The cruisers* they do have are reserved for use as remote bases operating on the fringes of TMC patrolled space as troop support as well as for evacuations and troop transport. The heavier spacecraft are also used in large-scale raids on firmly entrenched criminal compounds or those with numerous henchmen or spaceships of their own. *Battleships* are unheard of in the TMC, but the organization does have a number of huge "deployers" that function as mobile headquarters for Patrol Division squads as well as providing mobile support for large raids. The TMC does operate a number of Metropolis-class *space stations* as well, usually in systems that are centrally located within areas of heavy TMC contractual obligations. These hub stations serve as local centers for TMC activities.

TMC spacecraft will differ little from the production line packages, except for the inclusion of some kind of grapple or magnetic towing system for securing other vessels when boarding. TMC ships also tend to be more heavily armored (30%) and often have 10-20% fewer weapons. This adaptation allows them to get closer for boarding instead of destroying enemy vessels outright. Very heavily armored shuttles are also one common exception within the TMC. These vessels are used to transport dozens of officers to a vessel or destination. They are slow, but reasonably maneuverable and outfitted with grapples and towing drives strong enough to pull others 30-50 times their size like a space tug boat. These "tugs" are used to haul away derelict spacecraft, space junk, and locked down (held in place) vessels to be boarded or to be hauled away for impounding. If the suspect spacecraft attempts to run, the boarding shuttle will attempt to prevent that and hold it in place or be dragged along, reducing the speed of the other vessel by 1D4x10+40%. Small or light vessels will be completely held in place, despite their best efforts to escape. Two to four TMC tug shuttles are used to "lock down" large vessels.

Toogarth

The planet Toogarth is a low-gravity world that serves as the center of the fledgling Toogarth Empire. The Toogarth aliens themselves are a cruel warrior race who delight in the torment and destruction of other beings. While their empire is relatively small now, they are extremely aggressive, and numerous indicators suggest they may soon embark on a vast expansion that could gobble up dozens of other civilized worlds. Those who fall to the Toogarth advance can expect wholesale slaughter, some level of genocide and mass slavery as the Toogarth rapaciously strip these worlds of anything of value, establish colonies and move on. Only the Toogarth's relative lack of technological expertise (they prefer to steal, conquer and buy their high-tech ships and equipment rather than make them), and their internal divisions keep them from becoming a true galactic power.

The Toogarth currently maintain two alien civilizations as slave races — the insectoid *Krit* and the psychic *Zylik*. Both races have suffered tremendously under Toogarth rule, and secretly hope to one day free themselves from their oppressor's yoke. Until then, these conquered people shall remain the servants of their reptilian masters. Urban myth claims there is an ancient legend that predicted their enslavement and that a band of heroes will one day arrive from another world to lead them to the freedom they so desperately deserve. **Note:** For more on the Toogarth, please refer to page 188 of the **Villains Unlimited™** sourcebook.

Trammel

This unremarkable Earth-like world is a training planet reserved for the Atorian Empire's corps of **Cyklops-Serpentmen**. These giant, four-armed humanoids have huge bat wings, twin snaking tails, fang-filled mouths, and a single eye in the middle of their forehead. They are natural warriors and are routinely employed by the Atorians as assassins, enforcers, raiders and all-around thugs. The Cyklops-Serpentmen relish this duty of theirs, although there are a small number of those among them who resent the Atorians and who have defected to join the FAR and TMC.

In recent months, a body of renegade (FAR, allied?) Cyklops-Serpentmen and their alien allies have infiltrated Trammel and established a guerilla force on the planet. They have begun waging constant, low-level insurgencies against the Atorian training facilities on the surface, killing numerous Cyklops-Serpentmen trainees. This situation is an ongoing security fiasco for the Atorian Cyklops-Serpentmen on the planet, who have failed in their every attempt to eliminate the insurgency and restore stability to the planet. If things continue as they have for much longer, the world may well erupt into a full-blown civil war, as the many civilians conquered by the Atorians who inhabit this backwater world grow increasingly sympathetic with the rebels, and gradually more hostile against their Atorian guests.

Most of the galaxy does not know about the situation on Trammel because the Atorian Empire is keeping a tight lid on it. The planet is deep within Atorian space, and the Atorians have no desire to let news of this get out into the open. Should the galactic public learn of the Empire's inability to crush a tiny little movement on an unimportant planet, the concern is that the FAR and/or others in the galaxy will lose their fear of the Atorians and their monstrous allies, and begin making bolder moves against them. TGE spies are likely to be the first to learn of this crisis (and pass it on to their FAR contacts), unless it is ended soon. **Note:** For more information on the Cyklops-Serpentmen, please refer to page 159 of **Aliens Unlimited™ Revised.**

Vaniayes

While some races like the Toke Tuul are still coming to terms with the darker aspect of their people's past, others have weathered the worst storms, dealt with the aftershocks, and have managed to move on to something better. This is the case with the **Mull Tiaii Fassinae**, a race of human-like reptilians who have seen their people soar to the heights of glory and plunge into the deepest pits of shame. However, they have reclaimed their pride, overcome their ancestors' crimes, atoned for them, and emerged greatly respected for it. Many centuries ago, the Mull Tiaii Fassinae were just mastering space travel and testing advanced methods of getting to distant stars light years away. Two planets within their home solar system were inhabited by intelligent life. The smaller planet had light gravity, but otherwise Earth-like conditions and was home to the human race known as the *Preteck*. The other was farther from the sun, cooler, and in perpetual twilight. This was *Vaniayes,* inhabited by the Mull Tiaii Fassinae. Space travel and higher technology came quickly to the reptilian peoples of Vaniayes while the Preteck lingered behind in a long, but slow to advance, industrial age. Seeking to better themselves by helping others, the Mull Tiaii Fassinae reached out to the Preteck and shared their technology with them. The gesture and its resulting allegiances were to be the foundation for a benevolent Empire as the reptiles came nearer and nearer to the perfection of their advanced space travel technologies.

Once advanced space travel was achieved, the reptilians found themselves welcomed into the galactic community, where they were determined to fit in and prosper. So it would be for nearly three centuries, then something changed. It didn't happen overnight, but there came a turning point for the Fassinae Imperial rule, in which the Fassinae Empire became corrupt, violent, and to most outsiders, evil. From benevolence to malevolence, the once great Empire became something not a far cry from the conquering Atorians. Fortunately the Empire was tiny compared to the Atorian Empire and so overconfident that it would hamstring itself. In their bid for power, they broke off from the Federation of Allied Races, invaded FAR space and began to invade worlds that members of the FAR. War exploded and lasted years, but a final violent outcome was averted when the evil alien intelligence that had taken hold of the rulers of the Fassinae Empire was discovered and driven from our dimension. Before the war came to an abrupt end (as did the corrupt rulers of the fledgling Empire), millions had perished in the conflict, several worlds suffered, and economic losses were beyond the comprehension of most.

While some argued the Mull Tiaii Fassinae were themselves the victims and pawns of a diabolical demonic power, others felt strongly that they were "willing" pawns and responsible for their actions. To make amends, the Fassinae Empire was dissolved, they apologized to all parties, contributed to the rebuilding of those civilizations they had attacked (the best they could), and the Mulls retreated to their home world and legitimate colony planets they had founded before the war. Many, many years later, they have remained a humble and benevolent people, rejoined the FAR and support peace and mutual respect and dignity for all races. The Mulls regularly extend a benevolent hand to those in need, and take no offense to those who decline their offer, or who still regard them with suspicion. As a result, most people in the galactic community, especially members of the FAR, have accepted them back into the fold as defenders of peace and freedom. The Mull Tiaii Fassinae have also mastered the arts of diplomacy and trade, and are recognized as masters of each. Some even consider them on par with the Toke Tuul as diplomats.

Even though they are warm-blooded reptilians, the Mull Tiaii Fassinae are very much human-like in appearance except for three major characteristics. First and most notably, their skin is scaly like those of lizards and ranges in

color from drab to shades of bright greens on the back of the body, arms, legs, and head, with creamy white, pale brown or a purplish grey color for their face, the palms of their hands and abdomen. Yellow or white highlights are found around the eyes and mouth, on their hands, and the bottom of the feet. Hair color (yes, they have coarse hair like humans) is black, dark brown or dark blue.

The second most striking characteristic is their multiple pairs of eyes. Three pair in declining size and order from the top of their forehead to what humans would consider the normal location for eyes. From a distance they look solid black with no noticeable pupil or iris, but upon close inspection, one realizes they have large, round, black pupils surrounded by a narrow, brown iris. Evolving on a twilight world, these eyes of theirs see with perfect clarity in low light and even complete darkness. They can also see infrared light, giving them a sort of natural thermo-optic vision. Consequently, Mulls must wear protective eyeglasses or contact lens style filters to protect their eyes in sunlight. Some get one pair surgically modified to see in brighter environments, but this is uncommon.

The third trait is the length and number of their fingers and toes. Each hand and foot has six digits. The fingers are a bit longer than humans, and ideal for delicate work.

Most Mull Tiaii Fassinae prefer regal, stylishly tailored clothing. Capes, cloaks, long coats, and dresses with flowing trains are among their favorites. This often gives them the appearance of refinement, culture and even royalty, especially to outsiders. Among the Mulls, rank and station are marked by the style, quality and elegance of one's clothes. Judges and those in the judicial professions wear white and pastel colors, the police and military wear black and blue colors, and diplomats and negotiators wear medium to light browns and blues.

The Mull Tiaii Fassinae are a Galaxy Age civilization equal or superior to any of the advanced races within the FAR. They have faster than light spacecraft drives, advanced space travel capabilities, hover vehicles, energy weapons, cutting edge medical technologies and numerous other conveniences and achievements. Their home world as well as their numerous colonies are all open to visitors and are marvels of art, science and composite architectures. The Mull Tiaii Fassinae have borrowed from the styles of numerous alien races to create a unique non-uniform, but appealing image for their sprawling city skylines. Such quilted cities are more common on the colonies than on Vaniayes itself.

Mull Tiaii Fassinae

(more commonly called "Mulls")

Alignment: Any, but overall tend to be Unprincipled, Scrupulous and Principled.

Attributes: I.Q.: 3D6+2, M.E.: 3D6, M.A.: 4D6, P.S.: 3D6, P.P.: 3D6+2, P.E.: 3D6, P.B.: 2D6, Spd.: 3D6.

Hit Points: P.E. attribute number x2, plus 1D6 per level of experience.

S.D.C.: 40 plus any additional from physical skills or special training.

Height: 6 feet plus 4D6 inches; six and a half to eight feet (2 to 2.4 m) tall.

Weight: 180 to 300 pounds (81 to135 kg).

Average Life Span: 250-310 years, though the older they get, the more they tend to sleep (12 hours per day is typical for those over 200). After 220 years of age, they actually begin to hibernate for one entire day a week. Death is not feared and seen only as the "longest sleep" or the "final sleep." Being killed before the final sleep, however, is quite unsettling to them. They do not fear death, but worry that the abrupt dying will somehow fill their final sleep with nightmares.

Major Super Abilities: Chameleon and Alter Metabolism. These two major super abilities are natural to Mulls and are the only ones that they have. Also see Natural Abilities.

Natural Abilities: 300 degree field of vision, making it nearly impossible to sneak up on (included under bonuses), nightvision 600 feet (183 m), see infrared light and heat emanations (roughly equal to infrared vision and thermo-optic at the same range as nightvision), and sensitive hearing (20 decibels beyond human range). Blind in daylight or any bright light (-10 to strike, parry, and dodge) and squint even in what humans would consider a dark, overcast day (-4 to strike, parry and dodge). The Mull Tiaii Fassinae can also regenerate partially removed limbs, such as from the elbow or knee down, but not an entire limb or the head. Regeneration does not speed up the healing process, it just allows for the replacement of missing digits and lower extremities to regrow. One inch per every two weeks is regrown. At this rate, regenerating an arm severed at the elbow would take approximately 9-10 months.

Racial Bonuses: +4 to initiative, +1 to strike and parry, +2 to dodge; in addition to possible attribute and skill bonuses.

Education: Technically any, but typically gravitate to the sciences, computers, engineering, communications or general studies, but military and pilot educations are also fairly common.

Special Weapons: The weapons commonly carried by the Mull Tiaii Fassinae are mainly decorative melee weapons such as daggers and swords. Many have been passed down through family lineages. They are the equivalent of Kisentite weapons and can be of any type.

Special Vehicles: Hover platforms are the most common type of transportation for these aliens. These platforms are up to 6x6 feet (1.8x1.8 m) and can be square or round. They hover 3-300 feet (0.9-91 m) above the ground, can travel at speeds up to 90 mph (144 km), and have 150 S.D.C.

Preferred Armor: Light armor (A.R.: 10-13, S.D.C.: 50-80) is most common.

Familiarity With Earth: The Mull Tiaii Fassinae have some familiarity with Earth due to the fact that their home world is within the Ilta Quadrant and several probes passed by the planet when these aliens still controlled the Fassinae Empire.

Rifts® Notes: In a *Phase World®* setting, these aliens will be very much the same as presented here, with possible ties having been forged between them and the Kreegor while they were still an empire. Bad blood would still exist between these two since the Mulls have given up their conquering ways and broken any alliance and contact they once had with the Kreegor. The Kreegor will perceive this action as an insult, weakness and stupidity. In a normal **Rifts®** setting, they are seen as D-Bees and hunted by the Coalition.

Galactic Monsters

The Riathenor

By Wayne Breaux Jr. & Kevin Siembieda

*Lieutenant Kador narrowed his eyes and watched the bizarre tableau before him with a mix of horror and fascination. A Shissan and member of the **TGE Unknown Situations Resolution Corp.**, the lieutenant had seen plenty of strange and grisly things in his time, but this ranked at the top. Corporal Barit, a Latran scout, and Corporal Zishnef, a Nattereri warrior stood transfixed and silent at his side. Below them on the far side of a large chamber was a gathering of the mysterious creatures known as **Riathenors** in their own habitat. Even here, safely nestled away in a hidden lair, they still wore their trademark battle armor. The three soldiers never expected to find a Riathenor outpost when they were dispatched to investigate the disappearance of three marketing scouts sent to a distant, uninhabited planet. Yet there they stood. Laughing and making merry. Things were about to get stranger.*

A dozen Riathenor warriors seemed to have just finished gorging themselves on .... god only knows what. The long table was spattered with blood and gore; some of the food that remained still moved. As the hardened TGE soldiers watched with sickened stomachs, they began to guess what might have happened to the missing scouts. Some of the platters below were unsettling in their similarity to humanoid skeletons picked clean. No one wanted to think about what the Riathenors at the table were having for dessert.

A moment later, a struggling human restrained by two more Riathenors was dragged into the hall. It was not one of the missing TGE agents, but some other poor victim. The three observers wanted to do something, but they knew they were no match for even one Riathenor let alone a dozen or more. The best they could do was observe and gather information so that others might put an end to this kind of horror.

With great effort not to make a sound, the three watched from their balcony seat provided by a vent near the ceiling. A small litter was carried into the chamber be-

hind the human by a pair of smaller Riathenors. The ones that had been eating stood and began to chant. One raised a wicked looking sword and seemed to lead the ceremony. On the litter was the lumpy shape of some kind of metal. It resembled the same material as the Riathenor armor, but unshaped. A nugget of the raw material perhaps. It had an organic appearance something like a brain or slug curled into a ball. Then they noticed the ball of metal twitched and seemed to pulse with an energy that shone from within.

The chanting grew louder and the nugget visibly undulated. Faster and faster, as if excited as it was brought closer to the restrained human. The three TGE agents exchanged glances, but their attention quickly returned to the spectacle below. The chanting stopped as the sword wielding Riathenor shouted something in an alien tongue and pointed toward the human. A nano-second later the observers realized the pulsating metal nugget had sprung to life and engulfed its victim head first! What had seemed to be hard metal a moment earlier, was now some sort of protoplasmic goo! It all happened so fast that the victim didn't even have a chance to scream. The glob had leaped .... lunged .... to cover the human's head and was now oozing down his body. As it flowed down to cover the feet, the chanting resumed and the glop covering the human began to glow and pulsate with a blue-white electrical energy. The protoplasm molded itself to the human-form and again resumed its hard, metal consistency. With each passing second, the metal took on the appearance of Riathenor battle armor.

First the general shape, then specific features – spikes, blades, clawed feet and hands. Next the head took on the demonic face plate of a Riathenor. Then moving machine parts began to rise out of the still molding metal, turning into retractable swords, and blasters mounted on the shoulders. The chanting was replaced by cheers and the two who had escorted the human sacrifice now shook the armor clad individual's hands and all gathered to pat him on the back and embrace him as one of their own.

It took the TGE agents a few minutes before they realized they had witnessed the transformation and birth of a Riathenor into an adult warrior. The nugget must have been a young Riathenor (until this very moment, nobody knew what a young Riathenor looked like). The feasting and chanting was part of a coming of age ceremony. And the human .... had become one with the Riathenor? And which was which? Was the actual sentient Riathenor the body armor covering or was it buried somewhere inside the human (host) body? They would leave the conjecture about the transformation to the experts. For now, they had to get out alive.

The TGE soldiers turned to each other, using sign language to agree on a hasty retreat. The Riathenors had established a breeding colony of some sort on this remote world and it would take a brigade of power armored soldiers to clear it out. Headquarters needed to be informed immediately.

Unseen by the three skilled operatives, other eyes were watching them. Crouched amid the rafters above the shadowed alcove that had sheltered the TGE soldiers from the main assembly, Chain'chn'Shoei watched with a broad mental smile that matched the skeletal grin on its flexible, living exoskeleton. Cloaked in magical invisibility and waiting in silence, the Riathenor practiced its patience until the "host taking" and "rite of rebirth" had concluded. Now it was time to act. Of the three intruders, the huge scaled alien was already targeted in the Riathenor's mind as a wonderful new host to be taken live. His host taking would directly increase Chain'chn'Shoei's strength and position as a warlord.

On board the advance TGE scout ship that brought the three agents, their two teammates watched and recorded the video feed of the transformation. The images were broken and choppy, but it conveyed all the key aspects of the terrible event. When the three were jumped by the Riathenor, and two fell in less than a half minute, the scout ship blasted off. They weren't deserting their comrades, they told themselves, they were preserving the information. Data and images that seemed to confirm certain rumors and revealed vital, never before known information about the mysterious and frighteningly alien Riathenors. They only prayed that they could escape without being spotted by one of the Riathenor's own spacecraft and avoid joining the ranks of the "missing."

Player information on the Riathenor

It is generally common knowledge, as far as common knowledge goes in the vast reaches of space, that the Riathenors are powerful armored aliens that arrived in our dimension through an alien dimensional portal. This happened before the planet Assin was torn apart by the unchecked magic energy that not only reduced the planet to rubble but opened thousands of tears in space and time. Many of which were portals to other dimensions and planets, among them the domain of the Riathenors. It is also known by many, that the evil Riathenors sometimes hire themselves out as mercenaries, raiders and assassins, although most of the time they stick to their own kind and follow their own (unknown to others) agenda.

The Riathenors seem to dislike, and feel superior to, most other races. This is evident in their complete lack of compassion or feelings toward other beings. They seem to consider all other beings as trouble and obstacles to be eliminated — or people to conquer and enslave. Riathenors are as cold and hard as the exterior armor that covers their bodies. In combat they show no mercy or quarter, nor do they ask for any. They seem to relish combat and cover themselves in weaponry. Their armor bristles with spikes, razor sharp barbs and blades from knuckles to head, to toe. Swords or multi-bladed claws extend from their forearms, and their fingers and toes end in metal claws. Likewise, the knees and elbows are often spiked or bladed, and a variety of concealed and obvious energy weapons are mounted on the shoulders, back and forearms. And most carry an assault rifle, with ion, particle beam, and plasma being their weapons of choice.

Rumors persist that Riathenors can also cast spell magic and/or somehow integrate magic into their battle armor. Another rumor suggests the Riathenor and their battle armor are two separate living beings that share a common body as the result of a strange symbiosis. One of which is an alien creature of magic. Many insist that the battle armor is indeed a living creature that protects the Riathenor inside. Somehow magic is involved, which explains how the armor seems to (magically) heal and change its form. Then again, all of this is mere conjecture based on rumor, hearsay and the occasional "close encounter."

Little is known about these malevolent beings, for any who bear witness to their culture and life are slaves who never see the light of day or observers who are hunted down and exterminated before they reveal any dark secrets. Those warriors who have managed to survive Riathenor attacks present conflicting reports and what seems to be exaggerations and hallucinations caused by panic and stress, for many of the abilities reported seem to defy the laws of physics (as least as we understand them) and to point to "magic" seems like the easy and unlikely answer.

G.M. Info

Riathenor Warriors

Game Master's Note: *NONE* of the information presented here is currently known to anyone in the Milky Way galaxy. The Riathenors are very, very secretive about themselves, and their invasion/attack plans are always extremely well hidden, staged in remote sectors of space. However, members of the Federation of Allied Races (FAR), among others, are beginning to worry about these strange aliens. The FAR has launched its own investigation that is almost certain to reveal bits and pieces, if not everything, over the next 5-20 years. Whether the video transmission presented in the opening story falls into the hands of the TGE (which will get copied and anonymously sent to the FAR) or the hands of the player characters (with Riathenors in hot pursuit?) is left to you. Sounds like the stuff of adventure and a galactic campaign to us.

Despite the rumors and information given in **Aliens Unlimited™**, the Riathenors are not true demons (as some people choose to believe), nor evil human mages merged with a powerful symbiote. These are just a couple examples of the popular misconceptions about this bizarre race. There is truth in these rumors, however, for the Riathenors are "demonically evil" and "magical," only they are a sort of sentient *parasite* that takes over the body of humanoids, *humans* in particular, to become a weird synthesis of metal, magic and flesh. The humanoid form is preferred above others and seems to give the monsters the kind of flexibility of form and locomotion they most desire.

Riathenor (pronounced rye-ath-en-nor)

Types of Riathenors: There are only four types of Riathenor, the "Dagotte" (1%), "Warrior" (70%), "Kilm'aktro" Giants (15-19%), and the animalistic "Heretshi" (10-14%). The Warrior is the norm and what most people think of when they hear the name, "Riathenor."

Alignment: Miscreant or Diabolic without exception.

Attributes: I.Q.: 3D6, M.E.: 3D6, M.A.: 2D6, Supernatural P.S.: 1D4+31, P.P.: 2D6+14, Extraordinary P.E.: 2D6+18, P.B.: 2D4+2 (more impressive and frightening than attractive), Spd: 3D6+48 (average is 58 or 40 mph/64 km; but maximum is 66 or 45 mph/72 km).

Size: 6-8 feet (1.8 to 2.4 m); varies with the size of the host body. True giants, larger than 12 feet (3.6 m), can not be used for hosts and only the Kilm'aktro Riathenors stand 9-12 feet (2.7-3.6 m).

Weight: 300-600 lbs (135 to 270 kg).

Average Experience Level (NPC Villains): 2+1D4; mature adults 50+ years old are +1D4 levels. Only ancient Riathenor Warriors and the Dagotte may be 11-15th level.

Armor Rating (Natural): 12 or 13 is average. Starts with an A.R. of 10 +1 per every two levels of experience; i.e. A.R. is 11 at level two, 12 at level four, 13 at level six, 14 at level eight, 15 at ten, and tops out at A.R. 16 at level 12. Any roll to strike under the Natural A.R. does NO damage!

Hit Points: P.E.x3+2D6 per level of experience!

S.D.C.: 2D6x10+200

Horror Factor: 11 for a single warrior, 14 when they outnumber their opponents.

Disposition: All Riathenors have basically the same heartless disposition. They like to dominate others, enjoy frightening, hurting and killing others, and see most other life forms as either food, inferiors to be enslaved, or enemies to be destroyed.

Natural Abilities: Can survive in most any environment. Does not breathe air and can survive in the vacuum of space, toxic atmospheres and underwater (although they hate being underwater for more than a short period; maximum depth tolerance is two miles/3.2 km). Heightened senses, including Ultraviolet Vision, Infrared Vision, and Heightened Sense of Hearing (all identical to the *minor super abilities* of the same names; see bonuses below). Supernatural P.S. and Extraordinary P.E. (modifiers already factored into attributes, S.D.C. and bonuses), bio-regenerates 1D4x10 damage every

30 minutes; impervious to gases, poisons, drugs, toxins, disease, normal fire and heat, and radiation (including Mega-Damage fire in those environments). Magical fires will have full effect, as does most magic and psionics. Can easily leap 20 feet (6 m) high or 25 feet (7.6 m) across. Also see magic and natural blade and energy weapons.

Psionics: None.

Super Abilities: None other than those listed under Natural Abilities.

Magic: Described in the Riathenor weapons section.

Combat: Equivalent to Hand to Hand: Expert, but use the stats, number of attacks and bonuses presented here.

Number of Attacks: Six (6) to start, plus one additional at levels 4, 8, 12 and 15.

Bonuses (includes combat and super abilities – does not include attribute bonuses): +8 on initiative, +3 to strike (+4 to strike with sword), +4 to parry (+5 to parry with sword), +5 to dodge, +2 to roll with punch, fall or impact, +6 to pull punch, +3 to disarm, critical strike on a natural 19-20, and +6 vs Horror Factor.

Education Level and Skill: Riathenors are instinctively aggressive warriors with a variety of military and combat related skills. Typical skills (many instinctual) include: Computer Operation, Land Navigation (+20%), Navigation (+10%), Navigation: Space, Mathematics (Basic & Advanced +20%), Read Sensory Instruments, Concealment (+10%), Detect Ambush (+5%), Detect Concealment, Tracking (+15%), Acrobatics, Climbing (+5%), Prowl (+5%), Swim, Zero Gravity Combat: Basic, W.P. Sword, W.P. Heavy, W.P. Energy Pistol, and W.P. Energy Rifle. Magically understands, reads and speaks all languages. May select 1D4 additional Piloting skills, and one W.P. of choice. At level five, the character can select a total of 1D4+2 other skills from any of these categories: Physical, Rogue, Technical or Wilderness. **Note:** No skill bonus applies unless it is indicated in parentheses above. Also see magic, under the weapons portion of this section.

Background details about the Riathenors

The Riathenors cycle of life. The normal 'mating' process between two Riathenors is more like a donation of traits or the division of an amoeba than anything humans think of as sexual. Over 300 points of P.P.E. are needed (150 each) as well as intent and plenty of focus to create a viable offspring. Although the Riathenor's physical body takes on the basic traits of its host body (male or female, human or alien), the Riathenors themselves are asexual, so any two, male or female, can (for lack of a better term) mate. Moreover, a Riathenor is a Riathenor, so it does not matter if the host bodies of the "parents" are two distinctly different alien species.

The procreation and birthing processes are actually one in the same and very simple. When two Riathenors make a cooperative effort to create offspring, each embraces the other, goes into a trance (lasts 1D6+1 hours) and focus a large amount of P.P.E. through themselves. The energy is merged to cause a small portion of their armored exoskeletons to become protoplasmic and entwine with each other. This creates a clump of matter that turns into a hard, metallic nugget the size and general shape of a football. This is the Riathenor young. Only one may be created at a time, and for the next six months, the two "parents" must bring fresh victims to their progeny, where they perform a *ritual sacrifice* that will direct the P.P.E. of their prey into the nugget. This continues once a week, and the baby needs a minimum of 30 P.P.E each feeding. At the end of six months, the Riathenor offspring has grown to the size of a steamer trunk or small chest (about 5 feet/1.5 m long) and goes into a state of hibernation or stasis sleep. It remains completely dormant for another six months, during which time some internal transformation or growth takes place. The parents usually stow it in some secret place or with dozens of other Riathenor eggs, and go their separate ways. (A mature adult can mate with another mature adult and produce offspring once a year, but there is no romance or emotional ties. Thus, the creation process is usually done with a different partner every time.)

One year after its birth, the young is ready to become a Riathenor. As seen in the opening story, a magical ritual is required to awaken the slumbering Riathenor nugget/egg and empower it to take a host body. Without this ritual, the creature will remain in stasis for years, even centuries. Exactly how long a "nugget" can survive in stasis may be unknown even to the Riathenors, but it is at least two thousand years. Only the aggressive and rare *Riathenor Dagotte* can sense a potential host and take it *without* the ritual or other adults. However, even the Dagotte will wait in nugget form for approximately 500 years before it instinctively takes such an action. Once one has become an adult, it will seek to create others of its kind. Most Riathenor nuggets/eggs are typically kept in clutches of several dozen to a few thousand, so once one is created, several nuggets are at hand waiting to be transformed in the rite of rebirth. Once forty or more adults have awakened, they will divide into smaller groups of 6-12, take some of the eggs and scatter across the planet — and whenever possible, into outer space and to other worlds. Splintering into smaller groups give, their race a better chance to survive and multiply, for if one group or colony is discovered and destroyed, the others remain free and most likely, not even known to exist.

These satellite colonies will remain secretive and hidden for at least fifty years, killing only enough to support themselves and to supply host bodies to the remaining young. Only after all have been "reborn" into adulthood with a host body do the Riathenor, begin to procreate and expand their colonies. However, the alien parasites must wait fifty years before sexual maturity. If no mature adults are among them, they continue to keep a relatively low profile, preying on others only enough to survive while they wait. Upon reaching sexual maturity, a pair of Riathenors can give birth to one young every year until their numbers swell. After 1D6x100+300 adult Riathenors have been born into the colony, they become increasingly aggressive and begin to go out into the galaxy around them with exploration, scouting and future conquest on their minds. Their quick reproduction cycle from egg to adult means their numbers can grow rapidly.

However, the fact that a Riathenor does not reach sexual maturity until they are 50 (Earth) years of age, gives other races who know about these creatures the chance to exterminate them before they get going. The young Riathenors instinctively know this and strive to protect the elders, for they represent the future of their race. This is what makes the Riathenors in the Milky Way something to be worried about, for in the last few years, their presence in the known galactic community, though still uncommon, has increased dramatically. This can only mean they have risen to sufficient numbers to start exploring the galaxy around them. Unless their numbers are culled over the next few generations, a hundred years from now, the Riathenors will actively and noticeably begin to invade and conquer entire worlds, becoming a real intergalactic threat in our dimension. They are already starting to do so on a small scale and in secret, picking remote planets, planetoids and colonies inhabited by humanoids without space age technology. Such low-tech and/or lightly populated worlds (ideally under a billion) are the perfect environments to begin their colonization and growth, because the indigenous people don't possess the technology to adequately oppose the Riathenors. At the same time, the natives offer a plentiful source of hosts and food. Best of all, the primitive world is beyond the notice of the advanced galactic community. In fact, Earth is one of the planets that has been visited by Riathenor scouts.

So little is currently known about the Riathenors, that few realize the danger these alien parasites represent. However, the *Toke Tuul* have had some disturbing psychic dreams about the Riathenors and have, with the support of the FAR, begun an in-depth investigation of them.

P.P.E. Vampires. The Riathenor organism is a vampire that lives on P.P.E. energy. That means in many ways, the humanoid inside functions as a living battery as well as a means of locomotion. (Without a host body the Riathenors are nothing more than the pulsating mineral-like clumps described in the introduction. They can not move by themselves, and without P.P.E. from a *living* source, they fade into hibernation that can last thousands of years.) Once connected to a host body, that body functions as the base of its power. The Riathenor can sustain itself without supplementing its energy from an outside source for up to a month by drawing on the small, renewing amounts of P.P.E in the average human body. However, the creature is weak and sluggish. (**Note:** Reduce the number of its usual attacks, speed and combat bonuses by half.) The high levels found in the body of a Wizard or most other practitioners of magic can keep a Riathenor energized on a basic level for up to a year, and at full strength for the first month. However, to be at full strength, feel good, and not suffer from hunger pains (which makes them even more angry and aggressive than usual), the Riathenors must *feed* on other living beings. This is another interesting example of the strange duality of the symbiote and the host body, for not only does the Riathenor symbiotic organism need to feed on P.P.E. from a living food source, but the humanoid host body also needs sustenance or it will perish. Thus, after the Riathenor makes its kill and devours the P.P.E. (doubled at the moment of death), it then carves up its victim and eats it to nourish the host body. It must also drink water or blood to sustain the body, and most learn to enjoy drinking not only water, but their victims' blood and alcohol.

Feeding & Gluttony. The only way for the Riathenors to access the P.P.E. they need is to kill other living creatures. As fate would have it, the monsters can only feed on the P.P.E. of sentient beings, not animals or ambient energy. Since they prefer the humanoid form, they are also the monsters' main "prey." Vile, self-serving creatures, Riathenors often gorge themselves on P.P.E., drinking in much more than they actually need to survive or to function at full strength. Typically, two ordinary humans (and other life forms with a similar P.P.E. range) will sate a Riathenor's energy needs and enable it to function at full strength for 2D4+6 days. However, the "taste" and good feeling that eating excess P.P.E. brings is so intoxicating and pleasureful (even if it does quickly fade away a few hours after consumption), that Riathenor regularly gorge themselves. Slaying one Wizard or a dozen ordinary people will have the same effect. This is pure and simple gluttony, for the energy does NOT provide extra power or extend the duration of their physical capabilities (still 2D4+6 days), just as a human eating a meal that's three times the size of normal does not mean he won't be hungry the next day. Riathenors must feed every 8-14 days. Eating more at one sitting, so to speak, does not change this. Meanwhile, the host body needs to drink at least 24 ounces of water (or blood) every 24 hours, and to consume food every 72. The strange union with the symbiote and its magical nature alters and reduces the body's natural requirements for water and food. It also enables the host body to consume raw meat and drink polluted water without ill effect. However, the host body does not need raw or rancid meat and can be fed any range of food it used to eat before bonding with the Riathenor (fish, fruit, vegetables, etc.). It's just that the Riathenors like to maim and kill. Besides, having to feed the host body is a good excuse to have some excess P.P.E by slaughtering a sentient being and eating a quarter, while enjoying the rush from the magical life energy released at the moment of death.

The host body. Humans and similar humanoids make ideal hosts for the Riathenors. Humans have sufficient P.P.E. and the body shape they are looking for. More importantly, humans generally represent minimal trouble or resistence as host subjects and prey. This is especially true of comparatively primitive civilizations (like Earth and lower), provided the race does not possess super abilities (unlike Earth).

Riathenors have a natural preference for a certain body size and the bipedal configuration, making creatures such as humans more desirable than others. Moreover, the parasites like the "taste" of humans and most human-like beings, including the Fehrans of the Atorian Empire, Aluta, Arismal, Darakans, Naidens, Shissans and other humans presented in *Aliens Unlimited™, Revised*, pages 103-121, making them the preferred choice, with Apes, Canines, Felines, Avians and Reptile races next in line, pretty much in that order. Riathenors can not use Insect, Mineral, or Vegetation/plant life forms as hosts, although they may

conquer and enslave them. Also as noted elsewhere, Riathenors regard *superhumans, creatures of magic, supernatural beings* and, to a lesser degree, *psychics*, as their natural enemies. With the exception of psychics, none of the these *natural enemies* can be used as hosts, because they are too strong and can resist the transformation process. **Note:** Whatever natural abilities the host may have possessed in his natural state, including magic, psionics, and super abilities, they are lost when the Riathenor transformation is complete. The Riathenor parasite can NOT draw upon the abilities or memories of the host body in any way.

The transformation. Victims can fight back during the initial "host bonding," which is one of the reasons humans and other comparably weak humanoids are among the Riathenors' favorite selections for hosts. A victim engulfed by a young Riathenor is encased in a form-fitting armor that quickly seizes control of him. However, potential hosts that have an *Extraordinary P.E.* (attribute score of 22 or greater), or natural *Healing Factor* (see the minor super ability) can resist the symbiote, forcing it to relinquish and remove itself. Likewise, characters with a *P.S. attribute* of 40 or greater, or who possess *Superhuman* or *Supernatural P.S., Invulnerability or Transformation powers* of their own, can literally wrestle with the damned thing, and tear it off of them. This is why super beings, dragons, creatures of magic, and supernatural beings are never intentionally targeted for "union." Instead, they are regarded as *natural enemies* and as potential P.P.E. food, nothing more. All other humanoid life forms are seen as slave stock, cattle and hosts. Remember, sentient life forms that are *insects, minerals* or *plants* are also immune to being used as a living host.

Too much of a fight will cause the Riathenor young to leave its target host, turning back into the lumpy, giant brain-looking nugget of metal to wait for a weaker host.

Regardless of any initial troubles, once the creature seizes control, it will begin to completely merge with its living host. First, it eradicates the mind and willpower of the host body. Within a week (1D4+3 days), the host brain is completely gone and taken over through a combination of natural toxins, nerve connections and subtle magical effects. The process is not unlike a biological lobotomy. Only when it is done, the person no longer exists and the alien symbiote is literally in the driver's seat. The host body little more than a puppet or the internal workings of a robot controlled by the Riathenor organism. The alien becomes both body and mind. Second, the creature makes the host body is its own. A Riathenor is more than an alien exoskeleton with a person inside. The metallic exoskeleton is not *worn* like clothing, but completely merges with the host body. Tentacles of nerves entwine and penetrate the flesh, making the once human body the internal guts, engine and center of life for the Riathenor. Humanoid and exoskeleton literally become one whole unit. Remove one and the other dies.

Rescuing the host: The host is not completely assimilated by the Riathenor parasite until the end of three days (72 hours). Thus, one has roughly three days to save a friend before it is too late, however, even after 24 hours, there will be long-lasting physical and mental scars that will plague the victim for the rest of his life.

How to do it: In all cases, the only way to save the host is to kill the Riathenor exoskeleton that engulfs him. Until the union with the host is absolutely complete, the Riathenor's A.R. is only 9, and its S.D.C., attacks per melee round, and combat bonuses (initiative, strike, etc.) are all half those of a normal, first level adult. Reduce its S.D.C. to zero or below and it is slain! When killed, the armor turns into protoplasmic goop that drips away all by itself. However, the individual "saved" is scarred for life. Just how badly is detailed below. Moreover, the Riathenors who presented the nugget/egg with the host body are well aware of its vulnerability and at least one or two usually stay at its side or nearby until the 72 hour period has elapsed, and the newborn can better fend for itself. Thus, would-be rescuers should expect to face 1D4 Riathenors in addition to the one containing their friend.

Day One:

The mind and personality of the host body is completely subverted. The individual knows he has been engulfed and his body is being taken over by some alien force, but he only has a vague, nightmare-like perception of it all. There is also physical discomfort and pain as the character feels trapped and claustrophobic. As if he has been buried alive. The following penalties may apply when a host has been rescued in under 24 hours.

Roll percentile dice for *each* of the following permanent side effects. Rolling above the number given means the character has lucked out and does NOT suffer from any such problem.

01-98% Physically scarred by connections to the Riathenor parasite. Reduce P.B. by two points.

01-80% Insanity: Claustrophobia. Fear of small enclosed areas, including narrow tunnels, closets, elevators packed with people, and the cockpits of fighter spacecraft.

01-50% Phobia: Afraid of being buried alive.

01-50% Obsession: Hates and wants to find and destroy all Riathenors, or fears and avoids them. Player's choice.

Day Two:

The physical and mental connections become stronger. The victim can feel his connections to his own body being severed and usurped. His mind races in a constant state of fear and agitation. A constant throbbing headache pounds in his mind like a drum and a deep feeling of loss overwhelms him. Sharp pain courses through his body on regular intervals, reminding him that he is still alive and not dreaming.

If rescued after 24 hours but under 48, roll percentile dice for *each* of the following permanent, debilitating effects. The character may be lucky to be alive, but he will never be the same.

01-98% Physically scarred by the Riathenor parasite. Reduce P.B. by 1D4 points.

01-80% Reduce P.S. by 1D4 points.

01-75% Reduce I.Q. by one point.

01-70% Reduce M.E. by 1D4 points.

01-50% Has forgotten 1D4 skills (player's choice which ones).

01-90% Insanity: Claustrophobia. Fear of small enclosed areas, including narrow tunnels, closets, elevators packed with people, and the cockpits of fighter spacecraft.

01-75% Phobia: Afraid of being buried alive or of sticky, gooey substances (pick one).

01-70% Obsession: Hates and wants to find and destroy all Riathenors, or fears and avoids them like the plague. Player's choice.

01-50% Roll for a random insanity on the Neurosis Table.

Day Three:

The physical and mental connections are almost complete. The host has no sense of being attached to his body and memories appear by themselves and vanish.

If rescued after 48 hours but under 72, roll percentile dice for *each* of the following permanent, debilitating affects. The character may be alive, but he will never be the same again. If an attribute is reduced to five or less, the character can be considered crippled.

01-98% Horribly scarred by the Riathenor parasite. Reduce P.B. by half.

01-95% Reduce P.S. by 2D4 points.

01-80% Reduce P.E. by 2D4 points.

01-75% Reduce I.Q. by 1D4 point .

01-80% Reduce M.E., P.P.E. and I.S.P. (if any) by 1D6x10%.

01-60% Has forgotten 1D4+2 skills (player's choice), plus *all* skills (old and new) suffer from a -20% penalty; has trouble remembering things.

01-98% Insanity: Claustrophobia. Fear of small enclosed areas, including narrow tunnels, closets, elevators packed with people, and the cockpits of fighter spacecraft.

01-97% Phobia: Afraid of being buried alive or of sticky, gooey substances (pick one).

01-90% Obsession: Hates and wants to find and destroy all Riathenors, or fears and avoids them like the plague. Player's choice.

01-65% Roll for a random insanity on the Neurosis Table.

01-60% Roll for a random insanity on the Psychosis Table.

01-55% Roll or pick another phobia.

Average Life Span: Unknown for certain. The war-like nature of the Riathenors is such that most die a violent death. However, it is believed an adult can live for at least 1000 years.

A chance for life after death: Many rumors suggest the Riathenors are demons or undead who can rise from the dead. This is not true, but one must make certain a Riathenor is truly slain, otherwise their powers of recovery are so phenomenal that they may recover, and seemingly rise from the dead. To be certain a Riathenor stays dead, an opponent must either decapitate the monster or reduce its S.D.C. to zero and Hit Points to 50 points below zero. Otherwise the hellish brute will recover in 2-3 hours (1D4x10 H.P. every 30 minutes), and he won't be happy.

In addition, a Riathenor who has not reached 50 years of age to become a mature adult can attempt to save itself by returning to the nugget/egg state, go into hibernation for a year, and wait to be reborn all over again! This feat requires opportunity and 100 P.P.E. points; probably necessitating the murder of an individual with plenty of P.P.E. or slaughtering a dozen innocent people. The chance of successfully reverting to a nugget/egg is 01-80% -10% for each decade (round up) the creature has experienced adult life. Failure means it dies, turning into a protoplasmic puddle (host body and all). Even if successful, there are drawbacks. 1) The reformed egg must be rescued by its fellow Riathenors, hidden, or ignored or foolishly preserved by the enemy. (**Note:** A nugget/egg can be destroyed by suffering 113 S.D.C. points of damage, but has an A.R. of 14. Also note that at least currently, nobody knows that a Riathenor starts life as a mineral-like egg, so soldiers are likely to ignore the strange "rock," especially if tucked out of the way.) 2) There is a 01-70% likelihood that, regardless of the chosen host body, the reborn Riathenor will live its second adult life as a brutish *Heretshi* – the four-legged animalistic Riathenor. The Riathenors know this is the likely outcome, but may choose to serve its people in that capacity in the future, rather than die in the present.

Temperature & Environment. The Riathenors' home world is a dark shadow realm of incredible volcanic activity. The ash from those geo-furnaces clouds the sky and dims the sun. It is not a twilight world, but it creates a dome that traps the heat and keeps temperatures hot; an average close to 200 degree Fahrenheit/93 C). Despite this hothouse environment, Riathenors are not susceptible to cold (perhaps due to their techno-magical armor) and don't seem to have any preference in climates. Thus, they can be found in jungles to temperate forests to arctic tundras and outer space.

Riathenors in the Milky Way. Thankfully, the Riathenors in the Milky Way are relatively small in number. Even if there are a few thousand of them, while they might make a formidable army, those numbers are spread across the galaxy in much smaller bands, and even an army of them would be easy to contain or exterminate. In fact, most scientists believe the Riathenors have splintered into small bands of a few hundred to a thousand to avoid a campaign of genocide. If one cadre is uncovered and destroyed, a hundred others continue to thrive, undetected, perhaps on the very next planet light years away. Many believe until there are millions of them, the Riathenors will keep (for them) a comparatively low profile as raiders and bushwhackers, rather than planetary invaders and conquerors. It is for that reason that some civilizations believe a campaign of genocide should be waged against these monstrous vampires now! Before their numbers grow too large and they establish a true power base.

Indeed, the greatest number of Riathenors work to establish colonies and find hosts to increase their numbers. Others search the galaxy for a dimensional nexus that could lead back to their home world — or to bring more of their kind into this life-rich environment. To support their efforts and other needs, many Riathenor engage in space piracy. This practice gives them opportunities to capture spacecraft and equipment, find humanoid prey and acquire potential hosts.

Many observers are surprised that so many Riathenors associate with other races. While they most often ally themselves with other *monster* races, they have been encountered fighting alongside the very same humanoids they normally feed upon and use as their hosts (i.e. 2-6 Riathenors are members of a larger, mixed group of pirates, raiders or criminals). Some believe the creatures do this to study and learn more about their prey and potential slave races. Others feel the Riathenors are simply creatures of opportunity, and band together with other evil and predatory creatures simply to improve their chances of survival, and/or to explore the galaxy at large.

Slaves. On their home world in some distant dimension, the Riathenors hold slave pens filled with humans for the purpose of providing chosen host bodies, and control entire cities (as well as other planets) where other humanoids serve as slave labor, cattle and second-class citizens.

Natural Weapons

Experience and age bring power. As a Riathenor grows and matures, so does its physical strength and magical nature. Each new advancement in age (experience level) means greater combat and magic capabilities. Potential Psychic Energy (P.P.E.) naturally reserved for spell casting rises, damage thresholds increase (Hit Points/S.D.C. and A.R.), magical awareness expands, and natural weaponry becomes more powerful.

Natural Armor Rating: 10 +1 per every two levels of experience; i.e. 11 at level two, 12 at level four, 13 at level six, 14 at level eight, 15 at ten, and topping out at A.R. 16 at level 12. Any roll to strike under the Natural A.R. does NO damage!

Supernatural P.S.: A typical Riathenor has a *Supernatural P.S. of 32-35,* doing 2D6+2 S.D.C. on a restrained punch, 5D6 damage on a full strength punch and 1D6x10 for a power punch.

Blade attacks do punch damage plus the additional damage from the blades themselves.

Natural Weapons

A variety of blades and sharp spikes cover the body, giving the warring fiends an array of weapons as part of their natural hunting and combat abilities.

Starts with Finger and Toe Blades: Claw strike does 4D4 additional damage. A single blade/clawed finger does 1D4 damage and can be used to inflict torture. May be retractable, like a cat.

Starts with a small, single Spike or Small Blade on the shoulders, elbows, and knees: Adds 1D6 damage to shoulder blocks, elbow strikes and knee attacks. One additional spike or blade (doing an additional 1D6 damage) will appear at these locations every two or three experience levels.

Note: After fifth level, small spikes, blades and projections the size of a pinky finger or smaller also appear on the forearms, legs, shoulders, chest and back. Although they look menacing, they offer little or no extra combat damage or attack options. Only those who try to wrestle or grapple with the Riathenor will suffer *1D4 damage* whenever they try a crush/squeeze, pinning, tackle/ram or pouncing attack.

Additional Blade Weapons appear at levels 2, 4, 8, 12 and 15. Make selections from below. Some replace others. Some are not available until a particular experience level.

Knuckle Spikes on each hand: Adds 1D6 to punch damage.

Triple Blade Claw (1; instead of a Short Sword): Dagger-sized blades that (magically) extend from the hand or forearm: Does an additional 2D6 damage, +2 to disarm. May be substituted with the Short Sword.

Short Sword (1): 2D6 additional damage, +2 to parry. May be substituted with the Triple Blade Claw. Retractable into the forearm.

Large Sword (1): 3D6 additional damage, +1 to strike, (magically) extendable from the forearm.

Double Large Sword Blades (replaces Single Sword or Triple Blade Claw): 6D6 additional damage, +1 to strike and parry; retractable. Not available before fourth level.

Triple Blades (large; replaces Single or Double Sword): 1D4x10+6 additional damage; retractable, +2 to strike, +1 to parry and +1 to disarm. Can not be selected before eighth level.

Note: The blades may be shaped like traditional swords, serrated, hooked, sickle or axe-shaped, or other styles, but still do the same damage.

Riathenor Energy Weapons

A variety of magically created and powered energy weapons grow on the forearms, shoulders and sometimes the back or neck. The two shoulder systems are independent, and can be fired at two different targets or simultaneously at the same target. A simultaneous attack counts as one melee action/attack.

Starts with one single barrel forearm weapon of choice.

Starts with one single barrel shoulder weapon of choice.

Additional weapons *or* a double barrel upgrade at levels 3, 6, 9, 11 and 14. Magically appear. More than one energy weapon can be grown on each shoulder, The "ammo" is considered a bolt of magically generated energy.

Plasma Launcher (shoulder): Damage: 5D6 single shot (can be turned into a double barrel blaster to do 5D6 per single blast or 1D6x10 per simultaneous double blast; counts as one melee attack). Range: 3000 feet (914 m), increase range 1000 feet (305 m) at level six. Payload: 24 blasts (per barrel). Regenerates every 12 hours.

Lightning Thrower (shoulder): Damage: 6D6 single energy blast (can be turned into double barrel blaster to do 6D6 per single blast or 2D4x10 per simultaneous double blast; counts as one melee attack). Range: 2000 feet (610 m), increase range 600 feet (183 m) at level six. Payload: 20 blasts (per barrel). Regenerates every 12 hours.

Heat Blaster (shoulder or forearm): Damage: 4D6. Range: 1200 feet (366 m) when on the forearm, 2000 feet (610 m) as a shoulder unit. Payload: Unlimited!

Particle Beam Gun (forearm): Damage: 6D6. Range: 500 feet (152 m). Payload: Unlimited, but each blast counts as one melee action/attack.

Plasma Ejector (forearm): Damage: 1D4x10. Range: 1200 feet (366 m). Payload: Effectively unlimited, but only three blasts can be fired per melee round (each counts as one attack).

Laser Gun (forearm): Damage: 3D6. Range: 2000 feet (610 m). Payload: Unlimited (each blast counts as one melee action/attack), but most Riathenors prefer weapons that do greater damage.

Riathenor Magic

The Riathenors can also cast magic spells, although which spells are extremely limited. The magic of the Riathenors is instinctive, automatically present and grows with each level of experience. Some suspect they have some connection to a demonic source of magic either here or in another dimension, perhaps an alien intelligence or evil god of some kind.

Initial Spells: In a magic rich environment (any one that allows for spell casting), they can instinctively cast spell magic to augment their already formidable powers as warriors. Start with *Tongues, See the Invisible, Teleport (self), Mystic Shield, Eyes of the Wolf, Breathe Without Air* (used on captives) and *Fire Ball.*

Additional Spells: As the creature grows, additional spells become known to them. The following spells are gained as their experience increases. The level at which

they receive the spell is given in parentheses: Chameleon (2nd), Fly as the Eagle (3rd), Wall of Flame (4th), Dispel Magic Barrier (5th), Levitate (6th), Invisibility: Simple (7th), Fear/Horror Factor (8th), Magic Net (9th), Escape (10th), Mystic Portal (11th), Death Trance (12th), Energy Disruption (13th), Invisibility: Superior (14th) and Dimensional Pocket (15th).

ALL Riathenors have these spells, but they can only cast them once the magic "awakens" at the designated level. They are limited by the same rules as other practitioners of magic, i.e. they must have access to the necessary P.P.E. to cast the spell.

P.P.E. to cast spells: Riathenors can not draw on the natural P.P.E. reserve of their host body, because it is the engine and fuel that powers them and the battery that stores the P.P.E. they get from eating. Since the P.P.E. absorbed during gluttony stays with the Riathenor for 1D4 hours, the monsters will frequently go on a killing spree to store up a large quantity of P.P.E. before going into combat. Likewise, an individual can absorb the P.P.E. of every victim it slays in combat. However, to drink in the P.P.E. unleashed at the moment of death, the Riathenor must pause and concentrate to do so. This takes five or six seconds and uses up *two melee attacks/actions,* leaving the monster vulnerable to attack. While drinking in the P.P.E. for those 5-6 seconds, the Riathenor can NOT attack or defend itself! **Note:** Maximum amount of P.P.E. stored and available from gluttony is 30 P.P.E. per level of the Riathenor's experience. Remember, this energy is only available for 1D4 hours, and can suddenly vanish (random roll determination for length of duration), so most try to use magic in the first hour or two after P.P.E. is absorbed. Of course, if the stolen P.P.E. is used up sooner, it is gone until more kills can be made to replenish it.

Heretshi

The Heretshi are powerful, deadly war beasts used by the Riathenors. They are the faulty result of either a corruption in the rebirth process of a Riathenor who had once been an adult but reverted back to the stasis state before reaching its 50th birthday, or the result of using quadrupedal sentient life forms (i.e. intelligent beings that walk on four legs). Heretshi are comparatively uncommon, making up only about 10-14% of their species. They often appear to have a canine or feline shape, and their low intelligence reflects their bestial appearance. Most stand about the size of a small to large horse. Many have horns and a barrel chest, giving them a rather bullish appearance. Despite their appearance, they are still intelligent and have all the basic abilities, powers and magic of the Warrior Riathenor, with a few variations. Heretshi are even more aggressive and savage than the Warriors are and serve the other members of their race as guards, scouts, hunters, battle companions, and even as riding animals. They seem to have an instinctive, burning hatred of supernatural beings and creatures of magic, and enjoy stalking and hunting them more than any other; super beings are third on their list.

Heretshi are only sociable to other Riathenors. They are not slaves or animals and never treated as such or sold. The animal-like Heretshi are productive members of Riathenor society and treated with the respect and dignity they deserve. Those unfamiliar with the Riathenor, on the other hand, often make the mistake of treating them as animals and paying the price one way or another. These so-called "Animal Riathenors" will often play the role of the dumb animal or brute to lure their enemies or captors into a false sense of security, before displaying an all too human intelligence and cunning. Moreover, they are natural predators with an instinct for playing possum and laying low before making their move. They understand languages, can operate machinery (provided the item doesn't need too delicate a touch), and can make simple plans and plots. A captured Riathenors of any other variety will usually quietly wait for the opportunity to make good an escape in the bloodiest but most efficient way possible. The Heretshi will do likewise if they are letting themselves get captured as part of a plan, saw it coming or are accompanied by other Riathenors to give the beast direction. However, if unexpectedly trapped, cornered or the last one standing, a Heretshi Animal Riathenor is likely (01-75% chance) to launch into a killing frenzy, stopping only when it has made good its escape or it is slain. A frenzied Heretshi is immune to tranquilizing drugs and stun weapons of any type, as well as mind control or magic charms. It will fight until it reaches 40 Hit Points below zero, then collapses (see the notes on healing and coming back from the dead).

Heretshi (pronounced her-etch-ee)

Also known as "Animal Riathenors," something of a misnomer since they possess low human intelligence.

Attributes: I.Q.: 1D4+6, M.E.: 3D6, M.A.: 1D6+4, Supernatural P.S.: 1D4+31, P.P.: 1D6+18, Extraordinary P.E.: 2D6+14, P.B.: 1D4+4 (more impressive and frightening than attractive), Spd: 4D6+66 (average is 77 or 53 mph/85 km; but maximum is 90 or 62 mph/99 km).

Size: 4-6 feet (1.2 to 1.8 m) tall at the shoulders, and 8-12 feet (2.4 to 3.6 m) long from snout to rump. Some have tails (4-6 feet/1.2 to 1.8 m long), others (about 33%) do not.

Weight: 700-1000 lbs (315 to 450 kg).

Average Experience Level (NPC Villains): 1D4+2; mature adults 50+ years old are an additional +2 levels. Only ancient Riathenor Warriors and the Dagotte may be 11-15th level.

Armor Rating (Natural): 12 is average. Starts with an A.R. of 10 +1 per every two levels of experience; i.e. A.R. is 11 at level two, 12 at level four, 13 at level six, 14 at level eight, 15 at ten, and topping out at A.R. 16 at level 12. Any roll to strike under the Natural A.R. does NO damage!

Hit Points: P.E.x4+2D6 per level of experience!

S.D.C.: 3D6x10+220

Horror Factor: 13 for a single, 16 when a group of 3 or more are present.

Disposition: All Riathenors have basically the same heartless disposition.

Natural Abilities: Same as the Warrior, plus Heightened Sense of Smell; can track by scent at 60%+3% per

level of experience (+10% to follow blood scent). See page 234 of HU2 for complete details.

Psionics: None

Super Abilities: None, other than those listed under Natural Abilities.

Magic: Less than Riathenor Warrior. Limited to *Tongues, See the Invisible, Teleport (self), Mystic Shield, Eyes of the Wolf, Fire Bolt,* and *Repel Animals* at first level and the following additional spells acquired at the level indicated: Chameleon (2nd), Levitation (3rd), Fly as the Eagle (4th), Invisibility: Simple (5th), Fear/Horror Factor (6th), Escape (8th), Teleport Self (10th) and Death Trance (12th).

Combat: Equivalent to Hand to Hand: Expert, but use the stats, number of attacks and bonuses presented here.

Number of Attacks: Five (5) to start, plus one additional at levels 2, 5, 7, 11 and 14.

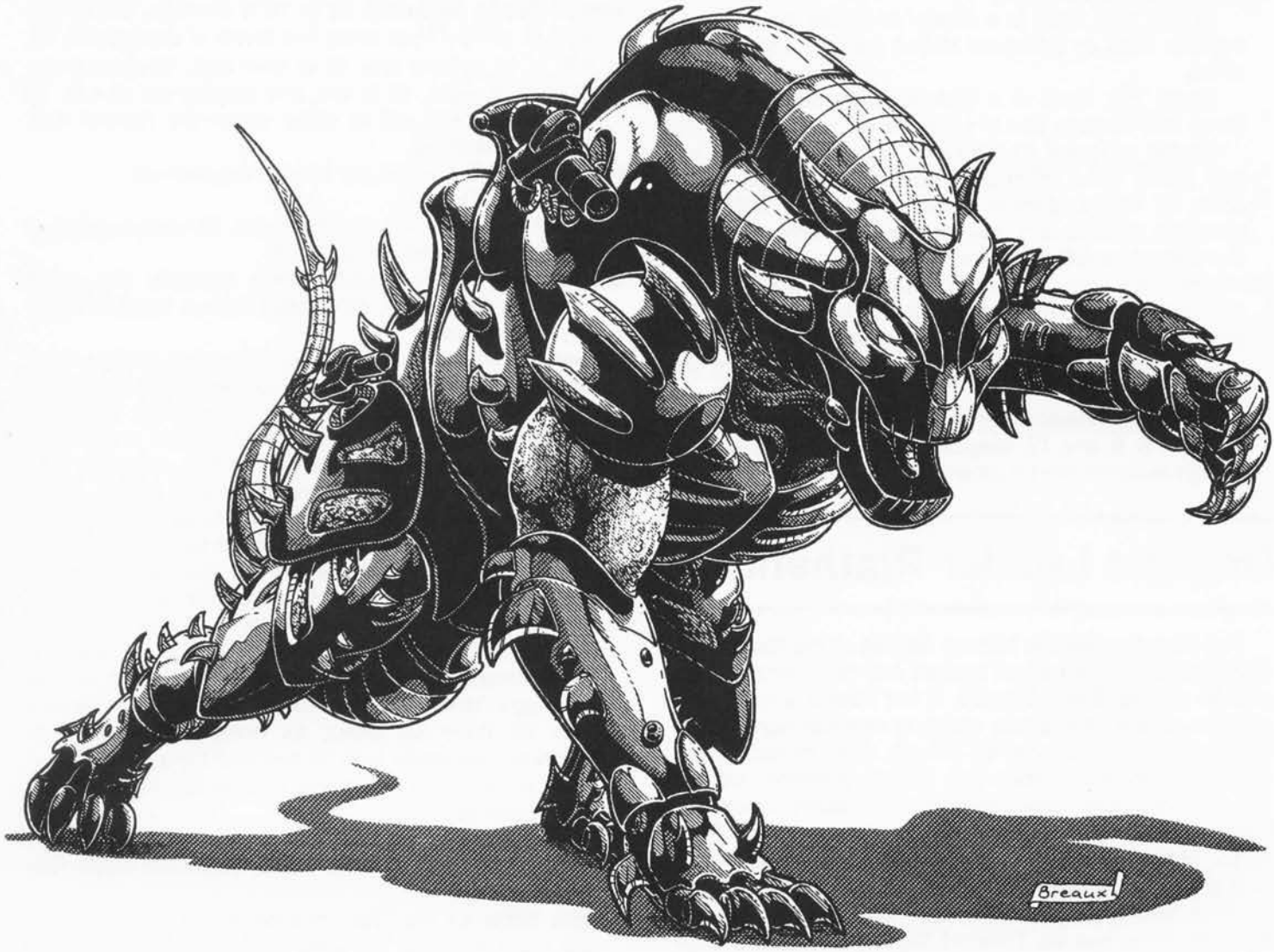
Bonuses (includes combat and super abilities – does not include attribute bonuses): +6 on initiative, +4 to strike, +4 to parry, +6 to dodge, +3 to roll with punch, fall or impact, +4 to pull punch, +1 to disarm, critical strike on a natural 19-20, and +8 to save vs Horror Factor.

A typical Heretshi has a *Supernatural P.S. of 32-35,* doing 2D6+2 S.D.C. on a restrained punch, 5D6 damage on a full strength punch or head butt, and 1D6x10 for a power punch or running ram attack (01-85% chance of knocking opponents smaller than it off their feet, 01-42% if giant-sized. Victim loses initiative and two melee actions.)

Bite Attack does 5D6 damage (no P.S. bonus applicable).

Education Level and Skill: Like all Riathenors, they are instinctively aggressive warriors with a variety of military and combat related skills. Typical skills (many instinctual) include: Land Navigation (+25%), Navigation, Mathematics: Basic (+10%), Read Sensory Instruments (+5%), Detect Ambush (+10%), Detect Concealment (10%), Intelligence (+10%), Identify Plants and Fruit (+15%), Track Animals (+10%), Track Humanoids (+20%), Climbing, Prowl (+10%), Swim (+20%), W.P. Sword, W.P. Energy Pistol, W.P. Energy Rifle, W.P. Heavy, and one W.P. of choice. Magically understands, reads and speaks all languages. May select 1D4 additional skills at levels 5 and 10 from any of the following skill categories: Espionage (+5%), Military (+5%), Physical, or Wilderness. **Note:** No skill bonus applies unless it is indicated in parentheses above.

Natural Blade Weapons: Basically the same as the Warrior Riathenor. Do punch damage plus the additional



damage from the blades themselves. The claws, tail and horns are among the most common, but retractable swords are available too (remember, tend to have feline bodies).

Starts with Teeth: Bite damage does 5D6 (no additional P.S. damage).

Starts with Finger and Toe Blades: Claw strike does 4D4 additional damage. A single blade/clawed finger does 1D4 damage and can be used to inflict torture. May be retractable, like a cat.

Starts with a small, single Spike or Small Blade on each shoulder: Adds 1D6 damage to shoulder blocks, elbow strikes and knee attacks. One additional spike or blade (doing an additional 1D6 damage) will appear at these locations every two or three experience levels.

After fourth level, small spikes, blades and projections the size of a pinky finger or smaller also appear on the forearms, legs, shoulders, chest and back. Although they look menacing, they offer little or no extra combat damage or attack options. Only those who try to wrestle or grapple with the Riathenor will suffer *1D4 damage* whenever they try a crush/squeeze, pinning, tackle/ram or pouncing attack.

Additional Blade Weapons appear at levels 2, 5, 8, and 11. Make selections from the usual possibilities, plus any of those below.

Spiked Tail: Ends in a cluster of spikes like a morning star; does an additional 3D6+3 damage and is +1 to strike.

Blade Tail: Ends in a wicked blade; does an additional 3D6 damage and is +1 to parry.

Blades or Horns on the Head (2 per selection, 4 total): Small ones inflict 2D6 additional damage, large ones do 4D6 additional damage on head butts and ramming attacks, and may be used to parry an attack but without benefit of bonuses.

Riathenor Energy Weapons: Same as the Warrior Riathenor, except these weapons usually grow from the front shoulders, occasionally on the haunches or head.

Starts with one single barrel weapon of choice on each shoulder.

Additional weapons *or* a double barrel upgrade at levels 3, 6, 9, and 12. Magically appear. More than one energy weapon can be grown on each shoulder.

Dagotte Leader Riathenor

The Dagottes are the highest ranking of the Riathenors and function as the natural leaders and field commanders of their people. Being Dagotte is not merely a command position or rank, it is also a status of mystical significance and raw power. They can be thought of as mystical leaders whose followers obey with fanatic devotion, without question or pause. The position is not totally unlike the "God made flesh" status of the ancient Egyptian Pharaohs. In addition to such status, a more practical means of respect is the fact that they are the only ones who can return a raiding party back to their ship or base camp in the blink of an eye via *Teleport Superior*, or back to their home dimension (limited to 13 Riathenors) via *Dimensional Teleport*. (Fortunately, while the tiny handful of Dagottes who exist in our dimension can return home with 13 fellow Riathenor in tow, only those Dagottes who were rifted to or born in our dimension can return to it, and only by themselves. They can not bring other Riathenors back to the Milky Way with them.) There is roughly one Dagotte for every 400-800 Riathenors. If there is a more powerful Riathenor or Riathenor master (some are certain they serve some infernal power, dark god or vile alien intelligence), no one has seen it.

Dagotte (pronounced da-got)

Alignment: Miscreant or Diabolic without exception.

Attributes: I.Q.: 2D6+10, M.E.: 3D6+3, M.A.: 2D6+6, Supernatural P.S.: 1D4+31, P.P.: 2D6+18, Extraordinary P.E.: 2D6+18, P.B.: 2D4+6 (more impressive and frightening than attractive), Spd: 3D6+48 (average is 58 or 40 mph/64 km; but maximum is 66 or 45 mph/72 km).

Size: 7-8 feet (2.1 to 2.4 m); regardless if the host body was smaller.

Weight: 300-600 lbs (135 to 270 kg).

Average Experience Level (NPC Villains): 4+1D4; mature adults 100+ years old are an additional +1D6 levels. Only ancient Riathenor Warriors and the Dagotte may be 11-15th level.

Armor Rating (Natural): 12 or 13 is average. Starts with an A.R. of 10 +1 per every two levels of experience; i.e. A.R. is 11 at level two, 12 at level four, 13 at level six, 14 at level eight, 15 at ten, and topping out at A.R. 16 at level 12. Any roll to strike under the Natural A.R. does NO damage!

Hit Points: P.E.x3+2D6 per level of experience!

S.D.C.: 2D6x10+230

Horror Factor: 14 for a single warrior, 16 when a group of 3 or more Dagottes are present.

Disposition: All Riathenors have basically the same heartless disposition, only these have a head for strategy and tactics.

Natural Abilities: Can survive in most any environment. Does not breathe air and can survive in the vacuum of space, toxic atmospheres and underwater (although they hate being underwater for more than a short period; maximum depth tolerance is two miles/3.2 km). Heightened senses, including Ultraviolet Vision, Infrared Vision, and Heightened Sense of Hearing (all identical to the *minor super abilities* of the same names; see bonuses below). Supernatural P.S. and Extraordinary P.E. (modifiers already factored in to attributes, S.D.C. and bonuses), bio-regenerates 1D4x10 damage every 30 minutes; impervious to gases, poisons, drugs, toxins, disease, normal fire and heat, and radiation (including Mega-Damage fire in those environments). Magical fires will have full effect, as does most magic and psionics. Can easily leap 25 feet (7.6 m) high or 30 feet (9 m) across. Also see magic and natural blade and energy weapons.

Psionics: None

Super Abilities: None, other than those listed under Natural Abilities.

Magic: Same as the Riathenor Warrior, except knows a few more spells at the level indicated in parentheses:

Breaux

Starts at level one with *Tongues, See the Invisible, Teleport (self), Mystic Shield, Eyes of the Wolf, Breathe Without Air* (used on captives), and *Fire Ball*.

Additional Spells Include: Chameleon (2nd), Levitation and Fly as the Eagle (3rd), Wall of Flame (4th), Dispel Magic Barrier and Invisibility: Simple (5th), Heal Wounds (6th), Mystic Portal (7th), Fear/Horror Factor (8th), Magic Net and Shadow Meld (9th), Escape (10th), Teleport: Superior (11th), Death Trance (12th), Energy Disruption and Armor of Ithan (13th), Invisibility: Superior (14th) and Dimensional Pocket and Dimensional Portal (15th).

Combat: Equivalent to Hand to Hand: Martial Arts, but use the stats, number of attacks and bonuses presented here.

Number of Attacks: Seven (7) to start, plus one additional at levels 3, 6, 9, 12 and 15.

Bonuses (includes combat and super abilities – does not include attribute bonuses): +8 on initiative, +4 to strike (+5 to strike with sword), +5 to parry (+6 to parry with sword), +6 to dodge, +4 to roll with punch, fall or impact, +10 to pull punch, +5 to disarm, paired weapons, critical strike on a natural 18-20, and +10 to save vs Horror Factor.

A typical Dagotte has a *Supernatural P.S. of 32-35,* doing 2D6+2 S.D.C. on a restrained punch, 5D6 damage on a full strength punch and 1D6x10 for a power punch, the same as the typical Riathenor, but the Dagotte has more attacks per melee, greater P.P. and magic.

Education Level and Skills: Riathenors are instinctively aggressive warriors with a variety of military and combat related skills. Typical skills (many instinctual) include: Computer Operation (+10%), Land Navigation (+25%), Navigation (+20%), Navigation: Space (+15%), Mathematics (Basic & Advanced; +30%), Read Sensory Instruments (+10%), Concealment (+20%), Detect Ambush (+20%), Detect Concealment (10%), Tracking (+20%), Acrobatics, Climbing (+20%), Prowl (+15%), Swim (+20%), Zero Gravity Combat: Elite, W.P. Sword, W.P. Energy Pistol, W.P. Energy Rifle, W.P. Heavy, and one W.P. of choice. Magically understands, reads and speaks all languages. May select 1D4+1 additional Piloting skills and at levels 1, 5, and 10, the character can select a total of 1D4+2 other skills from any of the following skill categories: Espionage (+10%), Military (+5%), Rogue (+5), Physical, Technical or Wilderness. **Note:** No skill bonus applies unless it is indicated in parentheses.

Natural Blade Weapons: Do punch damage plus the additional damage from the blades themselves. A variety of blades and sharp spikes cover the body, giving the fiends an array of weapons as part of their natural hunting and combat abilities.

Starts with Finger and Toe Blades: Claw strike does 4D4 additional damage. A single blade/clawed finger does 1D4 damage and can be used to inflict torture. May be retractable, like a cat.

Starts with a small, single Spike or Small Blade on the shoulders, elbows, and knees: Adds 1D6 damage to shoulder blocks, elbow strikes and knee attacks. One additional spike or blade (doing an additional 1D6 damage) will appear at these locations every two or three experience levels.

Starts with Knuckle Spikes on each hand: Adds 1D6 to punch damage.

Starts with small blades and projections the size of a pinky finger or smaller covering the forearms, legs, shoulders, chest and back. Although they look menacing, they offer little or no extra combat damage or attack options. Only those who try to wrestle or grapple with the Riathenor will suffer *1D6 damage* whenever they try a crush/squeeze, pinning, ram or pouncing attack.

Additional Blade Weapons appear at levels 2, 4, 6, 8, 12 and 14. Make selections from below. Some replace others. Some are not available until a particular experience level.

Triple Blade Claw (1; instead of a Short Sword): Dagger-sized blades that (magically) extend from the hands or forearms: Does an additional 2D6 damage, +2 to disarm. May be substituted with the Short Sword.

Short Sword (1): 2D6 additional damage, +2 to parry. May be substituted with Triple Blade Claw. Retractable into the forearm.

Large Sword (1): 3D6 additional damage, +1 to strike, (magically) extendable from the forearm.

Double Large Sword Blades (replaces Single Sword or Triple Blade Claw): 6D6 additional damage, +1 to strike and parry; retractable. Not available before fourth level.

Triple Blades (large; replaces a Single or Double Sword): 1D4x10+6 additional damage; retractable, +2 to strike, +1 to parry and +1 to disarm. Can not be selected before eighth level.

Blades or Horns on the Head (2 per selection, 4 total): Small ones inflict 2D6 additional damage, large ones do 4D6 additional damage on head butts and ramming attacks, and may be used to parry an attack but without benefit of bonuses.

Riathenor Energy Weapons: Same as the Warrior Riathenor, except those with a limited payload see their payload doubled.

Starts with one single barrel forearm weapon of choice.

Starts with one single barrel shoulder weapon of choice.

Additional weapons *or* a double barrel upgrade at levels 3, 5, 8, 10, 13 and 15. Magically appear. More than one energy weapon can be grown on each shoulder.

Kilm'aktro Giant Riathenor

Approximately 15-19% of the Riathenors are *Kilm'aktro*, giant warriors 9-12 feet (2.7 to 3.6 m) tall. They look just like their smaller brethren only bigger. However, there are some less obvious differences too. These powerful warriors are Riathenors that have taken giant humanoids as hosts. The physical power of these creatures is greater than other Riathenors, only they are not quite as smart or fast. Still, most are considered equals in the Riathenor society. Their fearsome size and appearance is often used, however, to intimidate outsiders and opponents.

Note: Unless otherwise indicated, the Kilm'aktro are fundamentally the same as the Riathenor Warriors.

Kilm'aktro (pronounced Kilm ache-trow)

Also known simply as the "Giant Riathenor"

Alignment: Miscreant or Diabolic without exception.

Attributes: I.Q.: 2D6+2, M.E.: 3D6, M.A.: 2D6, Supernatural P.S.: 2D4+32, P.P.: 2D6+12, Extraordinary P.E.: 2D6+18, P.B.: 2D4+3 (more impressive and frightening than attractive), Spd: 3D6+48 (average is 58 or 40 mph/64 km; but maximum is 66 or 45 mph/72 km).

Size: 9-12 feet (2.7 to 3.6 m) depending on the size of the host body.

Weight: 600-1000 lbs (270 to 450 kg).

Average Experience Level (NPC Villains): 2+1D4; mature adults 50+ years old are +2 levels.

Armor Rating (Natural): Standard for Riathenors: Starts with an A.R. of 10 +1 per every two levels of experience; i.e. A.R. is 11 at level two, 12 at level four, 13 at level six, 14 at level eight, 15 at ten, and topping out at A.R. 16 at level 12. Any roll to strike under the Natural A.R. does NO damage!

Hit Points: P.E.x3+2D6 per level of experience!

S.D.C.: 3D6x10+260

Horror Factor: 13 for a single warrior, 16 when they outnumber their opponents.

Disposition: All Riathenors have basically the same heartless disposition.

Natural Abilities: Can survive in most any environment. Does not breathe air and can survive in the vacuum of space, toxic atmospheres and underwater (although they hate being underwater for more than a short period; maximum depth tolerance is two miles/3.2 km). Heightened senses, including Ultraviolet Vision, Infrared Vision, and Heightened Sense of Hearing (all identical to the *minor super abilities* of the same names; see bonuses below). Supernatural P.S. and Extraordinary P.E., bio-regenerates 1D4x10 damage every 30 minutes; impervious to gases, poisons, drugs, toxins, disease, normal fire and heat, and radiation (including Mega-Damage fire in those environments). Magical fires will have full effect, as does most magic and psionics. Can easily leap 20 feet (6 m) high or 25 feet (7.6 m) across. Also see magic and natural blade and energy weapons.

Psionics: None

Super Abilities: None other than those listed under Natural Abilities.

Magic: Described in the Riathenor weapons section.

Combat: Equivalent to Hand to Hand: Expert, but use the stats, number of attacks and bonuses presented here.

Number of Attacks: Five (5) to start, plus one additional at levels 4, 8, 12 and 15.

Bonuses (includes combat and super abilities – does not include attribute bonuses): +5 on initiative, +3 to strike (+4 to strike with sword), +4 to parry (+5 to parry with sword), +3 to dodge, +2 to roll with punch, fall or impact, +5 to pull punch, +3 to disarm, critical strike on a natural 19-20, and +6 to save vs Horror Factor.

Education Level and Skill: Riathenors are instinctively aggressive warriors with a variety of military and combat related skills. Typical skills (many instinctual) include: Computer Operation, Land Navigation (+20%), Navigation (+10%), Navigation: Space, Mathematics (Basic & Advanced; +20%), Read Sensory Instruments, Concealment (+10%), Detect Ambush (+10%), Detect Concealment, Tracking (+15%), Gymnastics, Climbing (+10%), Prowl, Swim, Zero Gravity Combat: Basic, W.P. Sword, W.P. Energy Pistol, and W.P. Energy Rifle. Magically understands, reads and speaks all languages. May select 1D4 additional Piloting skills, and one W.P. of choice. At level five, the character can select a total of 1D4 other skills from the categories of Rogue, Technical or Wilderness. **Note:** No skill bonus applies unless it is indicated in parentheses.

Greater P.S. & Natural Weapons: A typical giant Riathenor has *Supernatural P.S. of 36-40,* doing 3D6 S.D.C. on a restrained punch, 6D6 damage on a full strength punch and 2D4x10 for a power punch.

Blade attacks do this damage plus additional from the blades themselves. However, since these blades are all proportionately larger, each type does one extra die of damage. The number and type are the same as usual.

Energy weapons are the same as the Warrior Riathenor.

Magic abilities are the same as the Warrior Riathenor.

Other Notable Monsters

Asteropids

Asteropids are huge, armored arachnid or crab-like creatures native to the void of space. They are mineral based organisms with a rough, stone-like hide tougher than most tanks. Unlike other mineral aliens who feed mainly on solar and other forms of energy, Asteropids feed on metallic minerals. For this reason, they are often found on asteroids digging out the dense metals commonly found there, but they find the compound alloys used in spacecraft to be especially delicious. Consequently, Asteropids frequently sniff out and attack the hulls of spaceships, satellites, and space stations, as well as devour space junk and try to take a bite out of any robots, androids and cyborgs who happen to cross their path. Even spacecraft moving at a percentage of the speed of light are not safe, for the Asteropids spin sail-like silicon webs that catch solar rays to move them through space using principles identical to that of a microwave sail. Their "sails" can move them at up to 3/4 the speed of light. Their mouth, large hook-like claws and legs are super tough and can even cut and tear battleship armor; up to A.R. 18 (but they don't like the living metal of the Riathenors).

Asteropids are both scavengers of ore and scrap metal as well as predators who attack vehicles, spacecraft, robots and living mineral beings! They are slightly more intelligent than an animal and only "attack" when hungry or defending themselves. They will usually ignore non-metallic life forms unless they are startled or feel threatened by them. In fact, Asteropids will often ignore humanoids riding on their backs, provided the riders are just along for the ride and do not try to steer or otherwise annoy, hurt or threaten the great beasts. For the most part, the creatures only wish to feed and be left alone. The creatures have a keen sense of smell for metals and minerals (5 miles/8 km range) and a kind of radar or psychic sense that detects metals and ore up to 300 miles (480 km) away in space where there is no atmosphere to carry a scent. This metal detection sense even works through soil and rock (but at one third the range), almost like a geologic sensor probe. Their footpads are like organic magnets that will stick to metal (i.e. spacecraft) and their diamond hard claws at the end of their feet are perfect for digging through rock, tearing apart metal sheeting (and ship hulls) and gouging out chunks of ore. In fact, if large space freighters don't conduct a regular inspection, one or more Asteropids may hitch a ride on the side of their hull, munching on fins, cable and sensor arrays before they start in on the hull. When feeding on a spacecraft, the creature's powerful claws will attach to the hull and the mandibles begin to cut and tear. An acid-like saliva helps to loosen the metals and/or cut through rock, as well as digest the material after it is eaten. While eating, the giant beasts are oblivious to danger or attack until they have suffered 100 or more points of damage, then they will defend themselves. Armor and weapons of attackers are eaten, but the fleshy parts are discarded; however, the strength of the creature's jaws and claws plus its acid saliva often kills the person long before their body is left alone. Mineral aliens present a tasty treat of vital energies mixed with mineral bodies to the Asteropids and they will be sought out directly when possible. As one can see, these strange creatures can be a problem. Fortunately, they usually burn up on reentry to planets with atmospheres, so they seldom make it to a planet's surface. They are space creatures who live in the endless void.

Asteropids (pronounced as-tah-rope-ids)

Alignment: Animal, roughly equal to Anarchist.

Attributes: I.Q. 1D4+3, M.E. 2D6, Supernatural P.S. 20+5D6, P.P. 3D6, P.E. 1D4x10, Spd 6D6 walking/running; much faster when flying through the cosmos on a spun sail.

Size: 15 to 20 feet (4.5 to 6 m) tall, 25-40 feet (7.6 to 12.2 m) long.

Weight: 18 to 40 tons.

Hit Points: P.E. x10

S.D.C.: 500 +1D6x100

A.R. (Natural): 15

M.D.C. Note: In a Mega-Damage setting, the animal has M.D.C. equal to P.E. x100.

Horror Factor: 10 (15 to mineral beings, robots, cyborgs and those clad in power armor).

Average Life Span: Unknown for certain, approximately 900 years.

Disposition: An even tempered scavenger and predator that is aggressive only when eating or defending itself.

Natural Abilities: Breathe without air, impervious to cold, natural armor, radar and ability to sense metal, rapid space travel and acid saliva (as detailed in the description, above). Cold-based attacks (even by magic) do no damage, fire/heat/plasma does half damage.

Power Category: Alien monster.

Major Super Abilities: Supernatural P.S. and Invulnerability.

Minor Super Abilities: None.

Combat & Skills of Note: None per se, other than survival instincts.

Attacks Per Melee Round: Four.

Bonuses: +2 to strike, +2 to parry, +4 to roll, +6 to dam-

age in addition to P.S. damage, critical strike on a natural 18-20, +2 to save vs magic, and +10 to save vs Horror Factor.

Originating Alien Environment: Space.

Natural Weapons: The monster's claws are large, jagged mineral blades backed by size, weight, and strength. They are very dense and used to dig through solid rock and penetrate the hulls of spacecraft.

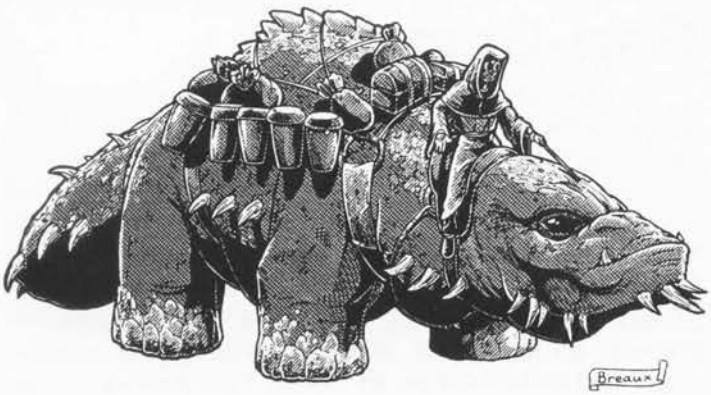
Claw damage is 2D4x10.

Bite damage is 6D6; the mandibles are less powerful, being used to slowly nibble away at metal and stone.

Acid Spit does 1D6x10 damage, but is only used when the creature feels especially afraid or angry. Range is 200 feet (61 m). Bonuses: +3 to strike.

Net attack. It can also project a silicon web and use it as a net to entangle pesky troublemakers (rarely attacks those who are netted). Works effectively the same as the *Magic Net spell*. Range is 100 feet (30.5 m). Bonuses: +2 to strike.

Vehicles: None, but the Asteropid may hitch a piggyback ride on a spaceship or travel through space under its own power by spinning a wide web with its silicon fibers. This web works exactly like a microwave sail on a spacecraft, dragging the monster along at speeds up to 0.75 times the speed of light! The Asteropid's effective piloting percentage in this case is 65%.



Bontu

Bontu is the Tagonican word for a large, domesticated labor animal. It is a broadly used term across the galaxy because of the TGE's influence and the fact that such livestock are sold under the "Bontu" heading in their catalogs. Bontu are usually considered to be elephant or larger sized animals that can be domesticated and used as for heavy labor, and pack and riding animals on low to no technology planets and inhospitable wildernesses. There are many reasons for advanced civilizations to take this low-tech approach with these immense animals, especially those trying to establish a colony in a wilderness. These creatures can carry as much, and sometimes more, than most man-made vehicles and work well in terrains, particularly forests and marshlands, where vehicles might get bogged down or trapped. They are also very economical, with feed and care generally equal to that of maintaining a comparable vehicle, and the initial cost of the animal is usually less than the vehicle. Moreover, maintenance of these beasts of burden is simple and easy, native people connect with them more readily than with machines, plus the animals have more personality (which can be a blessing and a curse). Regardless of the reasons, Bontu are popular with explorers and colonization.

Bontu are, by and large, harmless grazing animals that can be domesticated and trained. Of course their size and strength presents some risk, and additional armor and modern weapons can be mounted on their backs and shoulders, turning them into walking tanks. Small catapults or heavy machine-guns wouldn't be out of the question depending on the tech level and needs of the civilization using the animals, and they can easily carry a number of people like living APCs.

Bontu is a general word that covers dozens of giant beasts of burden, creatures whose exact size, appearance and physiology vary greatly. Tables are given below to randomly determine appearance and other traits, and the G.M. can certainly modify and add to them as he sees fit. A skill in *Horsemanship: Alien Mounts* (or Exotic) should be required for advanced handling of these creatures, including their use as war mounts or combat platforms.

Bontu are rolled up much like player characters, using tables for determination of traits, but the G.M. will most often be interested in picking certain aspects that fit the current setting. Most of the tables come from the HU player character creation rules modified to fit these animals.

Bontu (pronounced bon-too)

Alignment: Any, but typically considered Anarchist or Unprincipled/instinct driven.

Attributes: I.Q. 1D6+1, M.E. 2D6, M.A. 2D6, Superhuman P.S. 20+2D6, P.P. 2D6+3, P.E. 3D6+6, P.B. 2D6+3, Spd 2D6+10. A result of 6 on a D6 gives the animal a bonus 1D6 roll to add to the trait, as does an 11 or 12 on a 2D6 roll or 16, 17 or 18 on a 3D6. Attributes may also be modified by appearance and physiological traits. P.S. is Superhuman unless otherwise noted.

A.R. (Natural): 2D4+7

Hit Points: 2D4x10 +P.E. attribute number.

Base S.D.C.: 3D4x10+30; S.D.C. may be increased by the tables that follow.

Size: Bontu are generally 7-10 feet (2.1 to 3 m) tall at the shoulders and 15-20 feet (4.6 to 6 m) long from snout to haunches; a tail may be a few inches to several feet long depending on the beast.

Size, S.D.C. and Attribute Modifiers: Roll on the following table to see if there are any modifiers. Note that increases are as indicated or they can be adjusted as the G.M. sees fit.

01-20% The beast is 70% larger than average, 100% stronger and heavier (increase P.S. by 50% and make it Supernatural, also add 120 points to S.D.C.).

21-40% Bontu is 25% larger than average; add +1D4 to all physical stats and increase S.D.C. by 50%.

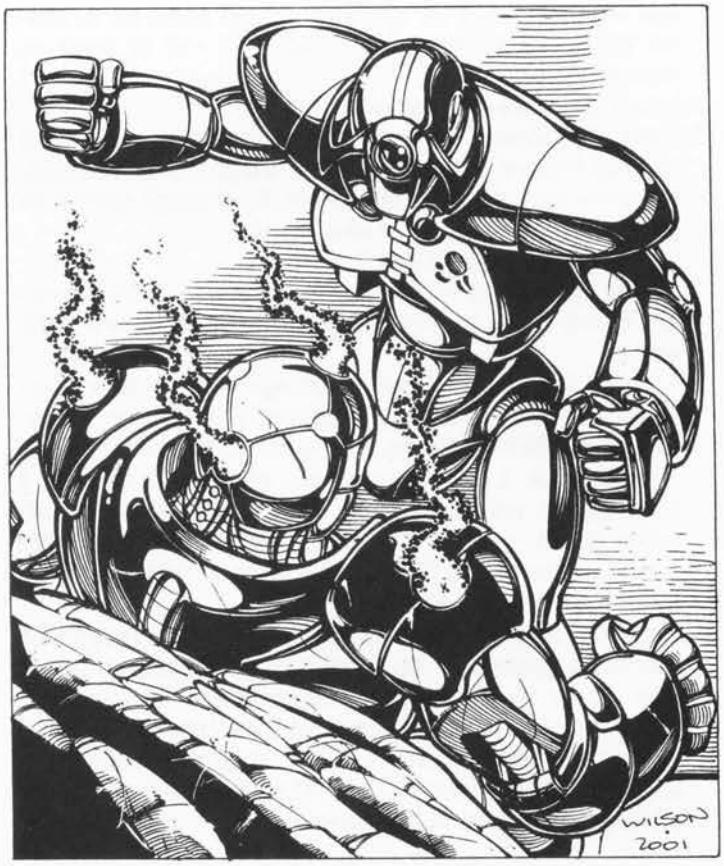
41-60% Average size and strength, but add 1D4 to I.Q., and 1D6 to M.E. and M.A.

61-80% Bontu is 50% larger than average and 25% tougher (increase P.S., P.E. and S.D.C. accordingly).

81-90% The animal is 30% larger than average (increase S.D.C. by a third and add +12 to Superhuman P.S.).

91-00% The typical size but twice as fast as usual; increase Spd accordingly.

Weight: Generally 3D4+6 tons, but will increase proportionately with size.
Horror Factor: 1D6+6
Average Life Span: Usually 1D4x10+8 years.
Disposition:
01-60% Domesticated, obedient and docile.
61-80% Domesticated and reasonably obedient, but has more personality than most and can be more stubborn or playful; -5% on Horsemanship: Alien Mounts skill.
81-00% Domesticated to a point. Tends to be temperamental and more aggressive than usual. Makes a good riding animal or war mount; -10% on Horsemanship: Alien Mounts skill.
Natural Abilities: Typically can pull 1 to 2x their P.S. in tons (sometimes more), can swim 50% (sometimes better), and have a good sense of sight, smell and hearing. **Note:** If the G.M. likes, he can also roll once on the *Alien Appearance Table* and once on the *Alien Physiological Modifications Table,* pages 92-93 and 93-95 respectively of **Heroes Unlimited™, Second Edition**. **Power Category:** Usually none, but the G.M. may want a creature with an unusual power. If so, roll on the optional table below. Most are used as a natural defense.
01-10% Cyborg war mounts with partial bionic augmentation and 1D4 mounted weapon systems. Seven million credits budget.
11-15% Invulnerability.
16-20% Psionic: Empathy and Sense Magic; 2D4x10 I.S.P.
21-25% Major Power: Alter Physical Structure: Ice.
26-30% Minor Power: Heightened Sense of Hearing..
31-35% Psionic: See the Invisible and Resist Fatigue, 1D4x10+8 I.S.P.
36-40% Major Power: Chameleon.
41-45% Psionic Defense: Mind Bolt; 2D4x10 I.S.P.
46-50% Major Power: Shrink, but no smaller than the size of a cat.
51-55% Psionic Defense: Telekinesis; 1D6x10+12 I.S.P.
56-60% Minor Power: Mental Stun.
61-65% Minor Power: Heightened Sense of Smell.
66-70% Psionic Defense: Death Trance; 1D4x10 I.S.P.
71-80% Minor Power: Extraordinary Speed.
81-85% Any one Minor Super Ability of choice.
86-90% Any one Major Super Ability of choice (excluding mind powers).
91-94% Major Power: Alter Physical Structure: Metal or Stone.
95-97% Intangibility.
98-00% Teleport Self and up to two tons.
Combat Skills: Natural ability only. Even war trained mounts will do little more than maneuver properly and refrain from getting spooked.
Attacks Per Melee Round: 01-50% Three, 51-75% Four, 76-00% Five.
Bonuses: Based on attribute bonuses and possible special abilities.
Originating Alien Environment: Varies.



Gari-Goma

The Gari-Goma is a kind of possessing entity vaguely similar to the Tectonic Entity found in the *Beyond the Supernatural™ RPG.* The big difference is that the Gari-Goma entity can only inhabit and control devices and machines that are already built and designed to do something, including puppets, toys, tools, weapons, robots, vehicles and even space stations and buildings. When a person creates something, they leave a faint psychic impression on the object, including small hopes, desires, ideas, and determination, as well as frustration and anger (if applicable). The Gari-Goma is initially attracted to these impressions and inhabits man-made objects and possesses the item as the only way to establish a foothold in the physical world. However, these are malevolent spirits to begin with, and quickly seek to move to an object with more power, durability, and damage potential.

Once the Gari-Goma is linked to the physical world via its initial object possession, it can move from one object to another, provided it's a machine or device made by a sentient life form, including factory-line production items stamped out by robots (after all, the factory complex was created by somebody). Once inhabited by the mischievous and wicked Gari-Goma, the device is under its complete control. The entity can cause it to turn off and on, stall, cause glitches, display false readings, and if electrical, it can cause the item to give off a slight shock (1D4 damage). If the machine has moving parts or locomotion, the foul Gari-Goma can make it move without an operator or pilot. This is especially dangerous when we're talking about robots and machinery (bionics, with its direct link to a flesh and blood sentient being, can not be usurped by

this entity). Only if the machine is designed to be animated can the Gari-Goma move it. Thus, a lamp may blink on and off but it can not move to hit somebody in the head. On the other hand, a desk lamp with a swivel arm could (although the damage would be a mere 1D4 to 1D6 depending on the size of the thing). However, if the entity seized control of a robot (with or without an activated artificial intelligence), automated security/weapons system or vehicle then the Gari-Goma could cause real havoc. The entity controls and powers all aspects of the mobile robot, vehicle or machine it inhabits and can operate it as if it were the overriding pilot or controlling force. In the case of a massive spaceship or space station, a single Gari-Goma can only control one specific module/section of it at a time, such as the engine room, or med-lab, or navigation, or weapons control – or one particular floor of a building. The major limitation is that the entity only controls systems and operations that are integral to the item. It can not control a floor or section of a spaceship or building and also control the robot guards. It could transfer itself into *one* of the robot guards, but to do so means it leaves the other device/building/section and can only control one robot not all of them. Of course, it can switch from one to the other as long as they are within range.

To transfer between devices or sections, the Gari-Goma must be within 60 feet (18.3 m) of the target item, unless it is physically connected in some way, such as electrical or telephone wire (the entity can not use wireless transmissions to travel long distances). The transfer and taking control uses up one entire melee round of action in which the entity can do nothing else (i.e. a 15 second pause in the action). This means isolating the possessed object away from other machines (a very difficult task in the modern world) traps the damned thing inside the object. And Gari-Goma hate being stuck in one particular device for more than a year. Blasting the possessed device into space is only sort of a good idea. In remote areas of space, the item and the entity inside might float around for hundreds, to hundreds of thousands of years, but sooner or later, someone is likely to find it. Meanwhile, in heavily populated sectors of space, scavengers, salvage operators and innocent travelers might find or bump into the cursed item, although small objects are more likely to float around undisturbed for centuries. Because Gari-Goma can only possess artificially created machines and objects, they are susceptible to certain rituals and can be drawn into carved crystals, fetishes or sculpted pieces of metal and trapped inside them forever. When trapped inside a magic item, the entity usually has no control over it, but serves as an energy source for the magic of the item. However, such mystic knowledge is a lost art among 99.9% of all advanced civilizations.

Destroying the item while the Gari-Goma is still controlling it, will expel the creature as a globe of glowing energy. There is a 01-50% chance that the shock of expulsion will cause it to immediately return to the alien dimension it originates from and not return for 3D6x10 years. Otherwise, it remains stunned (and open to Astral attacks) for 1D4+2 melee rounds before it will seek out a new object to inhabit. A successful *Exorcism* will also expel and banish the entity for the same period. A successful *Banishment* will send it away for twice as long.

Destroying the Gari-Goma. The only way to attack and destroy it is on the Astral Plane or while it is in energy form in the physical world, but it can only be attacked by an Astral Traveler striking it or using any type of magic or psionics available while in the Astral form. Or psionic energy can be used but limited to only *Mind Bolt* or *Psi-Sword*.

Gari-Goma (pronounced gary-goma)

Alignment: Anarchist or Evil.

Attributes: I.Q. 3D6, M.E. 4D6, M.A. 2D6. Physical attributes are based on the inhabited item.

Hit Points: 1D4x10 if the essence can be attacked directly from the Astral Plane.

S.D.C.: Based on the artificial body. Can range from 2D6 for a toy to tens of thousands for a spacecraft.

A.R.: Varies with the artificial body.

Size: Based on possessed item. The entity can not exist on the physical plane except within an artificial body.

Weight: Depends on the machine, object or device possessed.

Originating Alien Environment: The Astral Plane

Horror Factor: 10, but only when the opponent realizes they are facing a machine under the control of an evil force.

Average Life Span: Unknown. Unless destroyed, may be immortal.

Disposition: Gari-Goma are vicious spirits jealous of the free moving physical forms of mortals. They use their abilities to inhabit the devices created by living physical beings and turn them against them. This gives the entity the physical state it so envies, plus allows them to strike out and hurt the mortals they so envy.

Natural Abilities: An Astral entity with the power to inhabit and operate artificial machines, devices and objects created by sentient beings in the physical world. Usually enters into the physical world via some dimensional anomaly, magical summoning, or some fluke. Once it has been in our dimension that individual entity can return to it, although it may take years to do so. Unless there is some device to inhabit within 10 minutes of arriving into our world, the entity returns to its own. Does not need air to breathe and can survive in a vacuum.

Power Category: Alien monster.

Major Super Abilities: None; see natural ability to possess machines.

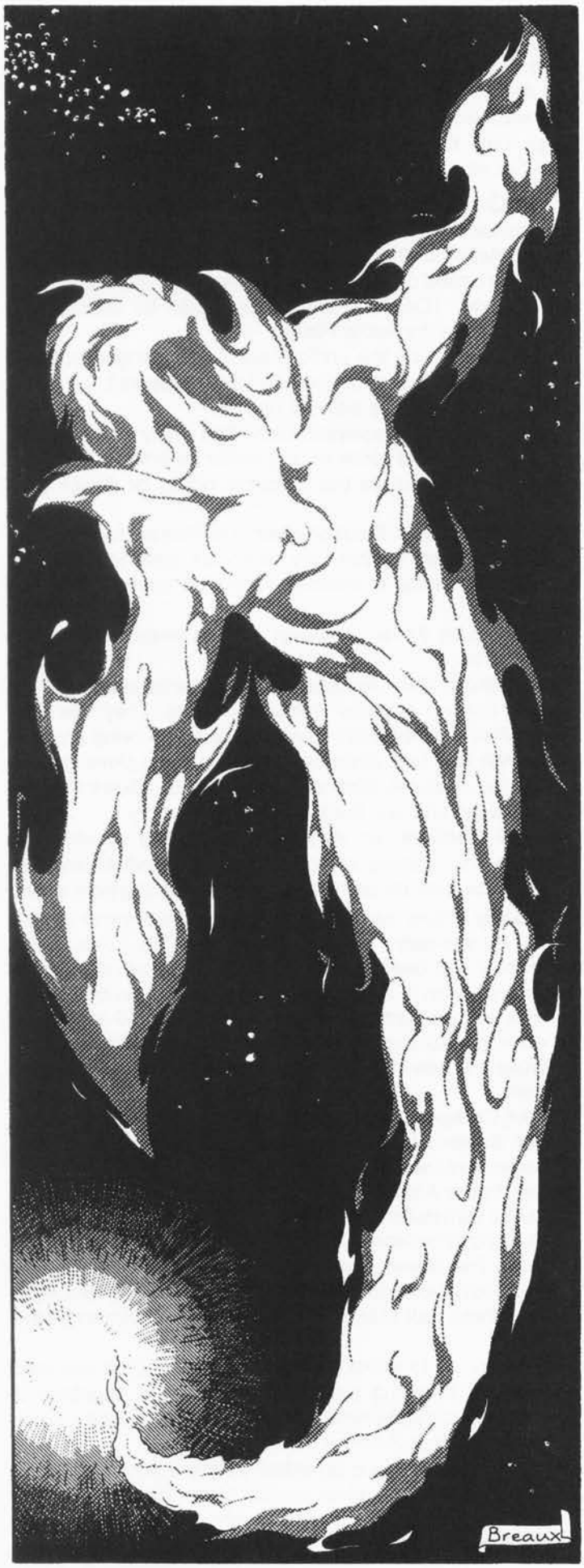
Minor Super Abilities: None.

Combat Capabilities: None; limited to the inhabited artificial body/machine.

Attacks Per Melee Round: Varies with the capabilities of the body. Non-combat vessels will only have two, vehicles three, but robots and items designed for war have six.

Bonuses: +1 to strike, parry, and dodge, plus any supplied by targeting systems or the built-in capability of the device/machine/robot itself. Pilots possessed vehicles at 85% proficiency.

Weapons: Only those provided by the object possessed by the entity, and minor electric shock by touch (1D4 or 1D6 damage), but only if the artificial body has an electrical system.



Note: Very rare in the Milky Way, but when they do appear, they can cause serious trouble. Usually solitary creatures, so one seldom encounters more than one at a time and never more than four.

Gammorites

Almost nothing is known about the aliens called Gammorites. They are blazing creatures of plasma and radiation that can devastate nearly any spacecraft, especially when they attack in numbers. The aliens are very fast and seem unhindered by the vacuum of space, flying about like some kind of human torch. Gammorites appear as roughly humanoid masses of fiery energy. Most are green, blue or white in color and bands of some kind of light or energy glide across the surface of their forms. Getting close to one will provide a nice suntan. If too close without proper protection, the character can expect a sunburn and a hefty dose of radiation. They can fire energy blasts and touching a Gammorite will vaporize softer items like cloth, wood, and flesh, and superheat, scorch and pit even heavy armor, metal and stone. When angry and attacking (which seems to be their natural state when dealing with other life forms), they throw beams of pure plasma and discharge heat and radiation like some small reactor. Four to six of these creatures can melt a typical fighter craft to slag in less than a minute.

Rumors across the galaxy say they are born within stars and that they have a civilization of some kind, though no one has yet verified either. What is known is that they are aggressive, powerful and unconscious of the cares or needs of other races. Tales of their first known appearance come from deep in the *Titrana quadrant* and reports of encounters have grown as the years pass. The few who have taken an interest in tracking the sightings and attacks by these beings note a general path that points toward the galactic center. As the beings encroach upon the area of known space where the planets are much closer together and organizations like the FAR and TMC have a presence, their activities are both more noticeable and threatening.

No one can say what the Gammorites may be after, but whatever it is, they are laying a trail of destruction in their wake as they head toward it. Immensely destructive, Gammorites lay waste to whatever and whoever gets in their way, annoys them or tries to make contact with them. No one can say if they destroy everything they come upon in anger, revenge, or for some other reason. The handful of FAR patrols sent out to investigate the Gammorites have been destroyed.

Gammorites (pronounced Gam-o-rites)

Alignment: Unknown, but all indicators point to an aggressive Miscreant alignment

Attributes: I.Q. 3D6, M.E. 3D6, M.A. 1D6, P.S. 3D6, P.P. 3D6, P.E. 3D6+6, P.B. 2D6, Spd 3D6 running or up to the speed of light flying (see Natural Abilities below).

A.R. (Natural): 10

Hit Points: P.E.x3 plus 3D6 per level of experience.

S.D.C.: 1D4x10+80

M.D.C.: In a Mega-Damage setting, combine the H.P. and S.D.C. and make them M.D.C., point for point.

Size: 8 feet (2.4 m).
Weight: Believed to be beings of pure energy.
Horror Factor: 13
Average Life Span: Unknown.
Average level of Experience: 1D4
Disposition: Largely unknown, though indicators point to an aggressive and destructive attitude. They seem to be unreasoning. No one is known to have survived a Gammorite assault to relate any pertinent information on them.
Natural Abilities: Impervious to heat, fire, plasma, magic fire and radiation. Resistant to cold based attacks (does half damage). Breathes without air and can survive in a vacuum. Gives off radiation. Water and magic do normal damage (see the descriptions for the major super abilities listed below for full details of immunities and vulnerabilities), as do most energy attacks, physical attacks (although the attacker takes damage from the heat and radiation), explosives, etc. Unlike the normal plasma form of a character with Alter Physical Structure: Plasma, these aliens keep their fiery form constantly, are unhurt by it, and are at home in the vacuum of space. They can fly through an atmosphere at up to 200 mph (320 km; no increase with experience) and can accelerate to launch into space, where they can propel themselves at the speed of light.
Skills of Note (or their equivalent): Basic and Advanced Math, Astronomy, Astrophysics, Navigation, Navigation: Space, and Zero Gravity Combat, all at 97%.
Power Category: Alien of unknown origin and unusual power level.
Unusual Physical Characteristics: Natural form is a fiery, radiation and plasma state.
Major Super Abilities: Control Radiation, Super-Energy Expulsion (Fire and Energy), Wingless Flight (in an atmosphere, light speed in space) and Alter Physical Structure: Plasma (constant, natural state).
Minor Super Abilities: None.
Combat Skills: Natural combat abilities.
Attacks Per Melee Round: Five.
Bonuses: In addition to attribute bonuses: +1 on initiative, +2 to strike, +3 to strike with energy blast, +2 to parry, and +4 to dodge, +6 to dodge when flying faster than 80 mph (128 km).
Originating Alien Environment: Unknown.
Weapons: None that anyone has seen. Their formidable natural abilities appear to be enough.
Vehicles: None. They rely on their natural ability to reach light speed to get around the galaxy.
G.M. Note: We have intentionally left the back story behind the Gammorites to you. Are they marauding monsters or conquerers? Are they on some life and death quest to retrieve or stop something in the center of the Milky Way galaxy? Are they good guys or bad guys? Are they so alien that they can not understand or care about other life forms, or are they (momentarily?) possessed or compelled by some outside force? Can the player characters (or NPCs) make contact and communicate with them? Help or befriend them? Whatever the case, no more than a dozen or two Gammorites are known to exist. All are making their way to the center of the galaxy.
Rifts® Notes: Gammorites are not likely to appear on Rifts Earth at all. However, they might appear in a *Phase World®* setting where they would pretty much be the same enigmatic beings portrayed here. Perhaps they have something to do with the Cosmic Forge, or have been driven insane searching for it for many millennia. Perhaps wherever they are flying to "is" the location of the fabled relic? (Or so people seem to believe.)

Gorgons

By Wayne and Cathy Breaux (tweaked by Siembieda)

The Gorgons are a race of space faring vampiric creatures. Although no one knows exactly where they originate, the myths and legends about them stretch back into ancient history on countless worlds. Even the Greek culture of Earth has stories about creatures called Gorgons, and both the Atorians and Raiding Clans have documented encounters with Gorgons as far back as 200 and 450 I.R.

Although the myths all vary slightly, they describe the Gorgons as monstrous women (sometimes ugly, other times beautiful) with live snakes for hair and a gaze so horrifying that it turned men into stone. In actuality, Gorgons are alien vampires who appear as beautiful females. Unless they are not trying to conceal their true nature, they wear a hood, hat, cap, babushka, or hair wrapping of some kind to cover the top of their head. And with good reason. A number of thick, fleshy black tentacles extend from the top of the head where one would normally expect to find hair.

The attractive females use their looks and sexuality to lure males to come into their embrace. Their disguise is made all the more effective by the power to alter their physical appearance to take on the features of the indigenous (or most desired) females. Once in the Gorgon's embrace, the tentacle-like appendages slip from beneath their covering and wrap around their victim's head and shoulders where they begin to absorb blood through the skin. A chemical excretion from the tentacles at the contact points renders the victim numb and induces a slight sense of euphoria (victims must roll 16 or higher to save vs non-lethal poison). Enraptured and lost in the sexual moment, the victim is not aware he is being fed upon. When the creature is done with him, the victim feels weak in the knees and slumps down in a daze (reduce attacks per melee round, combat bonuses, speed and skill performance by half for 1D4+1 minutes).

All in all, the whole experience is actually rather pleasant, and the victim does not realize anything is wrong until 1D4+1 minutes later when he continues to feel a bit woozy from blood loss. Even then, some males will not realize anything bad just happened, and most are too embarrassed to report the incident to the authorities. That's assuming the Gorgon did not bleed him dry. To conceal their identity, Gorgons usually only drain two or three pints of blood from a human (or equivalent from other life forms). This preserves the monster's identity because there is no murder victim drained of blood to tip off the authorities and

they usually target males who have had too much to drink already. Even if an enthralled victim does report the incident, what does he tell the police? "Um, I, uh, went to make out with this attractive woman, and um, I kinda felt funny and I think I blacked out for a minute. Then I slid down to my knees and could hardly move, and she, um, left." Placed in a euphoric state, the victim did not see the tentacles, bruises on the neck look like "hickeys," and (unless the Gorgon is a thief) he wasn't robbed or apparently injured, so there is no crime! Most males are told to go home to sleep it off and, in the future, avoid dangerous liaisons with strange women.

Those who save vs the euphoria still feel no pain and get some stimulation, but they will see the tentacles and realize something strange and bad is going on. They can try to pull away or fight, but this will anger and upset the Gorgon who is a) hungry, and b) probably trying to keep her presence a secret, which leads to, c) no witnesses. Ironically, in this situation, the creature is likely to use a conventional knife or firearm to kill her victim, and flee the scene.

The Gorgons' method of feeding and care to leave their victims alive (and confused) makes them very effective predators. It also makes them capable assassins for hire. If left undisturbed, and if the vampire so desires, she can drain a victim of blood in a matter of minutes (one pint per melee round/15 seconds). Each pint lost counts as 10% or 12% of the victim's Hit Points. No blood, no Hit Points. If slain this way, the victim will have no wounds except for strange red welts at the points of contact from the tentacles and a white complexion from a total lack of blood. (This pallor and lack of blood is where the myth comes from that a Gorgon turns men to stone.)

A Gorgon must feed on six to eight pints of blood (about 50-60 Hit Points) per week, but usually enjoys ingesting double that amount, feeding roughly every three or four days. Gorgons are intelligent, cunning predators who use their guile and shape changing powers to hunt and hide. Consequently, they are more prevalent than most people would like to believe. They are found mainly among space age civilizations and travel the galaxy like interstellar nomads. Most are scattered as individuals and small groups of 2-6, but larger clans of 12-30 are sometimes discovered.

Gorgons (pronounced gore-guns)

Alignment: Any, but typically Miscreant (32%), Diabolic (23%), Aberrant (10%) or Anarchist (30%).

Attributes: I.Q. 3D6+1, M.E. 3D6, M.A. 24+1D6, P.S. 3D6, P.P. 3D6, P.E. 3D6, P.B. 2D6+14 (at least when the head is wrapped; seeing the tentacles reduces the beauty by half), Spd. 3D6.

A.R.: Needs armor for additional protection.

Hit Points: P.E. attribute number x2, +2D6 per level of experience.

S.D.C.: 2D4x10

Size: 6-7 feet (1.8 to 2.1 m).

Weight: 140 to 180 lbs (63 to 81 kg).

Horror Factor: None when head is covered, 13 when head is uncovered.

Average Life Span: 250 years.

Average Level of Experience: 1D4+3; some are much higher.

Disposition: Most Gorgons are sly, playful, seductive hunters who use their natural charm, artificial beauty and cunning to carefully lure their victims right into their arms (or tentacles as the case may be). Most are cruel, heartless monsters who delight in enrapturing and killing their victims. Many Gorgons enjoy manipulating, using, belittling and abusing males whenever possible. The more heartless will string victims along for months, even years, draining them from time to time of both blood and money, before succumbing to draining them dry (killing them) or destroying them in some other way, i.e. ruin their reputation, business, marriage, etc. They seem to be most common in the Ilta and Liloqua quadrants, and some believe they originate from one of them.

Natural Abilities: The vampire powers, tentacles, and euphoric abilities noted in the description as well as night and thermal vision (600 feet/183 m).

Common Skills: Tracking (humanoids; +30%), Land Navigation (+20%), Camouflage (+15%), Prowl (+20%), Intelligence (+15%), Surveillance Systems (+5% to the electronic end, +15% to tailing), Dance (+20%), Sing (+10%), Seduction (+30%), Computer Operation (+10%), Basic Mathematics (+20%), Hand to Hand: Basic, W.P. Energy Pistol, one W.P. of choice and also select three from each of the following categories: Espionage, Rogue, Piloting and either Technical or Communications. All get a +10% bonus. May learn 1D4 additional skills from these categories at levels 4 and 8, without benefit of bonuses.

Power Category: Super Abilities.
Major Super Abilities: Control Others.
Minor Super Abilities: Alter Physical Body, Mental Stun, and Extraordinary Mental Affinity (already applied to M.A. attribute and Seduction skill; add +10% to skills of deception and sleight of hand).
Combat Skills: Hand to Hand: Basic; most avoid combat skills like boxing and wrestling.
Attacks Per Melee Round: 3 plus those from Hand to Hand combat; typically 5-6.
Bonuses: In addition to possible attribute bonuses, the Gorgon is +2 on initiative, +2 to strike, +1 to parry, +2 to dodge, +2 to roll, +2 to pull punch, and +6 to save vs Horror Factor.
Originating Alien Environment: High Gravity.
Education Level: General Studies, Pilot, or Rogue/Smuggler.
Weapons: Typically small, easily hidden weapons are used to keep a low profile. Common choices are laser bracelet guns (4D6), Spitfires (1D4x4), mini-ion blasters (3D6), pistols, and knives, especially Vibro-Blades or energy types.
Vehicles: Varies widely with the personality of the individual and the amount of scrutiny she may be under. Most try to keep a low profile.
Valuables: Most gather credits, gems and jewelry from the males they sucker and cheat. The typical Gorgon will have at her easy and immediate disposal 2D6x1,000 credits worth of jewelry and 2D6x1,000 in credits per level of experience!

Void Whales

For a long time, these magnificent creatures were thought to be mythological, but they are very real. Void Whales greatly resemble the wright whales of Earth, but their flippers are much longer and their bodies are covered with a thick, armored shell, spikes and horns. Its hide is as durable as battleship armor and the creatures are incredibly powerful. The typical adult gets to about 400-500 feet (122 to 152 m) long, but reports of Void Whales twice that length have been recorded by the Atorian Empire and TGE scout teams.

Void Whales travel in family groups and are sometimes mistaken on radar and sensors as a fleet of spacecraft (A successful read sensory instruments roll at -30% is required to recognize the whales). The older adults travel in the center of the group surrounded by the juveniles, while the mature adults travel around them for defense and to keep any young ones from wandering off. The young Void Whales measure 30 feet (9 m) long at birth and are as tough as space fighters. They are very small compared to adults and commonly cling to the sides of their parents. In times of trouble, the young whales will release themselves from the elders to hide in the mouth of an adult, while the more capable juveniles nearing adulthood help to fend off threats and fight attackers.

In combat, Void Whales attack using head butts, flipper and tail swipes and by ramming. This can severely damage most spacecraft, even battleships, especially if the creature is large. Against smaller opponents or spacecraft with especially tough hulls, the creatures can emit strange pulses of gravity that function as shock waves. The range on this unique attack is limited when compared to most spacecraft weapons, but the pulse is invisible and can not be avoided by most vessels. Only geologic sensor systems (RSI roll at -20%) or gravity well generator systems (RSI at -30%) can detect the pulses in time to dodge and take half damage. When an entire group of Void Whales surround a spacecraft and bombard it with shock waves, the result can be truly devastating.

Void Whales move themselves through space by an unknown means of propulsion. One theory is that they are powerful psionics and use hyper-developed telekinesis to pull/push themselves along, but the speeds they reach (factor 2) tend to discount this idea. A second theory attributes the movement to innate magical abilities, something lent credence by their ability to teleport, but no practitioner of magic has ever reported sensing magic from a Void Whale. Others suspect the creatures' large bodies are attuned to certain gravity wavelengths, possibly even negative gravity, and by shifting these attunements to different wavelengths, they can "push" themselves along at FTL speeds and teleport by creating a personal gravity well. It is rumored that the Atorian Empire has captured at least one of these creatures for experimentation, but learned nothing new from it.

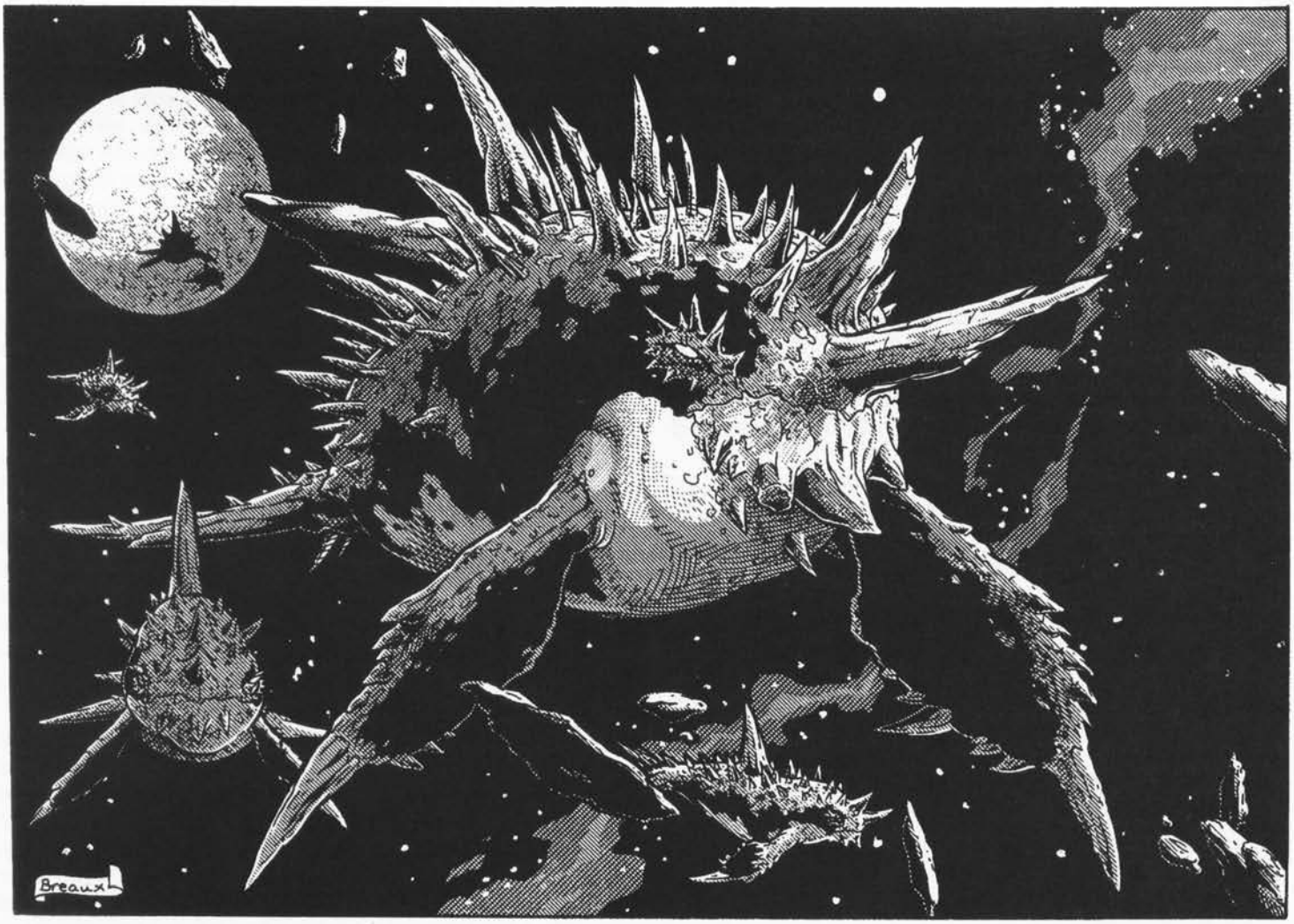
It is unknown where these creatures come from, how they mate and reproduce, or what they eat to survive. No one can even guess for sure, and the Void Whales are not telling. These creatures are rarely aggressive and prefer to avoid conflict whenever possible. However, certain regions of the galaxy have been noted as active regions for the creatures, possibly spawning areas or other protected zones, where they are quite aggressive and will attack anybody who comes within a mile (1.6 km) of them or the family group. Such areas are clearly marked on most space charts. Escaping from an antagonized Void Whale can also be difficult. They accelerate faster than nearly any spacecraft, even keeping pace with those of the Swip, and they are also reported to be able to negate the activation of gravity drives, thus eliminating point-to-point travel as a means of escape. Fortunately, they are quick to accept a hasty retreat and after a menacing head butt or two to show it means business, the creature is content to let the intruder flee without further incident. In places where the Void Whales are more placid, they will ignore vessels and people, unless they feel threatened. The creatures are said to be able to sense those who intend them no harm, and allow such individuals to touch them, travel alongside and even hitch a ride.

Void Whales (pronounced Voyd Wales)

Alignment: Considered Anarchist or Unprincipled.
Attributes: Juvenile: I.Q. 3D6, M.E. 3D6+1, M.A. 2D6+6, P.S. 4D6 (Superhuman), P.P. 3D6, P.E. 3D6+6, slow, casual cruising Spd 1D4x10.

Mature Adult: I.Q. 3D6+2, M.E. 3D6+6, M.A. 3D6+10, Supernatural P.S. 3D6+30, P.P. 3D6, P.E. 4D6+10, casual cruising Spd 2D4x10.

Elder: I.Q. 3D6+6, M.E. 14+2D6 , M.A.. 3D6+6, Supernatural P.S. 2D6+60 , P.P. 2D6, P.E. 3D6+40, casual cruising Spd 3D4x10.



A.R.: Young: 13, Adult: 15, Elder: 17.

Hit Points: P.E.x100

S.D.C.: Young: 1D6x100, Young Adult: 1D6x1,000, Elder: 1D6x5,000.

Size: Juvenile: 1D6x10 feet (3-18.3 m). Mature Adult: 1D4x100 feet (30.5 to 122 m). Elder: 1D6x100 feet +500 (183 to 335 m).

Mass: Size in feet: x10 tons.

Horror Factor: Young: 8, Adult: 12, Elder: 15; applies only when threatening or attacking.

Average Life Span: Unknown, but distinctive battle scars mark one Adult as being just over 300 years old; may live for thousands of years.

Disposition: Normally gentle and non-confrontational, but when attacked, they will defend themselves. On rare occasions, they have been encountered in hostile groups, apparently defending territory or spawning grounds.

Natural Abilities: FTL and space flight capabilities, teleport, and create gravity well as noted in the description.

Skills of Note: Unknown. Many believe the creatures to be highly intelligent, but whether they have actual skill knowledge or society as we understand them is unknown. Obviously have

Navigation and Space Navigation (+25%), which suggests they have Basic and Advanced Mathematics and knowledge of the stars.

Power Category: Alien monster.

Major Super Abilities: Vibration. (Functions at a level equal to the creature's P.E. Yes, this means a fully grown elder can create a shock wave that does more than 2D6x30 for damage, but the creature can also regulate the amount of damage inflicted and only uses this to defend itself.)

Minor Super Abilities: None.

Magic: None.

Psionics: Some believe the Void Whale possesses some or all psychic sensitive powers including Empathy and Telepathy. Some claim that the whales have spoken to them in their minds. None of this has been confirmed.

Combat Skills: Natural combat abilities.

Attacks Per Melee Round: Four for juveniles/young, six for adults, and five for elder adults.

Bonuses: In addition to attribute bonuses, +4 to strike, +3 to parry, +4 to dodge, +4 to roll with impact, +6 to pull punch, +6 to save vs possession, and +7 to save vs Horror Factor.

Damage: None. The Void Whales rely on their natural abilities to defend themselves. See super abilities for the damage of vibration attacks. Other attacks use the following damages (adults double it and elder adults triple it):

Head Butt: 6D6 +Supernatural P.S. damage.

Ram: 2D4x10 +Supernatural P.S. damage (no damage is done to the Void Whale).

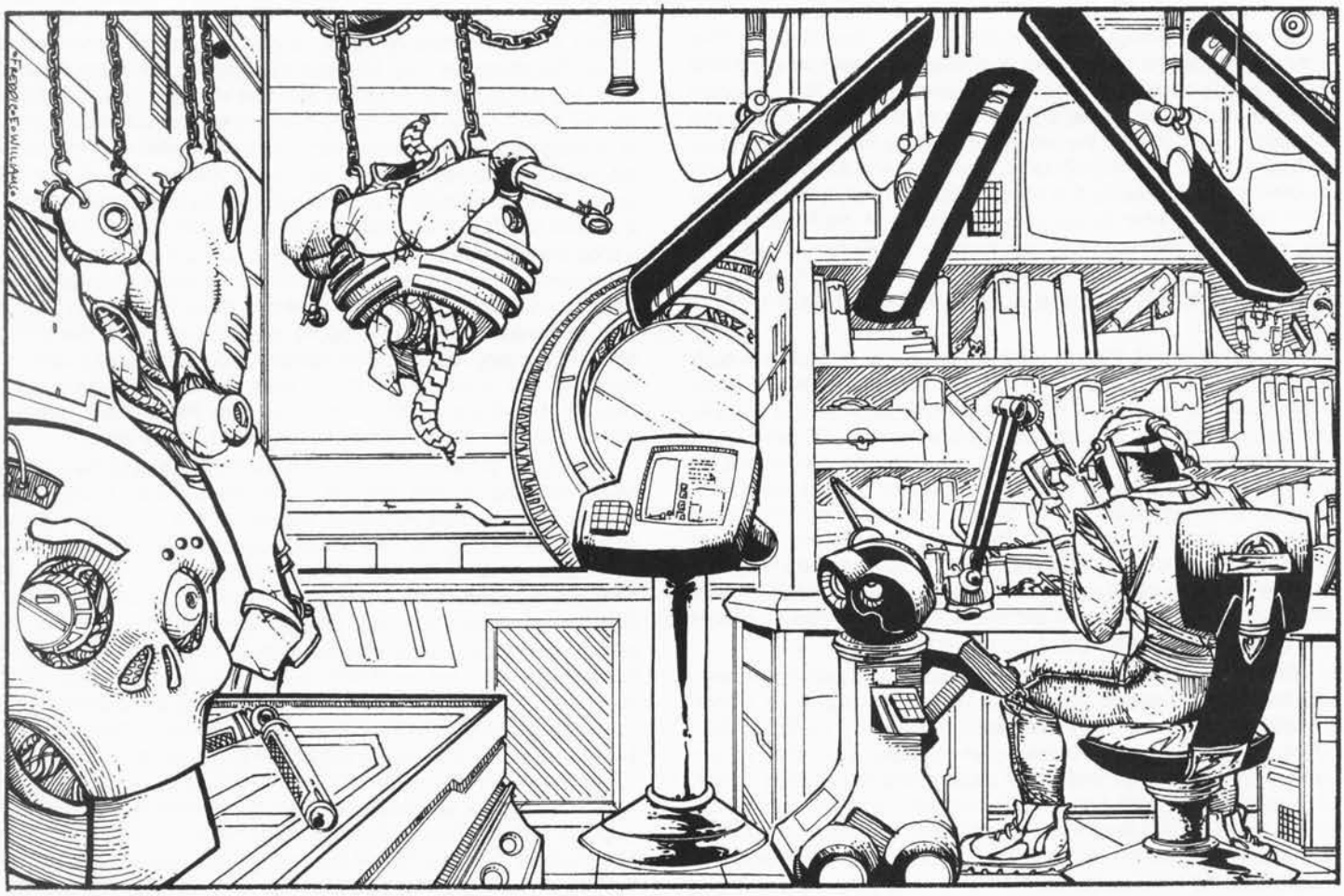
Speed Ram: 5D6x10 (uses up all attacks for that round and the Void Whale suffers 1/4 of the total damage).

Fin Swipe: 5D6 +Supernatural P.S. punch damage.

Tail Swipe:1D6x10 +Supernatural P.S. punch damage

Originating Alien Environment: Space.

Vehicles: None.



Equipment

Bionic Notes

To the galactic citizen, obtaining bionics is a routine and everyday occurrence. Most people reserve bionics for medical or military use, but some seek this hardware for purely recreational reasons, too. Cloning and advanced medical techniques, though not available in all areas of the galaxy, lessen the appeal of bionics, especially if one simply wants to replace missing parts and not augment the performance of his body. Partial and full conversion bionics are rare and reserved for special military units, adventurers, members of corporate security, private armies, mercenaries, and those with medical conditions that can not be treated any other way. In medical cases, most patients will opt for natural looking replacements instead of heavy armor and weapons.

In game terms, galactic characters from the Bionics Power Category are among those few who have had extensive systems installed, usually with a high degree of combat-worthiness. The average "heroic" cyborg will have a great deal more weapons, armor, strength and gadgetry than the average citizen who merely has a realistic-looking artificial arm or eye.

Beginning Bionic characters use the rules in **Heroes Unlimited™, Second Edition (HU2)** for creating a character, even if the character is to be used in a galactic campaign. Once the campaign is underway, available bionics will cost at least a third less for galactic citizens than they do for Earth citizens. After all, the prices listed in the **HU2** rule book reflect the rarity and expense of cutting-edge, experimental Earth technology. This same technology is considered everyday hardware in a galactic setting and is considerably less expensive. Rather than re-scale all of the equipment prices, a good rule of thumb for Alien Bionic characters is to *double* the initial cybernetics budget. This "double budget" rule is purely optional, however, and Alien characters are welcome to abide by the normal Bionics budget table. Those Alien characters who do not take advantage of the "double budget" rule have Bionics that are roughly equivalent to what is available on Earth and will not have the extra skill roll penalty to deal with. Plus, they will have a much easier time finding spare parts.

Those characters that do take advantage of the "double budget" roll will have a serious drawback to contend with – their bionic systems are "alien" and considered cutting-edge galactic technology, which is not very compatible with Earth technology. When on Earth, any repair skill rolls made on the character's bionics will always have a -25% modifier and cost at least 33% more to repair, sometimes 50% to 100% more (if possible at all). In addition, finding spare parts (such as replacement armor or limbs) will be difficult or even impossible, forcing the *alien cyborg* to either live with permanently damaged systems, obtain repairs only once in a blue moon, or somehow replace his Alien systems with the less advanced, native Earth bionics.

Once the character has someone ready to implant the bionics, he needs to see if the vendor has the systems he wants. Certain parts will be more common and readily available than others. Optics and radio systems are usually available, as are hands, arms and legs and other basic systems. Cyborg armor, augmented limbs and heavy weapons will be more scarce (unless a dealer specializes in them) and may require special order and a delay of 4D6 weeks before the item arrives. The purchaser must have the full amount of credits for both the materials and the surgery at the time of purchase. Some dealers will accept services or favors in place of or in addition to prices, but most them are underworld figures or butchers.

Poor availability and markups are left up to the Game Master. One simple service that can knock a few percentage points off the cost is for a character with existing bionics to trade it in (gets him a 10% discount). The doctor may also offer a discount (normally 2-5%) if the character provides a detailed report to the doctor on how their existing systems are working, along with comments and criticism. In fact, many doctors require such a detailed set of reports or interviews for their database. Information gained this way is not only valuable to future research, but it can be sold to other researchers for significant money, especially if the character that provided them is a regular provider of reliable information. Many of the street clinics use this tactic to defer their costs in obtaining bionic supplies and to ensure they get access to any new systems that become available; however, those lower costs are rarely passed on to the customers in the right form (see the info on street clinics below).

In addition to the materials cost, bionic surgery is expensive. Characters from the Bionics Power Category have their surgery costs waived or absorbed during character creation, but getting additional or upgraded bionics once the campaign is underway will require surgery. Bionic surgery costs 10% of the total cost of the bionic parts being installed. Thus, a bionic arm costing 700,000 credits would require an additional 70,000 in implant surgery. Two arms (1.4 million credits) and increased P.S. +10 for both arms (40,000 credits) would cost 144,000 credits in surgical expense. Again, the additional cost for surgery is only for non-Bionic characters seeking to get some bionics or for Bionic characters who seek to add to or upgrade the systems they started out with.

Surgical Recovery. Of course, all this hacking off of things and replacing them with foreign objects damages the body. Surely it is controlled damage, but it is damage nonetheless. Once the character has his new implants in, he must heal up from the surgery and adjust to his new implants. Each $25,000 (round down) of bionic implants will do one Hit Point (not S.D.C.) of damage to the character which must be healed entirely before the newly implanted systems can come on-line. The doctor can gauge on a successful diagnosis roll exactly how many implants a patient can have surgically implanted at one time. Multiple surgeries may be needed to finish the job (i.e. a 5 million credit partial conversion would require 200 Hit Points worth of surgeries. A tough person with 50 Hit Points would have to undergo four or five surgeries before the process was complete). If the doctor fails his surgery roll, both the damage from the surgery and the required time is doubled. If the damage caused by the surgery is greater than the patient's Hit Points, then he will have unfortunately gone into a coma and possibly "died on the table."

Thanks to advanced medical technology, galactic bionics patients will recover their lost Hit Points within 72-96 hours of the successful operation. However, the patient will still require extensive time to debug his new mechanical systems, finalize all cybernetic-organic integration, and continuous monitoring for possible rejection of the new parts. The standard rule of thumb is that for every Hit Point lost during cybernetic implantation, the patient will require an additional hour of full-time medical attention/therapy after his Hit Points are fully recovered. Thus, a 500 Hit Point series of surgeries will require nearly three weeks (20.8 days) of additional medical care and/or therapy after recovery. During this time, it is fair to assume the character performs at a diminished capacity (-30 to 50%; reduce the number of attacks, combat bonuses, and speed accordingly). Certain super powers, such as Healing Factor, Extraordinary Physical Endurance, Alter Metabolism, and Mechano-Link reduce this extra recovery time by half. In addition, the psionic abilities of Psychic Surgery and Increased Healing (magical healing too) can also cut the additional recovery time by half (but this is difficult to find). **Cost:** Hospital time for recovery is about 500 dollars per day.

"Street doctors" and "underworld doctors" are those with less than adequate facilities and/or skills, but all of them have lower than average scruples which happens to translate into lower than average costs. A clinic hidden in a back alley is not a "street

clinic" as regards to these rules if it is staffed by good doctors, even though it may be referred to as such. The term is used to refer to bottom-barrel doctors and clinics that cater to the poor and desperate, or are the only facilities to be found where bionics are illegal.

Street doctors usually cost half as much as reputable ones when it comes to surgery and recovery costs (a third don't have recovery facilities), but the costs of bionic components are the same. Only those who offer "recycled" bionics from a former owner may have parts for 25% less than standard, in addition to their other low rates. They may also release the patient early or allow accelerated healing which further cuts costs. The down side to street clinics, especially underworld clinics, and the reason they are sometimes called "butcher shops," is sloppy work. If a character uses a street clinic or other shady surgeon, the G.M. should require the doctor to make a cybernetics M.D. skill roll. A failed roll (most street Cyber-Docs are not particularly experienced) means the character must roll on the *Back-Street Bionics Side Effects Table* below to see what problems he will have with his poorly implanted bionics. Also, if the doctor uses second-hand parts, releases the patient early (before completely healed from surgery) or uses magical or psionic healing (other than that already discussed), make an extra roll (or one roll for each shortcut) on the chart and combine the results with the first roll.

Back-Street Bionics Side Effects Table

01-10%: Scarring reduced P.B. or P.P. by 2 points.
11-20%: Scarring reduced P.B. and P.P. by 1 point each.
21-40%: Double recovery and adjustment time (see below).
41-50%: Double adjustment time penalties (see below).
51-60%: Bionic components don't work properly. Reduce damage and range of weapons by 1D4x10%, and/or P.S. of limbs by 20%, Spd of bionic legs by 1D4x10%.
61-70%: 10% chance bionic implant fails when used.
71-80%: 20% chance bionic implant fails when used.
81-90%: Doesn't know his own strengths or limits. Is likely to break delicate items when handling them, can't pull a punch (does full damage), overshoots the target when leaping or running, and is off when using bionic weapons (-1 to strike). Needs adjustments.
91-95%: Double the damage done by implant surgery (2 H.P. per 25,000 credits).
96-00%: Massive damage from implant surgery (1D4 H.P. per 25,000 credits).

As you can see, seeking the best care and the most skilled surgeon is quite desirable for a character when dealing with something as expensive and risky as bionic augmentation. Corporate programs that build reliable operatives (not their experimental programs to develop new bionic systems) are considered top quality with the best doctors and equipment. Military and government programs will also usually have top quality components and care.

Adjusting to New Implants

Another consideration is that new bionics replace, but do not completely compensate for, the sensations of flesh and blood. Bionic characters are fully intimate with this phenomenon and adjust almost immediately to new implants (2D6 days), but others will go through an adjustment period of at least one month (4D6 weeks), during which they will perform at less than peak levels due to distractions and the need to make constant adjustments or compensations for the bionics and lack of physical sensation. G.M.s should assign penalties based on the new bionics (-5% to skills for one bionic eye, -10% for two, -2% to skills and -1 to strike for implanted weapons in the arm or hand, -15% to skill performance for a new hand, etc.). Multiple systems have cumulative penalties. Full conversion bionic characters usually spend a year training to adjust to their new bodies, and most spend a year or more undergoing multiple surgeries to gradually acclimate them to their rapidly replaced flesh. This adjustment and training time is half for characters from the Bionics Power Category, as they are experts at handling their own cybernetic systems.

In addition, there is a certain mental strain to consider as well. Characters who receive bionic replacements of any kind must roll a one-time save vs insanity. If they fail, roll on the following *Bionic Insanity Table.* This mental damage comes from the patient's inability to cope with the radical changes his body has undergone. Most galactic citizens, since they are so accustomed to the very concept of bionics, and receive expert counseling while recovering from surgery, don't usually need to roll on this table, or just develop a phobia or obsession. This rule does not apply to characters from the Bionics Power Category unless the G.M. thinks it is appropriate. Their personalities are such that they can usually handle bionic implantation of any kind without mental or emotional damage. (G.M.s, feel free to use this table when making villains. A great motivation for a bad cyborg's behavior is madness brought on by the very process that gave him his powers.)

Bionic Insanity Table

01-15%: Feels he has lost his humanity and is more machine than human. Also feels disconnected with humanity, making him something of a sociopath; lacks a feeling of kinship, compassion and mercy toward flesh and blood people. Tends to be cold, uncaring, and inhumane. May also be condescending.
16-30%: Feels he has lost his humanity and has become a monster! Sees himself as ugly, an outcast and inadequate regardless of how attractive or invisible the bionics may be or how others see him. Skill performance is permanently -10% and combat bonuses are reduced by one point. Tends to be a lone wolf and assumes people are saying the worst about him.
31-45%: Feels he has lost his humanity, has become a monster, and hates the world for it! Number one on his hate list are those he holds responsible for his getting bionics. Number two are anybody who installs bionics. Number three the world at large. This character is in emotional pain, making him an aggressive, cruel and murderous psychopath.
46-65%: Life is precious syndrome. Sees himself as less valuable than ordinary people without bionics and is fanatical about protecting others, especially women and children. Will sometimes take dangerous actions (to self) to protect others. If a villain, the outlook is reversed, where he sees anybody who is not a cyborg or robot to be inferiors to be used, abused and enslaved.
66-70%: Obsessed with death. Doesn't want to die, but is fascinated by death and the many ways to die, as well as theological aspects of death and the afterlife. Death has no horror for this character and he sometimes takes foolish and reckless chances, assuming he can get mechanically "fixed" later if necessary.
71-75%: Paranoia: Dislikes, distrusts and fears advanced machines including other cyborgs, robots and computers (not crazy about being on spaceships or space stations either). Avoids them and is always suspicious of them. Will target opponents who are cyborgs, in robots or power armor or reliant on gizmos and hardware. Doesn't trust cybernetic doctors or agencies who promote the use of bionics or robotics for military purposes or general use by the public.
76-80%: Obsession: Machines. Machines are either good and the character is obsessed with advanced technology and gizmos (will get more bionics whenever possible if only a partial cyborg), or hates it, hates his machine body (but won't

change it) and promotes the values and wonders of being flesh and blood, getting back to nature, physical fitness and not relying on machines ad nauseam. Dislikes technophiles and Hardware people.

81-85%: Roll once on Obsession Table in HU2.
86-90%: Roll once on Psychosis Table in HU2.
91-95%: Roll once on Neurosis Table in HU2.
96-00%: Roll once on Affective Disorder Table in HU2.

Repairing Bionics

Repairing alien bionic systems is fairly simple, since any facility able to make or install bionics can also repair them. For bionic galactic citizens, getting bionics repaired is like a trip to the doctor and the auto mechanic at the same time. If the character is on good terms with the organization who sponsored his becoming a cyborg, he may not have to pay anything for repairs. Likewise, many galactic citizens will insure their bionics for repairs; premiums on such policies cost 20% of the total cybernetic package each year, during which time unlimited repairs may be made at no cost to the insured. If the character must pay for repairs out of pocket, the going rate is usually 10 credits per point of S.D.C. replaced, and 10% the original cost of any bionic component to be repaired. Thus, a cyborg who has his bionic eye and 100 points of armor repaired should expect a final bill of roughly 9,000 credits (8,000 for the eye and 1,000 for the armor). Depending on where one shops for repairs (and what favors one can call in), these prices might drop to as little as 1 credit per point of S.D.C. repaired, and only 2% of the original cost of the cybernetic component to be repaired. Going to back-street cybernetics facilities can drop these costs even lower, but the cyborg runs the risk of poor repairs or service, as mentioned earlier in this section.

The character may also be able to effect repairs himself if the proper skills are known. Obviously some self repairs are impossible, such as doing fine electrical work on a hand (one handed penalty would be -30%) or repairing a damaged internal organ, bionic lung, or most any procedure that requires surgery. Characters highly skilled in repairing themselves will still have to shell out the money for parts and may need someone else to fix some of the damage before they can repair the rest of it or other systems on their own. Characters who make successful skill rolls to repair themselves can replace S.D.C. at the cost of five credits for each one S.D.C. point they fix, and can repair other systems for 10% of the listed prices. A character who also has mechanical and electrical skills may be able to build some components to use as replacements. However, jury-rigged and homespun repairs may look patchwork or funky.

Some bionic repairs may require extensive surgery, especially on those characters with less than partial reconstruction. In this case, surgery costs will be 15% of the total repair costs (not purchase costs) for that system (not the total cost of repairs, unless all systems require surgery to fix). However, there will be no need for extensive recovery time from repair surgery. Heavily converted cyborgs can simply have most systems disconnected for repairs, negating the need for surgery and its additional costs and often allowing the character itself to effect even extensive repairs.

Higher Cybernetic Limits

As noted in the Alien character generation section of **HU2**, alien bionics have higher attribute limits than those of Earth. Maximums are P.S. 40, P.P. 26, and Speed can go as high as 200 without reinforcing the legs (with reinforcing, it can reach a maximum Spd of 293).

A Note on Cost

In the sections below, all prices are given in credits. For game purposes, one credit equals one US dollar.

New Bionic Systems

Bionic Wings: Unlike the hover system below, bionic wings work just like the real things: they flap or glide. Any thrusters will be a few small maneuvering jets. This system can be built onto the character's bionic arms or, more commonly, the back. Bionic wings can be *solid panels* like that of an aircraft, artificial *feather-type wings*, or *synthetic sheets* over support structures (rather bat-like). Cosmetics can dress them up to look as real/alive as the character wants or they can be obvious metallic and plastic constructs.

The wings can be designed for gliding (use the distances for the Minor Super Ability Flight: Glide) or with full flight capability. The base speed for gliding wings is 50 mph (80 km) indoors and up to 120 mph (192 km) outdoors with a 100 foot (30.5 m) or higher drop to achieve acceleration (otherwise 60 mph/96 km). The base Spd for gliding wings can not be increased, but they can be used with a jet pack. Bonus for glide flight: +1 to dodge.

Full Flight Wings also start at the same 50/120 mph (80/192 km) base flight capability (only they don't need a 100 foot/30.5 m drop to accelerate to full speed). Additional points of flying Speed for full flight systems can be purchased for 10,000 credits per point, with 320 mph (512 km) being the top speed limit. Full flight wings can not be used with a jet pack, but they can be combined with a hover jet system for maneuverability (+2 to dodge in flight, the wings are +2 to dodge by themselves).

All bionic wings have a base S.D.C. of 40 each and can be reinforced to twice that (80 S.D.C.) for an additional 50,000 credits. Wing assemblies are typically retractable into back housings or can be folded up to be unintrusive in tight areas. These housings or folded wings will protrude and can not be easily concealed, but they are far more practical than walking around with a fully extended set of wings all of the time. **Basic System Cost:** 500,000 credits for glide-capable wings, one million credits for full-flight wings. The character must have a bionic chest and reinforced spine and shoulders to get articulated wings, otherwise they will have to be built into his own arms. **Maximum Flight Speed:** 120 mph (192 kph) for gliding wings. 320 (512 km) for full flight wings. **Maximum Altitude:** About one mile (1.6 km) for gliding wings. Full flight wings can carry the character to the halfway point in any planet's stratosphere. On Earth, that equates to a maximum altitude of about 15 miles (24 km).

Bionic Jet Pack: Built into the character's back are a number of thruster nozzles that when engaged, function exactly like a jet pack; requires a bionic chest for anchoring and ideally a reinforced spine and shoulders (use the aerial combat rules and penalties and the Pilot: Jet Pack skill). When not in use, the thrusters recess close to the character's back (or actually retract completely if he is wearing any kind of bionic body armor), and when activated, the jet nozzle ends rotate out and lock away from the body on prescribed angles to keep from doing any damage to the user. The pack is driven by mental command, much the same way a bionic hand is controlled, but it does require fuel or a power pack to operate. Jet thrusters may also be built into the feet for more control (+1 to dodge and +10% on Jet Pack pilot skill). **Power Supply:** Liquid fuel jet packs have a flight endurance of one hour. Super-solar engine jet packs have a flight endurance of 24 hours before requiring a four hour recharge period. Micro-fusion jet packs have a five year endurance, during which time they can be used constantly. **Cost:** 250,000 credits (liquid fuel), 375,000 credits (super-solar) or 600,000 credits (micro-fusion). **Maximum speed:** Mach 1 (660 mph/1,056 km). However, the base speed for a jet pack is 75 mph (120 km). Additional speed can be purchased at one mph (1.6 km) per 1,000 credits. The extra cost for a Mach 1 jet pack is 585,000 credits. **Maximum Altitude:** Galactic jet packs can reach the upper limits of any planet's stratosphere, and under low gravity, blast into space. On Earth, that is an altitude of roughly 31 miles (50 km), but blasting into space is not possible. **Bonuses:** +3 to dodge when moving at speeds of 25 mph (40 km) or more. **Note:** Jet packs can be used to hover in place or move at speeds under 15 mph (24 km), but require a successful Pilot Jet Pack skill roll to do so. Otherwise, the pilot will accidentally crash or bump into something, or stall the engine and plummet. A subsequent successful Pilot Jet Pack roll will restart a stalled engine and regain flight, but such rolls can only be made once per melee round, during which time the character may hit the ground before regaining altitude.

Bionic Hover-Jet System: This feature is identical to the concealed micro-hover system described on page 203 in the robotics section of **HU2**. **Power Supply:** Liquid fuel bionic hover-jets have a flight endurance of one hour. Super-solar bionic hover-jets have a flight endurance of 24 hours before requiring a four hour recharge period. Micro-fusion bionic hover-jets have a five year endurance, during which time they can be used constantly. **Cost:** 125,000 credits (liquid fuel), 200,000 credits (super-solar) or 350,000 credits (micro-fusion). **Base Speed:** 100 mph (160 km). **Maximum Altitude:** 500 feet (152 m). **Bonuses**: +1 to dodge in flight (the hover system can hover just above the ground and maintain its aerial dodge bonus).

Foot Thruster Jet System – a.k.a. Basic Zero-Gravity Maneuvering System: The Basic Zero-Gravity Maneuvering System (BZ-GMS) is a small-scale version of the bionic hover-jet system described above. It is not a viable means of propulsion. Rather, it gives the cyborg an edge in space combat by negating the penalties of zero-gravity combat. Small micro-jets are built into the cyborg's bionic feet, legs and back (or alternately, into its exoskeleton armor). These jets fire automatically to correspond with the cyborg's movements when in a zero-gravity environment. The top speed a cyborg could obtain in a zero-G environment, even when firing all thrusters at once, is 15 mph (24 km). The system has minimal effect in an environment with gravity by providing the character with accelerated thrust when leaping – adds 10 feet (3 m) to height and distance to a normal leap. Can not fly in an atmosphere. Jet thrust lasts only 2-3 seconds. **Power Supply:** Draws on the internal power supply of the cyborg and can be used indefinitely but drains other systems, reducing the range of optics/sensors and communications by half, and the range and damage of weapons by half. A super-solar BZ-GMS has a flight endurance of 24 hours before requiring a four hour recharge period and takes the drain off other systems (all work as normal). A micro-fusion BZ-GMS has a five year endurance, during which time it can be used constantly and takes the drain off other systems. **Cost:** 95,000 credits (internal power supply), 75,000 credits (super-solar) or 350,000 credits (micro-fusion). **Note:** +5% to Piloting skill if combined with a bionic hover-jet system or jet pack.

Bionic Climbing System: There are two versions of this system: Chemical and mechanical.

The chemical system uses small ports in the hands and feet to excrete a resin that bonds to just about anything. Adjacent ports secrete an almost instant neutralizer that breaks the bond of the resin (any residue will evaporate within minutes). The bionic character climbs by moving one limb, then attaching it, then moving another, and so on. This version has little chance of falling, but is slow to use, reducing movement to 1/4 normal. **Cost:** 125,000 credits. **Climbing bonus:** Can scale smooth, sheer walls and hold onto the side of moving spacecraft and vehicles; +20% to the climbing skill (max. 98%).

The mechanical system mimics that of many insects by lining the hands and feet with hundreds of super strong Kisentite filaments (retractable, of course). The hair-like filaments help grip nearly any surface, much the same way a fly does and greatly aid in climbing. It is much cheaper than the chemical system, but does not have the same level of adhesive power. Thus, when

climbing rope, cable or an elevated surface, the character is +10% to his climb skill and climbing is done at half his running speed. However, a penalty of -10% is applied instead of any bonuses when climbing a sheers, smooth surface. The climbing fibers are tiny, so despite their Kisentite nature, they do not add any damage to open hand attacks. **Cost:** 75,000 credits. **Bonus:** Adds +10% to climbing skill (max. 98%).

Data Plug: Also known as a "headjack," this is a special jack or port implanted in the base of the skull behind the ear. The data plug is connected to the character's brain at key areas to allow input from the jack to transfer information, pictures, sounds, and other sensory input from outside sources to be carried to the brain directly. Other connections to the data plug/headjack allow the character to send output through the jack so that devices or equipment plugged into the jack can be controlled mentally. The most common uses for this system are entertainment (especially interactive video), computer operation, navigation, and communications.

The "cyberlinking" that headjacks provide makes them a very useful tool for computer operators, especially those who wish to commit computer crimes. Using headjacks for illegal purposes is typically referred to as *cyberjacking*.

Data plugs/headjacks are very rare on Earth, but alien bionic characters should have no problem getting them in a galactic setting where they are everywhere, and nearly every corporate employee will have one. Anybody using a headjack gains a +10% bonus to any skill involving computer operation, navigation, reading sensor systems or other computer, audio or video systems. G.M.s, feel free to exercise your judgement as to when a headjack might be usable. **Cost:** 14,000 credits.

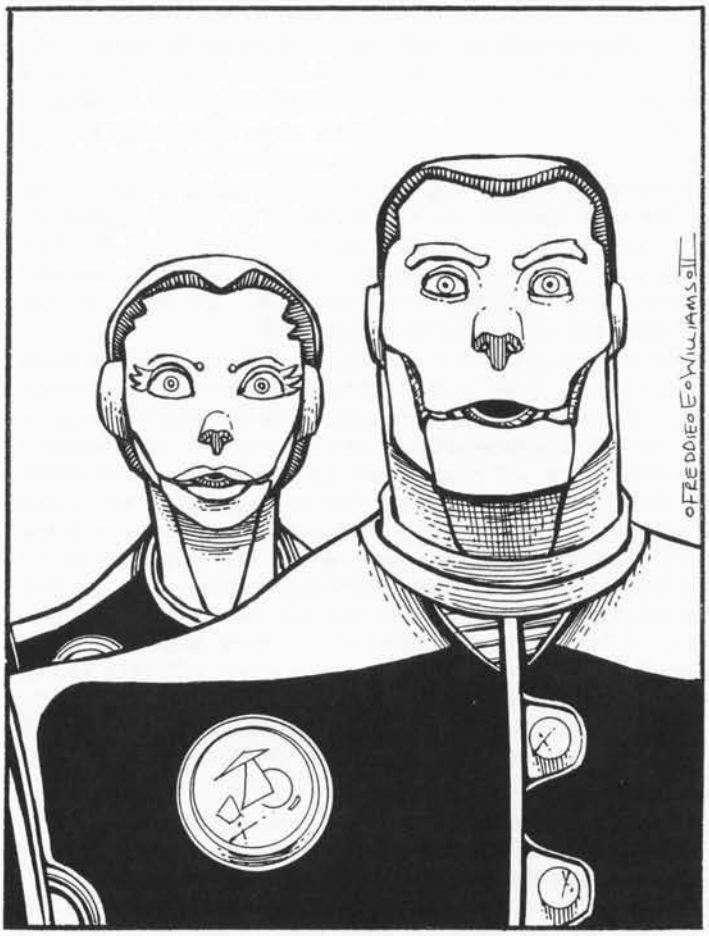
Vehicle Linking Headjack Hardware (VLHH or VL-2H): Standard headjacks can be supplemented with vehicle linking headjack hardware, also known as "VL-2H," enabling the user to interface with vehicles that have computer guidance and navigation systems (i.e. all spacecraft, robot vehicles, advanced aircraft and hover vehicles).

One field in which the VL headjack is especially common is robot piloting, making the machine respond at the speed of thought, much like one's own natural body. This speeds their reaction time considerably. The Atorians are especially fond of this implant and all of their robot pilots are implanted with headjacks as a matter of course, as are all Atorian computer operators, navigators and spaceship pilots.

To interface with a vehicle or robot, the user must have upgraded VL headjack hardware, and the vehicle or robot must be engineered to accept such interfacing. (Most low-end commercial vehicles are not.) **Cost:** 60,000 credits plus the normal headjack (14,000 credits) must be purchased first. If a character already has a standard headjack installed, he need only pay the 60,000 credit upgrade for VL-2H hardware. It costs 30,000 credits to wire a terrestrial vehicle (land, air, or sea, regardless of size) to accept a headjacking interface. Spacecraft are a bit more expensive to wire this way, costing 240,000 credits to interface all or most key components in piloting. **Bonuses:** Using a VL-2H system grants the pilot +15% to Piloting, Navigation and Read Sensory skills; it also applies to making trick moves and handling turbulence or system failures. +2 to initiative, +1 to strike and +2 to dodge when plugged into weapon systems. This also applies to those piloting robots.

Headjack Filter: For most Cyberjackers, this is an essential piece of defensive hardware that protects one against the potentially lethal effects of cyberjacking combat (see the Cyberjacking skill for details). In terms of cyberjacking combat, a headjack filter provides rudimentary armor. Headjack filters are typically reserved for military and law-enforcement use only, although that rarely stops corporate and criminal headjackers from obtaining this equipment. There are four basic levels of headjack filters: Light (**A.R.:** 12, **S.D.C.:** 30), Medium (**A.R.:** 14, **S.D.C.:** 50), Heavy (**A.R.:** 17, **S.D.C.:** 75), and Military-Grade (**A.R.:** 19, **S.D.C.:** 100). **Cost:** 125,000 credits for a light filter. 250,000 for a medium filter. 375,000 for a heavy filter. 500,000 for a military-grade filter. For any kind of headjack filter, it costs 2,500 credits to repair/restore one point of lost S.D.C.

Built-in Hacking Computer: This is identical to the Hacking Computer described in the Personal Equipment section of this sourcebook. The only difference is that bionic hacking computers are almost always built with a headjack connection. **Cost:** 650,000 credits for a basic system. 680,000 credits for a VR simulation system. 700,000 credits for a headjack system. 800,000 credits for a maximized headjack system.



Robotics

Robots in a galactic campaign can be as common and everyday as automobiles and household appliances are to modern Earth. Exactly how common depends on the particular civilization. Robots, power armors and exoskeletons are as comparatively expensive as exotic automobiles and sports cars are to an Earthling. Humanoid and even human-looking robots with limited artificial intelligence (AI) seem to be the most common type of robot in the Milky Way galaxy. They are typically used to perform menial labor (cleaning, shipping and receiving, collecting garbage, etc.) and guard duty, but can perform a host of other things too, such as automated servants, butlers, maids, drivers, and sometimes assist in building and mechanics (but mainly for maintenance work due to the limited AIs). Major options are limited to keep costs down, but upgrades are available from many retailers.

Robot superheroes will usually be on par with a heavy-grade military robot, which may be considered *restricted hardware* in certain parts of the galaxy. Robots with specialized military and

combat capability are usually illegal depending on the civilization, although basic combat and light weaponry (sometimes heavy) may be allowed for robot security systems and guards. Only recognized military entities and licensed security organizations can legally purchase and use armed and armored robots in any quantity.

Mass Market Humanoid Robot

These robots are humanoid, from 5 to 7 feet (1.5 to 2.1 m) tall, and can either have a featureless tin-man/robot appearance or be cosmetically modified to resemble any race. They have two arms, hands, feet and legs, a bipedal stance and are usually powered by super efficient batteries recharged overnight in any wall outlet. (Solar and micro-fusion power systems are usually reserved for industrial and military applications.)

Attributes: Most robots also have the equivalent of normal human hearing and color sight, and a basic AI with an equivalent I.Q. 8. All physical statistics are 10, except for the one most appropriate to their primary duties, which will be a 12.

Skills: The AI is programmed with six skills, each at 60% with one or two specialized skills at 90%. Thus, a robot specialized as a house cook won't regularly burn a meal and makes very tasty food (not top chef quality but very good). Meanwhile, its cleaning or other skills are only at 60%.

Armor Rating (A.R.) is a mere 7.

S.D.C. is 75, although being human-sized, they can be dressed up in clothes or normal armor.

No Combat Capabilities: Combat is impossible for them normally, and the robot can not punch, kick, fire a gun or use a melee weapon or club. Thus it has no attacks or combat bonuses. However, the robot does have three melee actions and may call the police, bar a door, or place itself between its owner(s) and harm's way if commanded to do so. Otherwise the domestic robot will simply stand still or continue to go about its business. All are programmed to recognize common emergencies (accident, fire, fight, threats with a weapon) and to call the appropriate agency for help (police, fire department, hospital/EMS, etc.) as the situation may require.

Illegal Combat Program: A combat program can be installed but is usually highly illegal. Punishment is impounding of the robot, a fine to cover the cost of reprogramming (10,000 credits), and the owner is prohibited from owning or working on robots for one year. A second and third offense sees the fine doubled and the prohibition increased to six years. A fourth conviction will see the character banned from owning or operating robots for life. In any instance, if others are injured or serious property damage results from the illegal tampering, the perpetrator will be sentenced to 1D6 years in prison. Combat Capabilities: 4 attacks per melee round, +1 to strike, parry and dodge, and two W.P. skills of choice (typically W.P. Energy Pistol or Rifle and W.P. Blunt or Knife) and will attack on command as well as respond to obvious bodily threats and attacks. That's it. Cost for this program can run from 15,000 to 50,000 credits.

Cost for a Mass Market Robot: 95,000 credits for the bargain bin models detailed above. Available Upgrade Options & Costs: 125,000 credits to get an extra three additional skills at 80% proficiency (half that for 60% proficiency; limited to one upgrade and Espionage, Military, Physical, and Rogue skills are *not* available), 120,000 for an extra 100 S.D.C. for the main body (increase all other S.D.C. by 20%; maximum one upgrade but Military robots can get as many as three S.D.C. upgrades), 20,000 credits to boost A.I. per one point of I.Q. (10 maximum), 15,000 to cosmetically make head and face look lifelike, 2000 credits for human speech, 2000 credits for natural mannerisms chip, 2,500 credits for soft skin (max. A.R. 10), 8,000 credits for soft and realistic looking skin and hair (max. A.R. 10), and any other reasonable options the G.M. may allow.

Legal Security Robots can acquire any of those noted above plus: 125,000 credits to get an extra three W.P.s 100,000 to get three additional Military or Piloting skills at 80% (limited to two upgrades), 100,000 for one additional attack per melee (only one upgrade), and an extra 250,000 to boost the A.R. to 12.

New Robot Systems

Combat systems and features are not (legally) available for commercial, mass market robots.

Robotic Wings: Identical to the system described under bionics, but designed for use by robots. **Basic System Cost:** 500,000 credits for glide-capable wings; one million credits for full-flight wings.

Increased P.P. for hands and arms: Commercial robots that have no human pilot but have an AI can have a maximum P.P. attribute of 14, but Military and authorized Industrial and Security robots can have a P.P. as high as 26. As usual, all limbs start with a base P.P. of 10. **Cost:** 25,000 credits for each point above 10.

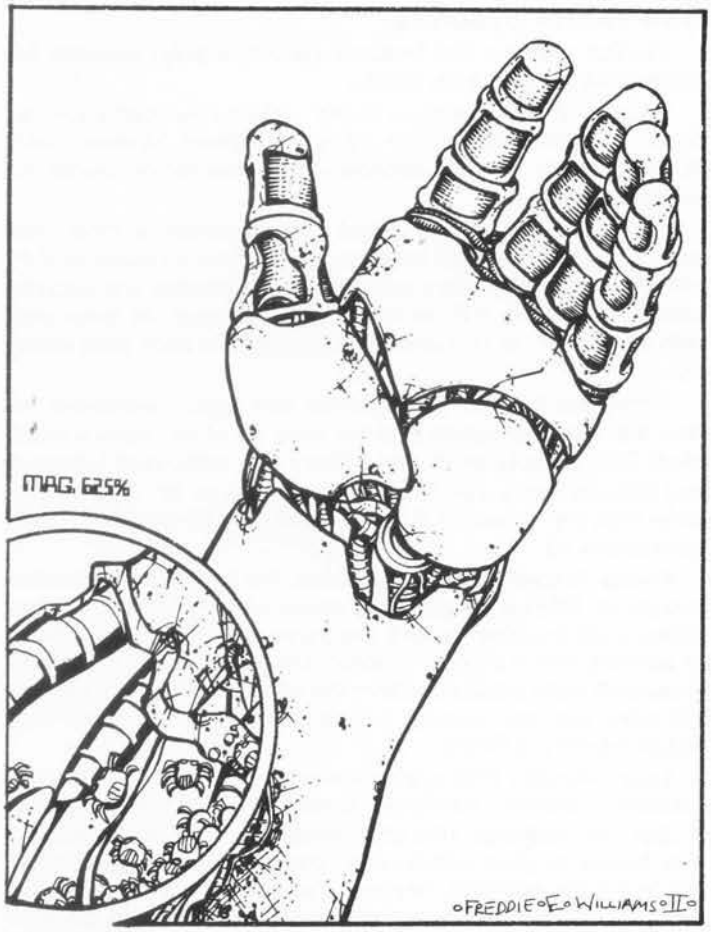
Increased P.S. for hands, arms and legs: Commercial robots that have no human pilot but have an AI can have a maximum P.S. attribute of 15, but Military and authorized Industrial and Security robots can have a P.S. as high as 30. As usual, all limbs start with a base P.P. of 10. **Cost:** 50,000 credits for each point above 10.

Frame Reconfiguration Systems: The frame reconfiguration system (or FRS) is an extensive series of modular systems that allows a robot to change from one frame style, such as a vehicle, to another, like a humanoid robot. One FRS needs to be purchased for each additional frame the robot can shift to. A humanoid robot that can change to a motorcycle and a small boat would require two FRS's.

Less extensive FRS systems allow hands to change to tools (torches, wrenches, spotlights, screwdrivers, etc.) or extremities to shift into weapons. This way, hands, shoulder plates, innocuous domes, or plain cylinders can change into weapons or missile launchers; however, weapons that change form as part of an FRS will cost twice as much as normal in addition to the FRS cost (due to the precision needed in aligning the reconfigured components). A reinforced frame must be purchased for FRS's to be installed. **Cost:** For an entire robot to shift forms, each system costs 1,000,000 credits for human-sized robots (up to eight feet tall/2.4 m) and 2,000,000 credits for giant-sized robots. For a single system (arm, hand, weapon) to shift its configuration, the cost is 75,000 credits for non-offensive changes and 150,000 for changes into weaponry (double for giant-sized). Each change requires one melee action/attack, although more than one change (such as changing frames and changing weapon systems simultaneously) can be initiated at one time on a successful piloting roll (see the New Skills section). The S.D.C. and any other traits rated by frame type use the smaller of the multiple frames for the ratings (In the above Robot/Motorcycle/Boat example, the base and maximum S.D.C. would be based on the humanoid robot, giving it 150 S.D.C. to start and limiting it to 900 S.D.C. maximum). On the other hand, the weight is determined by the heaviest of the multiple frames.

Direct Feed Weapon Power: Human-sized robots outfitted with super-solar, fusion or micro-fusion power sources can recharge the E-clips for their built-in energy weapons directly from their own power supply, instead of having to get them recharged elsewhere or changing clips. When this system is used with the super-solar engine, each energy blast that is recharged siphons away 2 minutes of the 8 hour reserve power that would normally fuel the robot when there is no sun. In fusion and micro-fusion engines, the recharge is limited to 60 shots per one hour period. All giant-sized robots of 10 feet (3m) or taller with a fusion engine can power any and all of their energy weapon systems, including large rifles and other heavy weapons, directly from their energy

supply, negating the need for E-clips, but the weapon must be attached to the robot by a power tube and can not be given to or transferred to another robot without proper tools and a compatible energy supply on the recipient robot or vehicle. **Cost:** 195,000 credits.



Self Repair Micro-Robots: This system allows a robot to begin repairing itself almost immediately after being damaged. A unit filled with miniature repair robots is housed in each extremity as well as the torso. When the robot takes damage, the repair system sends out the little robots and they begin to fix the damage. Each unit of robots can only fix 20 S.D.C. of damage, but multiple systems can be purchased to provide enough repair units to completely repair the robot in extreme circumstances. Once the unit uses its 20 S.D.C. worth of repairs, it will not function (there are no more materials in them), and they must be replenished at a cost of 2,000 credits, or they can be released onto armored plating of other robots or vehicles to gather supplies. The latter method requires 2 hours of salvage time for the robots to gather and process the materials, and the materials must come from a structure with an A.R. at least equal to that of the robot (such as an armored vehicle). Once the process is finished, the unit can again repair 20 S.D.C. of damage. Repair units will disperse across the body if they are able (the limb housing is for space and coverage purposes) and more than one unit can replenish itself at a time. **Cost:** 100,000 credits per system (20 S.D.C. of repair materials).

Basic Zero-Gravity Maneuvering System: Micro-jets in the feet and/or back that negate the penalties for zero-gravity combat. This is identical to the bionic system of the same name. **Cost**: 40,000 credits (liquid fuel), 75,000 credits (super-solar) or 350,000 credits (micro-fusion).

Emergency Reinforced Transfer Case: This system is about the size of a small briefcase, but it is rather heavy (30 lbs/13.5 kg) because most of it is protective armor. Inside the case is a liquid crystal storage medium specifically designed to accommodate artificial intelligence programs or transferred intelligence. The system comes with a transmitter system that has a range of five miles (8 km) when broadcasting and unlimited when hooked into a communications hardline (such as a phone line). If the robot or computer using this system is damaged severely or destroyed, its AI or transferred intelligence can be stored in the armored case (A.R.: 17, S.D.C.: 300) until another body/system is available to house it. The armored case has a built-in, top of the line transmitter/receiver to allow the stored AI access to the outside world. This way, it can possibly arrange on its own for a new body and/or housing system. The case can also accommodate cellular/digital modems, video communicators, and satellite/laser uplink equipment. **Cost:** $175,000

Repairing Robotics & Bionics

Let's face it, whenever robots are taken into combat, they are likely to sustain some damage. Being mechanical, these things do not heal from damage the way that organic folks do. Unless the robot is fitted with a self-repair unit, it must depend on the graces of repair personnel if it is to have a long and distinguished combat career. Characters who belong to organizations with robotics programs can probably count on repairs immediately, skillfully, and for free, but freelancers, criminals, or fugitives will likely have only themselves to count on. These people will have to rely on their own resources, which will be very limited compared to those of large organizations. The following rules will explain the tools, knowledge, and money needed to effect repairs or upgrade the systems of privately held robots.

Tool Kits

Without tools, repairs are simply impossible. The robotics budget during character generation can be used to purchase robotics repair kits. Please note that similar kits are available for any mechanical or electrical projects, including vehicles and spacecraft. It should also be noted that Hardware characters can build these kits for reduced costs. Only an Electrical Genius can build super-advanced computers such as a DiSCuS system, though.

Portable Robotics Tool Kit: This is a large, heavy briefcase (22 lbs/10 kg) filled with small mechanical tools (wrenches and screwdrivers), electronics tools, a small diagnostic computer, and welding/soldering tools. It can be used to locate and identify problems and realign, recalibrate, and repair armor and systems. This kit carries enough supplies and spare parts to repair up to 50 S.D.C. worth of damage. Any further repairs will require additional materials and/or spare parts. **Cost:** 20,000 credits/dollars. A portable robotics kit can be built into a robot of any style for 10,000 credits/dollars. Replenishing one S.D.C. point of repair capability costs 1,000 credits/dollars.

Medium Robotics Kit: A heavy, metal tool case that weighs almost 90 lbs (40.5 kg), this kit has nearly everything needed for field repairs on a robot, including everything found in the portable robotics kit and much more. It can be used to repair armor and replace damaged systems (spare parts/systems may be required). The medium robotics kit can not be used to build or reconstruct parts, but it can repair most systems to the point where they function, at least temporarily. This is often enough to get the robot home to a robotics shop where new systems can be built. A medium robotics kit can carry enough supplies to restore 100 S.D.C. to a damaged robot. **Cost:** 100,000 credits/dollars. Replenishing one S.D.C. point of repair capability costs 1,000 credits/dollars.

Robotics Shop Kit: This kit has at least four medium robotics kits, each with a different array of tools and equipment, and at least two computers, one for diagnostics and the other for design work. It also comes with a laser mold making system and at least two heavy welding/bonding systems. The robotics shop kit can

be used to fully repair any aspect of a damaged robot, and with the laser mold making system, it can custom build parts from scratch. The only limitation is that only one system can be constructed at a time (see the construction rules below for system categories). The robotics shop kit can restore all of the S.D.C. a robot needs, and can be used to add more (see the construction rules below). **Cost:** 400,000 credits/dollars.

Robotics Laboratory Kit: The robotics laboratory kit is a combination of several robotics shop kits with a few extras thrown in. It has the tools and equipment of at least three robotic shop kits, but in addition to diagnostics and repairs, the laboratory has full testing and simulation facilities and can build/construct more than one system at a time. The average robotics laboratory can simultaneously build the systems for half of a complete robot. Generally, only the military, large corporations, and very wealthy individuals will have a robotics laboratory (let alone more than one which would allow construction of an entire robot or even multiple robots at one time). **Cost:** Two million credits/dollars.

Design and Diagnostics Simulation Computer System (DDSCS or DiSCuS): This is a specialized and expensive computer. Its basic components are included in the robotics shop and laboratory kit, but they do not run full versions of the DiSCuS diagnostic and analysis software. This computer is perhaps the most useful tool in robotics design and construction because it coordinates all aspects of the process and even helps with mold making and automated assembling. In game terms, the DiSCuS provides a bonus to all robot construction and repair rolls. The degree of the bonus depends on how advanced the DiSCuS system being used is. DiSCuS systems range from Level One to Level Twenty. Each level of DiSCuS programming provides a +2% bonus to construction and repair skill rolls. Thus, a Level One DiSCuS provides a +2% bonus, a Level Twelve system provides a +24% bonus, and a Level Twenty system provides a +40% bonus. Needless to say, Earth scientists would love to get their hands on one of these systems, since it would negate the standard -40% modifiers they face on robotics skill rolls.

Cost: 150,000 credits/dollars per +2% skill bonus it provides; 900,000 for +12% bonus, 1.8 million for the 24% bonus and 3 million for the +40% bonus.

Makeshift Repairs and replacing S.D.C.

Obviously, the Robot Electronics and Robot Mechanics skills are the best choice for fixing damaged robotic systems, but what is a character to do in a pinch with repairs to be made? John Q. Pilot might be a great exoskeleton pilot, but without the proper training he can not repair the damage from the missile volley he just ate. But, who says he can not at least change a few fuses, tape a few loose wires, and knock out a few dents? The following *optional rules* are meant to let characters who are familiar with robots (but are not expert technicians) attempt to jury-rig their units back into better condition. G.M.s, please feel free to implement these rules as you see fit into your campaign. If you feel they undercut those who train specifically in hardware and robotics, then either only allow those Power Categories to use these rules or modify them or don't use 'em at all. Remember, it's *your* game. At the same time, one might consider using these rolls to give a "second" chance to those Robotics characters (as well as Secret Operative and Hardware characters) who bombed out on their standard skill rolls (i.e. "Sorry, this is the best I could do").

Each alternate skill below lists a number of S.D.C. that can be automatically restored to a damaged robot without having to make a skill roll. This restored S.D.C. is not actually repaired/replaced by the person, but instead reflects a few simple tricks like stopping fluid leaks, tightening/replacing loose bolts, removing twisted/obscuring items, and generally cleaning up a robot/vehicle after a battle. These little things do not physically replace S.D.C., but doing them will help bring the robot back to a better level of performance which translates in game terms into minor S.D.C. replacement. Alternately, if the G.M. is using any of the optional modifier systems from the **Heroes Unlimited Robot Combat section,** this tinkering may remove any one temporary modifier the battle imposed (G.M.'s option). The same system is given for electrical repairs in the following section. In general, these makeshift repairs are temporary at best, although it will be left to the G.M. to determine how long such jury-rigging will last. Also, temporary repairs of this kind can only be performed once on any given robot or part, until the unit is properly and *fully repaired.* In other words, character can only jury-rig a part of their robot once or twice before it is broken beyond his repair, even a temporary one.

Note that the more skilled a mechanic, the more the character can do to help the robot without having to make a skill roll. By making a skill roll, the character can attempt to actually do some repair work by welding, tacking, or bonding additional S.D.C. onto the robot. The most S.D.C. he can replace this way is limited by the skill he is using (see below for details) and the repair kits he has available (see previous section). If skill rolls are made and failed, the repair is flawed or inadequate, and *no* S.D.C. is restored. (At the G.M.'s discretion, failed repairs can actually worsen the condition of a damaged robot.)

All repairs, even those that are "automatic," still require time to perform; see the construction rules for armor and S.D.C. for repair times. Also, characters can only use *one* of their robot-related skills to make repairs. Thus, a character with the robot piloting and mechanical engineer skills would be able to use one of them, not both. Do not add the S.D.C. repair numbers for separate skills together if the character possesses more than one of the listed skills.

Replacing S.D.C. in the Field

Pilot Robot: This skill provides the character with basic robot maintenance. When dealing with actual damage, this character can do little more than make observations and guesses, but his training does allow him to make superficial repairs. Basic techniques with the on-board tools, and possibly the help of the robot itself, will allow a skilled pilot to replace 1D10 S.D.C. automatically, while a portable robotics kit would allow him to replace 2D10 S.D.C. instead of 10. If the character can succeed at a skill roll at -40%, the amount of S.D.C. replaced is doubled.

Basic Mechanics or Field Armorer: With some understanding of mechanics, this character is able to automatically replace 4D6 S.D.C. with on-board tools and 6D6 with a portable robotics tool kit. A successful skill roll at -20% will double the number of S.D.C. points restored.

Mechanical Engineer or Mechanical Genius Hardware Character: Characters with this skill are knowledgeable in most matters mechanical and can pinpoint trouble and restore 1D4x10 S.D.C. with on-board tools and 1D6x10 S.D.C. with a portable robotics tool kit. On a successful skill roll at -15%, twice as much S.D.C. can be replaced. Remember the time needed for repairs, especially when large amounts of S.D.C. are replaced.

Robot Mechanics: This is the only skill that can actually repair damaged systems (like servos, joints, reconnect a limb or optics, replace weapons, etc.) in the field. The previously mentioned skills can only replace S.D.C. to the armor/body. This skill is still limited by the tools available (see the kit descriptions above) and the skill rules (see the Robot Construction program and its special restrictions for details). Characters with this skill can automatically restore 1D6x10 S.D.C. to a damaged robot, and on a successful skill roll at -10%, they can replace 80 S.D.C. Most repairs made with this skill are *permanent* and are not makeshift in nature. They may not look pretty, but the repairs will hold under stress. Once the robot is taken to a robotics shop, this character can attempt to repair any further damage. The only exception is when the engineer is trying to make repairs using in-

adequate tools and/or inferior materials. Then the success roll is -20% and the repair will be jury-rigged. Remember the construction penalties in the Hardware section when rebuilding or constructing systems.

Electrical Repairs in the Field

Pilot Robot: Characters with this skill can do little more than change fuses and tape up loose wires.

Basic Electronics or Computer Repair: Characters with these skill can reroute or reconnect power, replace damaged wires, and remove damaged systems, and restore only the most basic systems; 1D6 S.D.C. (double if he has the Computer Repair skill).

Electrical Engineer or Electrical Genius Hardware Character: Characters with this skill can repair damaged electronic parts, wiring, optics, computer systems and sensors, but can not replace destroyed systems. Successfully using this skill, however, can temporarily repair *one* disabled (but not destroyed) or malfunctioning electronic system (roll for each item repaired) and restore 2D4 S.D.C. with on-board tools and 3D6 S.D.C. with a portable robotics tool kit. On a successful skill roll at -30%, twice as much S.D.C. can be replaced.

Robot Electronics: Characters with this skill can repair, replace, and partially rebuild damaged systems and optics. Successfully using this skill can repair *one* disabled or malfunctioning electronic system (roll for each item repaired) and restore 2D6 S.D.C. with on-board tools and 4D6 S.D.C. with a portable robotics tool kit. On a successful skill roll at -20%, twice as much S.D.C. can be replaced. Remember the construction penalties in the Hardware section when rebuilding or constructing systems.

Upgrading Robotic Systems

As anyone with an expandable personal computer knows, upgrading components is much cheaper than buying a whole new system. The same goes for robots. Why purchase a whole new head/helmet if all one needs is an optics package? Upgrades replace existing systems with better ones and are usually limited to boosting the AI or skill proficiency, adding new skill programs, increasing attributes, and replacing modular components and parts, including sensors, optics and audio systems. The robot must already have an existing system to get an upgrade, whether it is a new skill program, weapon, optics, or armor that is being improved. If there is no existing system or if the upgrade must be built instead of purchased, see the full construction rules below. For example, a laser weapon can be upgraded to a pulse laser, but not into a plasma weapon or any other different type of weapon. Likewise, range and capabilities can be increased in sensors, but sonar can't become radar and nightvision optics can't become thermal-optics.

Purchasing Upgrades: Robots can upgrade at any time, except during character generation. Any of the systems listed in **HU2**, **Aliens Unlimited**, or the **Galaxy Guide** can be purchased for upgrades. Upgrading saves money and is quicker than building a component from scratch. Remember that the availability of robotic systems will always be scarce. Even in a galactic campaign, finding the right system and components may be tricky. Not all hardware is compatible, especially in a setting where there are a million different alien design templates.

Skill Rolls: A character must make a skill roll appropriate to the system he is upgrading. Weapons require the Armorer skill or the specific W.P. skill. (For making a skill roll with a W.P., use the skill ratio of the Field Armorer skill.) Sensors and computers require a Robot Electronics skill roll. Limbs, armor, and other systems require a Robot Mechanics roll, and new programs require a Computer Operation roll (at -10%) or a Computer Programming roll (without penalty). Likewise, modifying a program or illegally adding a computer or skill program requires the Computer Programming or Computer Hacking skill. Naturally, characters lacking the required installment skills will have to find somebody else to do the job for them.

Cost: The costs for upgrades are cheaper, because they are prefabricated and do not require labor costs because the character is doing it himself. All upgrades cost 25% less than the listed price for an item.

Availability: On Earth, the character will need access to a friendly organization with a robotics program from which to purchase components to upgrade. If the character belongs to the organization and it is their robot, they may provide parts for free. If the character does not own his robot but is contracting it from the designers, payment will be required (but it may be 30% to 40% lower than list or more). In a galactic campaign, availability will vary widely. The average technical market will have a 45% chance of having the desired item, and prices may vary from 15% to 35% of list prices. Larger markets, especially those run by the TGE, will have a 38+1D6x10% chance of selling the desired item, and prices will be standard (25% of list). Remember, these are the prices for *parts* and *programs* that the character installs himself.

Optional Robot Construction Rules

Building a robot, or even one piece of a robot, is an exhaustive and lengthy process. For the independent hero, however, it may be cost effective and sometimes a necessity. Anyone who has built any kind of toy model kit or has worked on car engines knows how detailed and time consuming it can be. Now imagine that model or engine is just one of several dozen interconnected

systems, all parts of a single robot. It could take years to finish it. For the robotics character, that is very much the case. Each component of a robot has to function perfectly, and takes many hours to perfect. Each component goes together to form a system, be it an arm, a leg, optics or weapons. Remember, there are design and engineering concepts to be imagined and prototypes to be built. This is not a commercial "robot kit," this is designing a completely new robot. The whole process can literally take years, especially if working solo or with only 2-4 other people. Good thing characters get to start with a whole robot, isn't it?

The rules here are designed for characters to effect extensive repairs or to make affordable upgrades during the course of play. It is still very expensive, but should be within reach if the G.M. is willing to go along. Even though the prices are reduced, the difference will be made up for in time, and some components have to be tooled or made out of house. A good, reliable robot arm simply can not be made overnight, even in a large laboratory with complete schematics. Players should realize this from the start and not badger the G.M. about it ("Is my arm done yet? What do you mean, 'I just asked that five minutes ago?'") G.M.s should likewise be considerate and jump ahead in time ("It's two weeks later and the arm is finished) for the sake of the character, especially if the component being constructed is vital to the character's crime fighting abilities. Everyone should be understanding on this and enjoy the results. Sometimes, villains will not be so accommodating and will strike before the robot character is finished or upgrades are installed. In that case, the hero will have to be resourceful and save the day without his new hardware. But hey, working under pressure is what being a hero is all about, right?

Reminder: All of the rules and prices in this section apply to the campaign and regular play. During character generation, the listed prices in **HU2** are always used, no matter what the character's race or origin.

Robotic Systems Construction

The following entries detail the major system divisions of robotic construction. Each section lists the required skills, time needed and any modifiers to the skill roll for each system. The first skill listed in the "Required Skills" area is the one that is used for the construction roll on the system. The other listed skills are "secondary skills" that will make the job easier, but are not critical for success. A character with all of the skills listed for a specific system gets a bonus and the skill roll is made at +20% and takes half as long to complete. If all of the required skills are not possessed by the character, the construction roll is done at the normal skill ratio of the first skill listed.

Hardware characters with the Robot Construction Program make the required skill rolls at only -10% *if it coincides with their Hardware area of expertise.* For example, a Hardware Mechanical character with the Robot Construction Program would make Robot Mechanics rolls at -10%, but he would make Robot Electronics rolls at -40%, unless he had a second area of expertise in Hardware Electrical (in which case his Robot Electronics rolls would also be at only -10%).

Alien Hardware characters do not receive the standard -40% skill penalty for working with robotic systems, since their high-tech upbringing makes them considerably more at ease with such hardware than an Earth technician. Their penalty is only -10%. That said, G.M.s should be careful with Hardware characters using robotic skills for construction because they may one day have to deal with a dual power category character. It is recommended that their robot construction be limited to a few systems and only in emergency situations, or only allow robots to be built by others (fellow player character's robot, industrial or commercial robot, etc.). This is likely to foster teamwork and gives the Robotics character a means of repairing his robot.

The time required is total work time and does not include time off for eating, sleeping, adventuring, or earning a living. Someone who is able to dedicate all of his time to his work can work 8 hours plus 15 minutes per P.E. point per day. Any more than this risks mistakes or sloppy work. Generally speaking, every hour spent beyond one's maximum per day inflicts a -5% *cumulative* risk of the work being a total failure. When the work is completed, be sure to roll against any accumulated risk for failure. If a failure is not rolled, then the designer lucked out. If not, well, let it be a lesson not to perform high-tech work while deprived of proper rest and sleep. In really desperate or rushed times (to be determined by the G.M.), the character can double his daily work for up to three days a week without incurring any extra risk of design failure.

Additionally, the listed times are for the construction of systems for which the character already has blueprints. While this is great for replacing a damaged limb or component, it does no good for an upgrade that adds ten points of strength or a completely original innovation or design of his own making.

Designing new systems (drawing up blueprints), including upgraded ones, requires additional time equal to 50% of the total construction time. This additional time represents the need to finalize ideas, draw up plans, test the plans on computer simulations, and build the actual system from the smallest nut to the largest frame brace. The design process can be rushed, but each time it is halved there is a -15% penalty to the construction roll in addition to any other penalties for construction (as per **HU2** construction rules; see the Hardware section for full details). If one does not properly and fully plan ahead, there *will* be problems down the line. If no design time is taken, the construction rolls are made at -50%, in addition to any other penalties, which are all cumulative.

Failed construction roll. Any time the character messes up due to a failed construction roll, the results will not be noticed until halfway through the construction process, so G.M.s may wish to wait until halfway though the construction before the player actually makes the construction roll. If failure is rolled, the character makes another roll (with no modifiers) to see if the work can be *salvaged.* If the second roll fails, the process must begin again from the beginning, including purchasing all new materials and making a new construction roll. The design time does not need to be repeated unless three construction rolls are failures (obviously at that point the design is faulty beyond use).

On a successful second roll, the work can be salvaged and only the construction time must start over, no additional materials need to be purchased, etc.

For characters who can do the work themselves, prices for repairs (not replacement, upgrades, or construction) will be half the price for construction. For example, a targeting sight, as shown below, costs 50,000 credits/dollars to construct. Thus, the standard repair cost for one will be half that, or 25,000 credits/dollars. Repair times are half the listed construction times, except for S.D.C. Replacement which is equal to the original construction time.

These prices are on the assumption that the character is buying parts and handling all work himself. For those characters who can not repair their robots, but can gain access to someone who can (galactic characters will find such people and facilities on most space stations), the costs will scale upwards another 25%. That is, repairs will run at 75% of the original construction costs, instead of the usual 50% when it is done by the character himself.

All components listed below will cost the same amount as listed in the **HU2** rule book, since the prices listed reflect construction cost only. A robot that costs $20 million to construct will likely sell for three to five times that if purchased off-the-shelf.

Arms or Legs (One Pair): Required Skills: Robot Mechanics, Robot Electronics (or Electrical Engineer), and Computer Programming (for increasing running speed only). Time Required: 240 hours. Modifiers: -10% for reinforced frames.

Body Frames: Required Skills: Robot Mechanics, Automotive Mechanics (for automobile frames only), and Aircraft Mechanics (for aircraft frames only). Time Required: 120 hours. Modifiers: Humanoid -0%, cycle -0%, aircraft -5%, and animal -10%.

Power Supply: Required Skills: Robot Mechanics (for liquid fuel systems only), Robot Electronics (for Super-Solar systems only), and Electrical Engineering (for Super-Solar systems only). Time Required: 90 hours for liquid fuel and 160 hours for super-solar. Modifiers: -10% for super-solar. Note: Only liquid fuel or super-solar power systems can be constructed. Nuclear power systems must be purchased at the full, listed prices.

Building Engines: Required Skills: Robot Mechanics, Mechanical Engineer. Time Required: 180 hours. Modifiers: -5%

Hover Systems: Required Skills: Robot Mechanics, Mechanical Engineer, Computer Programming. Time Required: 210 hours. Modifiers: -15%

Sensors and Optics: Required Skills: Robot Electronics, Electrical Engineer, Computer Repair. Time Required: 45 hours per system. Modifiers: -10% on computer systems (including targeting computers) and radar.

Weapons: Required Skills: Armorer (Specific W.P. can be used, but at -20%), Robot Electronics, Robot Mechanics, and Chemistry (for flamethrowers and chemical weapons only). Time Required: 50 hours for firearms, 25 hours for chemical weapons and 100 hours for energy weapons. Modifiers: -10% for chemical weapons and -20% for energy weapons.

Armor and S.D.C.: Required Skills: Robot Mechanics, Armorer (for armor rating work only). Time Required: 2 hours for each 20 S.D.C. and 10 hours for each A.R. point. Modifiers: -10% on A.R. construction.

Pilot Systems: Required Skills: Robot Mechanics, Mechanical Engineer. Time Required: 15 hours except for reinforced pilot's compartments which take 8 hours per A.R. point. Modifiers: None.

Human Traits: Required Skills: Computer Programming, Computer Operation, and Art (or a good 3-D drawing program for sculpted facial features). Time Required: 40 hours each. Modifiers: None. Note: Touch sensing system, artificial blood, cosmetic enhancements, and sculpted facial features.

Self Repair Systems: Required Skills: Robot Mechanics, Robot Electronics, and Computer Programming. Time Required: 500 hours. Modifiers: -30%.

Artificial Intelligence: Required Skills: Computer Programming, Computer Repair, Robot Electronics, and Robot Mechanics. Time Required: 600 hours for a Standard AI, 2,000 hours for an Advanced AI, 1,800 hours for a Transferred Intelligence/Consciousness. Modifiers: None for a Standard AI, -20% for an Advanced AI, and -30% for a Transferred Intelligence/Consciousness.

Alien Genetic Engineering

In some parts of the galaxy, genetic modification is the "organic" alternative to cybernetics and robotics. For some alien races, cybernetics and robotics are repugnant concepts, while elsewhere, genetic modification is simply easier, cheaper or preferred over becoming dependent on a lot of external hardware. In any case, genetics is hardly the prominent industry that both cybernetics and robotics are. Only a handful of worlds specialize in genetic modification services. For the most part, genetic modification is an offshoot of the medical industry, and modifications for combat purposes are relatively uncommon. Characters created by them fall into either the Experiment or Mutant Power Category (the latter is especially appropriate if the end result is unexpected, such as a super ability manifesting itself).

Limb and Organ Replacement

Simple cloned replacement parts are commonplace in the advanced setting of the galactic community and are discussed in **Aliens Unlimited™**. Other less common (but more advanced) uses of cloning and genetic manipulation are presented below. These processes are still experimental and only a few races have been able to perfect them, thus they are still rare and prices are high. Note that these augmentations generally are not compatible with artificial systems like bionics.

Attribute Increases: Attributes can be easily tweaked up to the natural human maximums of 24. Results beyond that or raising multiple stats makes the process more involved. There are three levels of attribute augmentation: *Increased Attributes* (3D6+6), Perfect Attributes (1D6+15), and *Superhuman Attributes* (2D6+20). Attributes can be raised individually or in groups. Mental and physical attributes are the usual group distinctions. Different levels of increases can be used on different attributes. **Cost:** 250,000 credits for each Increased attribute, 750,000 credits for each Perfect attribute, and 5 million credits for each Superhuman attribute.

S.D.C. Increases: There are four levels of S.D.C. increase: *Increased S.D.C.* (1D4x10+25), *Perfect S.D.C.* (2D4x10+50), *Superhuman S.D.C.* (2D6x10+75), and *Regeneration* (one Hit Point or S.D.C. point every 20 minutes or three every hour).

Each level of S.D.C. increase is purchased separately, do not combine any of them except regeneration which can be added to any of the other three or taken on its own. **Cost:** 350,000 credits for Increased S.D.C., 750,000 credits for Perfect S.D.C., 2.5 million credits for Superhuman S.D.C., and 50 million credits for Regeneration.

Natural Armor Ratings: Toughening the character's skin and body to withstand physical damage, by increasing their resistance to taking that damage in the first place. The Natural Armor Rating has two categories: basic and advanced, and three levels: A.R. 10, A.R. 12, and A.R. 14.

Basic levels of armor rating actually add scales or other tough plates on the character's body to provide protection. The higher the level and A.R., the more of it there is on the body and the more extensive it is. Advanced armor ratings are the pinnacle of this technology and are not physically noticeable, for the process increases the density of the skin itself. The person looks perfectly normal. **Cost:** Level one basic (A.R. 10): 500,000 credits; level two basic (A.R. 12): 1.2 million credits; level three basic (A.R. 14): 3 million credits. Double the cost to get the same A.R. protection via advanced armor.

Additional Appendages: Just like insects and arachnids, multiple limbs can be genetically coded into the character.

Two extra arms add one attack per melee and +2 to parry. Maximum three pair (six arms).

An extra pair of legs requires a modified torso similar to that of an insect or a horse, though the legs can have any appearance. Each extra pair of legs adds 50% to the character's running speed, +1 to dodge, and +10% to overall balance. Maximum four pair (eight legs), requiring a long torso.

Tail: Two types: Cosmetic tail (usually short like a pig or donkey and useless), and Prehensile Tail which is typically long and nimble, able to grip objects like that of a monkey and some lizards (see page 160 of HU2 for rules on the *prehensile tail).* Prehensile tail adds one melee action/attack. Maximum of three tails are possible.

Tentacles: 10 maximum. Each pair (i.e for every two tentacles) provides the bonus of +1 to parry, and +5% to climb skill. For every three tentacles the character gets an additional melee action/attack and is +1 to disarm and +2 to entangle and pin. Tentacles are not as articulated as hands with opposable thumbs, but can use melee weapons and tools effectively and operate computers and most basic machines and equipment.

Cost: 50,000 for a useless cosmetic tail (gets it just for looks). 2.5 million credits for each pair of limbs (arms or legs), 1.7 million for a prehensile tail or one tentacle. Also see stingers and poison under genetic weapons.

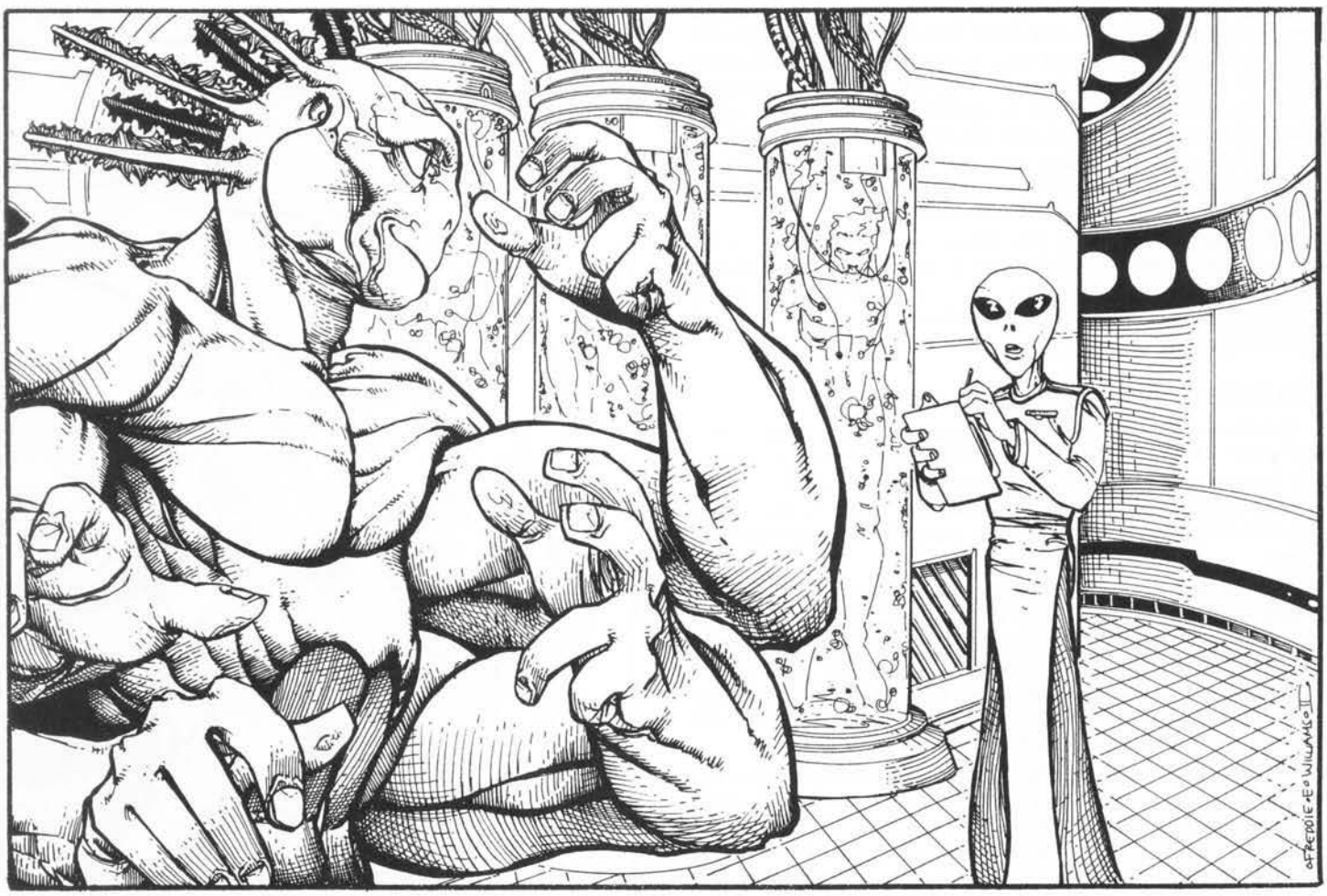
Ambidextrous: Character can use the right and left (and multiple?) hands with equal skill. Adds one melee action/attack, +1 to parry, +5% to the following skills: Climbing, Pick Locks, Palming, Concealment and other sleight of hand. **Cost:** 65,000 credits (140,000 for each additional pair of limbs without benefit of any additional bonuses or melee actions. Ambidextrous is not applicable to tentacles, tails or feet).

Augmented Senses: Many insects see in ultraviolet, some snakes have thermal senses, canines track by scent and have sensitive hearing, and the list goes on and on. Such genes can be mimicked or copied to augment humans and give them some of the same capabilities. Some of these augmentations can be temporarily turned off or subdued with additional genetic coding. G.M.s should use common sense for which systems can be switched off this way. Bonuses and abilities for heightened senses are identical to the Minor Super Abilities of the same names (supervision and heightened senses). **Cost:** 2.2 million credits per augmented sense.

Armored Eyes: The eyes are toughened and protected by a tough, transparent membrane that automatically slides into place when the atmosphere is foul or there is a danger to the eyes (i.e. when underwater, sand tossed at the eyes, tear gas, etc.). Irritants do not bother the character, except for the initial distraction of the eye being hit (-2 to strike and parry for the next attack only). Dirt, sand, smoke and chemicals including mace and tear gas do not apply penalties to the character's vision, although other aspects of chemical/gas attacks may affect the character with partial (3/4) or even full effect depending on what it is. **Cost:** 150,000 credits

Compound Eyes: Large, multi-faceted pairs of eyes that extend a character's peripheral vision to 180 degrees (like a bird's), allowing him to see just over each shoulder as clearly as if he had turned his head. Adds +1 to initiative and +1 to dodge (and +2 to perception rolls when applicable). Subtract 1 point from P.B. **Cost:** 650,000 credits per pair.

Extra Eyes: Can be placed anywhere on the body, but are commonly on the head. They are usually kept closed and asleep until used, but an additional augmentation will provide them with their own small brain bundle, allowing them to be constantly alert. Adds +1 initiative and +1 to parry and dodge (+2 to perception rolls); impossible to attack unseen from behind if located in the back of the head. Extra eyes come in pairs and can have additional augmentations, but special augmentations (nightvision,



X-Ray Vision, etc.) are bought separately for each pair of eyes (1.5 million each). If obvious, subtract 2 points from P.B. **Cost:** 825,000 credits per pair. Additional cost for vision super abilities (if any).

Insulation: The character has layers of fur, blubber or other natural insulations that provide protection from the cold. Fur and feathers are obvious, but a concentrated layer of blubber can easily go unnoticed, except for the extra bulk, making the character appear chubby or heavyset (not necessarily obese). Likewise, heat dissipating glands and water storage organs can increase resistance to heat and the elements. Cold insulation cuts cold damage by half and adds +2 to any saving throws against cold effects. Heat dissipation does the same for the opposite extreme. A character can not have both kinds of insulation. **Cost:** 250,000 credits for either augmentation.

Motion Detection Senses: Specially designed sensitive hairs and eardrums (or small antenna) among other subtle modifications enables the character to pick up the slight, but telltale signs of motion around him. This makes it impossible to sneak up on the character. The motion detection sense only works in a 30 foot (9 m) diameter around the character (40-60 feet/12.2 to 18.3 m if the motion is very fast, creates a large disturbance). Provides the following bonuses: +2 to initiative, +1 to parry and dodge, and +2 to roll with impact. **Cost:** 450,000 credits.

Radar: Same as the Super Ability in HU2, page 236, but this version only gets half the bonuses. **Cost:** 1.2 million credits

Sonar: Like a dolphin, the character can emit high-pitched clicks or whines that bounce off of his underwater surroundings and return to him where special organs in the forehead or ears translate them into an awareness of what's about. This system is not highly precise and will not allow the character to pick out details such as facial features or whether the sonar image is holding a gun or a flashlight, but it will allow him to operate in complete darkness underwater by "seeing" sonar images, shapes and movement in the water where the sonar is directed (typically below or in front of him). Sonar is not constantly going and does emit high-pitched sound waves that can be heard and traced by those with the right heightened senses or also using sonar and passive means of underwater detection. **Bonuses:** +1 on initiative and +2 to dodge, and +10% on Detect Ambush, but only when underwater. **Cost:** 1.2 million credits and the character has an oversized and rather bulbous forehead.

Wing Augmentation: A pair of fully functioning wings on the back. Wings can be feathered, leathery like a bat's, or insect-like. They provide a flight speed equal to the character's running speed +2D4x10 additional points. **Bonuses:** +1 on initiative and +1 to dodge.

Genetic Weapons

Genetic weapons are natural defenses such as fangs, claws and poison. All are close-ranged melee weapons except for spitting poison, which is still limited to less than 20 feet (6.1 m). All genetic weapons capable of extending and retracting (often hidden until necessary), such as claws, are coded as such from the outset.

Claws: Retract under the fingernails or into the tips of thick fingers, leaving only a slightly noticeable opening (perception needed to see them is moderate for large claws and challenging for small ones). Damage: Small claws add 2D4 damage to hand to hand attacks, large ones add 2D6. **Cost:** 125,000 credits per hand for small and 175,000 credits per hand for large claws. Half the cost if the claws are not concealed or retractable.

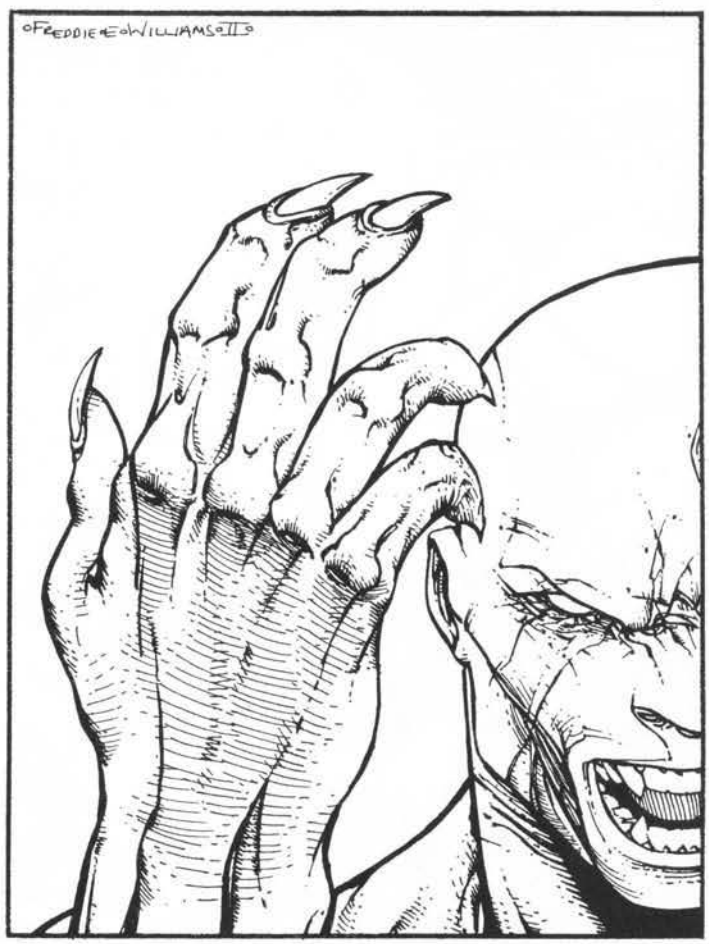
Fangs: Partially retractable fangs and lower canines give the character a notably feral appearance. Damage for retracted fangs is 1D4. Extended fangs do 2D6 damage (P.S. and combat bonuses do NOT apply to bite attacks). Hollow fangs for poison have no lower canines and only do 1D6 damage even when fully extended, but also have the bonus of inflicting poison (see below) upon victims of their bite. **Cost:** 90,000 for sharp canines, with modest fangs that don't retract. 150,000 credits if retractable and 275,000 credits if hollow, plus poison cost.

Poison: The character has special glands that create and store poison. The poison is typically *injected* via hollow fangs, quills or stinger, thus requiring one of those "delivery" mechanisms to get the genetic poison feature (can not be used with claws).

Lethal Poison: The poison does 4D6 damage direct to Hit Points. If the victim saves (a roll of 14 or higher vs lethal poison) he suffers only bite damage, plus 1D4 damage from the poison, and feels a burning sensation that may cause mild nausea or for him to break into a sweat, but nothing more. **Cost**: 450,000 credits. **Payload:** can manufacture enough poison for four attacks +1 per level of experience. Takes four hours to replenish one attack worth of poison.

Nonlethal Poison: Bite damage (usually 1D6) plus the fast acting poison causes dizziness and nausea for 1D4 melee rounds +1 round per level of the genetically augmented character's experience. The victim suffers the following penalties: Reduce Spd by half, -1 attack/action per melee round and reduce combat bonuses by half. Needs a 16 or higher to save vs nonlethal poison. A successful save means only combat bonuses (strike, parry, etc.) are -1, speed and the number of attacks are not penalized. **Cost:** 400,000 credits. **Payload:** can manufacture enough poison for four attacks +1 per level of experience. Takes four hours to replenish one attack worth of poison.

Quills: Like a porcupine, the character can extend durable, sharp spines all along his body. The quills are usually limited to the arms and/or head and back, but some elect to have quills cover the majority of the body as a defense system. Tinted lines can be seen under the character's skin like very fine bruises where the quills lie under the skin or sticking out a bit among the



body hair. The longest quills (6-12 inches) may look like long, thick rows or spikes of hair (especially on the head and back), at least until they are raised in defense.

As a defensive system, the quills will do 3D6 damage to anyone grappling with the character or trying to apply a wrestling style pin maneuver, crush/squeeze attack or leap/pounce attack, 1D6 damage to anyone punching him. Characters with quills also get a Natural A.R. of 8 and 2D6 S.D.C. if the quills cover at least a third of the body, A.R. 11 and an extra 4D6 S.D.C. if half the body is covered and A.R. 14 and 6D6 S.D.C. if all or most of the body is covered (typically has a soft underside). Or increase the A.R. by 2 and add in the appropriate S.D.C. when some other natural armor preexists.

As a weapon, the quills can be extended and used to augment kicks, punches or forearm and /backhand attacks by adding 1D6+3 damage to the normal damage inflicted by the attack (i.e. normal punch damage +1D6+3 from the quills, plus any damage from combat or attribute bonuses). Quills can not be "launched" unless they are on the end of a tail, and even then they get no bonuses to strike and do only 1D6 damage. Quills can be combined with poison, injecting the toxin on successful hits, but doing so costs an additional million credits. **Cost:** Third of body 1.3 million credits, half the body 1.9 million, 3/4 to full coverage 2.5 million credits.

Spit Poison: The character has special glands that create and store poison as well as the ability to "spit" the poison up to 15 feet (4.6 m) away, +1 foot (0.3 m) per level of experience.

Lethal Poison: Does 2D6 damage direct to Hit Points upon contact with the flesh, and blinds one's opponent until the eyes can be flushed with water (-10 to strike, parry and dodge while blind). Spitting poison into a victim's eyes requires a Called Shot and is done with a -3 to strike penalty. **Cost:** 650,000 credits. **Payload:** Can manufacture enough poison for four attacks +1 per level of experience. Takes four hours to replenish one attack worth of poison.

Stinger: The character has a tail of some sort that ends in a stinger. The stab of the stinger does 1D4 damage if small or 2D6 if large and does NOT have a poison injection capability. However, the stinger can be made to deliver a poison into its victims at the extra cost noted under *poison*, described earlier. In this case, the "sting" does only 1D4 damage plus poison (lethal or nonlethal). More than one stinger is possible but each requires its own appendage such as a tail (3 maximum) or tentacles (10 maximum). **Cost:** 50,000 credits for each nonpoisonous stinger (stabs only), 90,000 credits per poisonous stinger plus the cost of the extra appendage and poison generating glands.

Augmented Organs

Internal organs can be individually tweaked and enhanced to refine their productivity and increase efficiency. All bonuses are cumulative with attribute, skills and other possible bonuses.

Brain: Health and structure of the brain is improved, providing better memory and faster thought processes. +2 to I.Q., +1 on initiative (sharp and alert), +2% to all skills (including Secondary Skills) and is +1 to save vs possession and mind control (drug and psionic varieties). **Cost:** 1.2 million credits.

Lungs: Stronger and more efficient, the lungs are augmented to provide a larger flow of better oxygenated air. Endurance and physical performance benefit from this. Increase P.E., P.S. and Spd by +1 point, the character tires half as quickly as others do, and he can hold his breath for twice as long as normal (about one melee round per P.E. point). **Cost:** 750,000 credits.**Kidneys:** With super-efficient filtering capabilities and increased capacity, the kidneys can keep the blood cleaner for longer. +1 to P.E., +1 to save vs poison and drugs, +3 to save vs disease, and does not fatigue as quickly (about 10% greater endurance). Cost: 900,000 credits.

Digestive System: Effectiveness is increased in both breaking down and absorbing nutrients from food; faster, better, more efficient. Provides increased and extended energy levels. Reduce fatigue rate by 25%, +1D6 to Spd attribute, +1 to save vs poison, +6 to save vs food poisoning and disease caused by spoiled food, and +1D6+4 to S.D.C. Also enjoys +1 to initiative for two hours after eating. **Cost:** 650,000 credits.

Immune System: The character's jazzed up immune system takes care of sickness and toxins, but isn't powerful enough for regeneration. +20 to S.D.C., +6 to save vs disease, +2 to save vs poisons, and rarely gets ill, not even from the common cold. **Cost:** 1.1 million credits.

Adrenaline Surge: When the going gets tough, the tough are likely to get a nice surge of adrenaline. A number of superhuman feats are attributed to adrenaline. The character can initiate a surge of adrenaline once every hour that increases his speed and strength. The surge lasts for one minute (4 melee rounds) and adds +1 attack per melee, +1 to strike, +2 to parry and dodge, +10 to P.S. and P.E. (but neither becomes supernatural), and +20 Hit Points. Note that any damage comes off of the character's own Hit Points first, then the additional +20 points are used. The extra damage also transfers once the surge wears off. This means that a character under an adrenaline surge can essentially be killed and not realize it until the surge wears off. Certainly this is a two-edged sword. **Costs:** 1.2 million credits.

New Equipment

Melee Weapons

To reiterate the clarification given in **HU2**: energy melee weapons do not receive P.S. bonuses of any kind. The energy itself does the damage, not the force of the impact. This includes energy melee weapon systems for robots and bionic characters (as presented in **Aliens Unlimited™**).Relating to Supernatural P.S. and weapons, Vibro-Blade weapons are considered high quality weapons and seldom break when used by a superhuman wielder. Kisentite weapons are considered unbreakable (it would require ten times their maximum damage to break them).

Precision Weapons (based on ideas by Kevin Siembieda): The listed melee weapons in **HU2** and the **Galaxy Guide** are examples of average combat quality weapons. They will only break or fail in the most extreme and arduous of circumstances. Their damaging capabilities are what one expects from a combat weapon of that type. In the enormous marketplace of the galaxy, there are races, such as the Kisent, that have elevated weapon making to a science. The following bonuses and extra costs are for weapons produced by these masters of the craft. Remember that all costs for bonuses are cumulative – i.e., a 1500 credit Kisentite knife with +2 to damage would add 3000 credits (200%) to its cost, for a total of 4500 credits. Likewise, a regular broadsword at 300 credits with the same +2 to damage would add 600 to its cost for a total of 900 dollars/credits.

Precision Blade Weapons (including spears, axes, and forks):

+1 to damage add 150% to the cost of the weapon
+2 to damage add 200% to the cost of the weapon
+3 to damage add 400% to the cost of the weapon
+4 to damage add 500% to the cost of the weapon
+2 to parry add 400% to the cost of the weapon
+3 to parry add 800% to the cost of the weapon
+1 to parry and strike add 1000% to the cost of the weapon
+2 to parry and strike add 2000% to the cost of the weapon

Precision Blunt Weapons (including staves, hammers, and bolas):
+1 to damage add 200% to the cost of the weapon
+2 to damage add 400% to the cost of the weapon
+3 to damage add 600% to the cost of the weapon
+4 to damage add 800% to the cost of the weapon
+2 to parry add 300% to the cost of the weapon
+3 to parry add 600% to the cost of the weapon
+4 to parry add 900% to the cost of the weapon
+1 to strike add 500% to the cost of the weapon
+2 to parry and strike add 2000% to the cost of the weapon

Precision Chain or Ball and Chain Weapons (includes whips and certain oriental weapons):
+1 to damage add 500% to the cost of the weapon
+2 to damage add 600% to the cost of the weapon
+3 to damage add 700% to the cost of the weapon
+4 to damage add 900% to the cost of the weapon
+5 to damage add 1200% to the cost of the weapon
+1 to strike add 500% to the cost of the weapon
+2 to strike add 600% to the cost of the weapon

Microjet Throwing Weapons: Just like the advanced firearms ammunition of the same name, this weapon augmentation uses small rocket thrusters to increase the range and velocity of thrown projectile weapons. Knives of this sort have a small thruster in the hilt, arrows have miniature thrusters alongside the head, etc. The only drawback to these somewhat expensive weapons is the fact that once thrown, they may be lost. Because of this, many are designed to explode (doubling the price and the damage inflicted).

For those who can afford it, the newest advanced weapons return to the wielder by microchip commands and directional thrusters (raises the price by a factor of 30). In the latter case, the weapon has a paltry return speed of 12 and can only return *four times* before fuel is exhausted. Depending on how far these weapons are thrown, they generally take an action to throw and an action to return, allowing the wielder to stagger their attacks if more than one weapon of this type is employed (throw one, throw another, catch the first and re-throw, etc.). Keeping up such a pace is difficult and requires not only a skill in the specific weapon, such as W.P. Knife, but also requires a roll to catch the returning weapon and re-throw it. Catching it counts as one melee action/attack, and throwing it again counts as another. However, if the character has the *W.P. Targeting skill*, catching the weapon does NOT use up a melee action, but throwing it does. Rapid-fire throwing, catching and throwing again, is akin to juggling and an aimed shot is impossible. **Cost:** 10 times the normal cost of the weapon for a Microjet Weapon (i.e. a 50 credit knife will cost 500), but 30 times the normal cost for one that returns after it is thrown. **Range:** Triples the normal range of the projectile. **Damage:** Double the normal damage of the projectile.

Kirlios Throwing Circle: A metal ring about a foot across with a blade around the outer edge. The blade can be razor sharp or have serrations like a saw (2D4 for normal throwing circles of either type; not motorized or jet propelled).

The unique thing about the Kirlios weapon are that the blade is motorized and spins as it flies, adding an extra die to the damage. Combined with the microjet system, it is a truly impressive hand thrown weapon. All Kirlios have the return to wielder system, which is reflected in the cost. **Cost:** Typical Microjet Throwing Circle: 10,000 credits. **Range:** 200 feet (60 m). **Damage:** 4D8 (or 5D6). **Note:** One Kirlios warlord is said to have spent nearly a million credits on his Throwing Circle, adding a simple artificial intelligence instead of the basic return system chipset, upgrading the return thrusters to a micro hover system, and using a Kisentite blade (if so, it would cost 800,000 credits, have a range of 400 feet/122 m and do 1D6x10 damage).

Rail Guns

Rail guns are a highly effective combination of energy weapons and firearms. They launch projectiles at many times the speed of sound by electromagnetic current. Power runs down a "U" shaped rail (hence the name) on which the projectile rests. As the current races up the other rail, it carries the projectile with it. Muzzle velocities can easily reach several times that of normal firearms. The only problem with rail guns is their size. Miniaturization is difficult, even for advanced races; however, the punch of the rail gun at close-range (when compared to energy weapons) can not be disputed. Though rare in portable form other than heavy machine-gun style weapons, rail guns are common vehicle and cyborg/robot weapons. **Note:** Rail guns do not use shells, nor do they eject spent cartridges. With no propellant needed, the whole round is launched from the weapon. The lack of propellant also means that more ammunition can fit into the same sized clip or belt, thus the entries below will reflect this in significant ammo capacities.

The rounds used by a rail gun are most often metal slugs or rings, but specialty ammo with metal conductors for propulsion can be used (this allows wooden bullets for fighting vampires or ice rounds for thermal aliens, etc.). Anything that is dense or strong enough to withstand the forces of acceleration can be made into ammo. On Earth, early rail gun tests used plastic blocks with metal plates under them, and they could still punch through plates of metal an inch thick! The traditional special rounds that can be used by rail guns are exploding rounds and depleted uranium core rounds. All rail gun rounds are considered *armor piercing* because of their high velocities. (**Note:** Lower the A.R. of the target by 2 points, whether the A.R. is for artificial armor or Natural.) There is no muzzle flash from a rail gun, but the speed of the rounds makes a sonic boom like thunder, so these weapons are unsuitable for stealth missions.

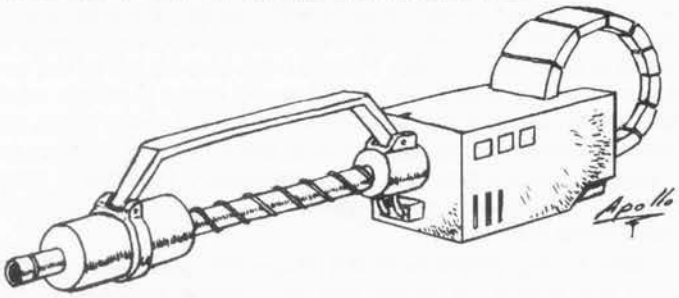
Rail guns are typically reserved for anti-vehicle and anti-armor and heavy combat, and often mounted on or built into combat vehicles and robots. The miniaturized, burst capable rail gun is an expensive prospect open only to such powerhouses as the TMC and the Atorian Empire, but if either of them make regular use of such equipment, it has yet to become common knowledge among the galactic community.

All rail guns are considered *heavy weapons* and can only be purchased legally with a security or military license. The FAR is very strict on this. The TMC feels much the same way, but can only crack down to the extent of the laws they are contracted to enforce. Fortunately for them, most governments share their dislike for heavy weapons in the hands of criminals or amateurs.

Exploding Rail Gun Rounds: These rounds are much more durable than conventional exploding rounds because they rely on the massive velocities of the rail gun to set them off, thus they could be safely fired in bursts. The lack of propellants for rail gun rounds means they are normally larger and heavier than bullets or cartridges of the same weapon class, which gives this particular special round a larger blast radius than other exploding bullets. Blast radius for human-sized and light rail gun explosive rounds is 3 feet (0.9 m), medium rail guns produce 5 foot (1.5 m) blasts with this round, and heavy vehicle rail guns have an 8 foot (2.4 m) blast radius using exploding rounds. **Cost:** When available, they average about 250-300 credits per bullet, but are usually illegal except for military or security personnel. **Damage:** Exploding rail gun rounds increase the damage of normal rail gun bursts by 3D6 (light), 5D6 (medium), or 1D4x10 (heavy).

Depleted Uranium Core (DUC) Rail Gun Rounds: Encasing a pellet of super-dense depleted uranium in the center of a rail gun round increases the already impressive velocity and impact potential of the round, raising its penetrating capabilities and subsequent damage rating. In addition to the natural *armor piercing* capabilities of the rail gun round, the DUC provides its own

+2 penetrating bonus for a total of -4 to A.R. See the Special Bullets section under Hardware: Weapons Expert (page 134) of **HU2** for full details on DUC rounds. **Cost:** When available, they average about 425-550 credits per bullet, but are usually illegal except for the military or licensed security personnel. **Damage:** Add 5D6 to the normal damage of a rail gun burst.



Light (Humanoid) Rail Gun: These weapons resemble a light machine-gun from Earth, only the weight and recoil are far greater. Humanoids with Superhuman or Supernatural P.S., and robots can handle a light rail gun without difficulty. Humanoids with normal strength must have a P.S. of 22 or higher, or else they will be unable to fire this class of weapon without getting knocked on their behind (lose initiative and one melee action, and -3 to strike). There are a multitude of models and makes for this type of weapon across the galaxy. Most are produced and used by militaries, but they are quite common on the black market. The weapon comes with a tripod and vehicle mounting bracket, ammo drum (empty; comes with a harness to wear it as a backpack or bolts to mount it on armor), and 4 ammo clips (likewise empty). **Cost:** 40,000 credits. **Weight:** 35 lbs (16 kg) with clips and 87 lbs (39 kg) with the ammo drum full. **Range:** 4000 feet (1219 m). **Damage:** 6D6 per round (3D6 M.D. for a burst in Rifts®). **Rate of Fire:** Aimed, Burst, or Spray, see the machine-gun rules. **Ammo:** 100 round clip or 1000 round drum.

Light Rail Gun (Vehicle): Roughly the equivalent of a man portable .50 caliber machine-gun, this weapon is designed to be broken down into three large components and a separate ammo drum to be carried by a squad of soldiers. Once it reaches its destination, it is set up and fired from a tripod or stable mounting (brackets included with armor piercing rivets to anchor it to rock and metal if necessary). Soldiers with Superhuman or Supernatural P.S., full conversion bionics, or robots may fire this weapon without bracing, but they must have a P.S. score of at least 23. Humanoids with normal strength simply can not handle the weapon without bracing it (attempting to will result in the shooter taking 4D6 damage and a knockdown/stun lasting 1D4 melee rounds). As a result, these weapons are usually mounted on vehicles and heavy robots. Only those specifically outfitted for use by superhuman/robot soldiers will be clip-fed; others will use large ammunition drums. These weapons make superb gun-pod weapons for giant robots (8 feet/2.4 m tall or larger). **Cost:** 75,000 credits. **Weight:** 85 lbs (38 kg) outfitted with clips, 250 lbs (112.5 kg) with an ammo drum. **Range:** 6,000 feet (1828 m). **Damage:** 1D6x10 per round. **Rate of Fire:** Single shots only. **Ammo:** 80 round clip or 800 round drum if portable, 5000 round drum if built into a spacecraft or large vehicle.

Medium Rail Gun (Vehicle): Intended for use exclusively as a vehicle weapon, only giant characters, giant robots (12 feet/3.6 m tall or larger), and those with a Superhuman P.S. of 50+ or Supernatural P.S. of 35 or greater can use this weapon. Even then the shooter is at -2 to strike due to the awkward size and bulk. Moreover, although these truly super-strong people could carry them, setting them up would require a crew of people. Medium rail guns of this type function as the main weapons of military scout vehicles (backed up by a heavy energy weapon or light vehicular rail gun) and often back up the main guns of tanks and other heavy juggernauts as anti-aircraft weapons or light anti-vehicle weapons. **Cost:** 240,000 credits. **Weight:** 1200 lbs (540 kg). **Range:** 7,500 feet (2286 m). **Damage:** 2D6x10 per round. **Rate of Fire:** Single shot only. **Ammo:** 500 round drum only if portable, 4000 round drum if built into a spacecraft or other large vehicle.

Heavy Rail Gun (Vehicle): These massive weapons are the size of artillery pieces and function as the main weapons of tanks or protect the walls of military fortifications. This class of weapon is simply impossible for even the strongest humanoid to hold and fire. Pirates and small militia forces have been known to mount these upon spacecraft as a cheap alternative to energy weapons, or as a means of discouraging boarding parties. Again, the sheer mass of the ammunition limits its payload for many practical reasons, though such weapons mounted on buildings can have additional ammo stored close by to facilitate reloading. Each of these rounds easily weighs 50 pounds (22.5 kg) on average. **Cost:** 750,000 credits. **Weight:** 2,000 pounds (900 kg). **Range:** 10,000 feet (3048 m). **Damage:** 1D4x100 per round. **Rate of Fire:** Single shot only. **Ammo:** 200 round drum built into large spacecraft.

Missiles

Missiles are not usually standard equipment outside vehicle and robot applications, but the wonders of miniaturization and the advent of *mini-missiles* have put the availability of man-useable sized rocket launchers within the reach of the galactic adventurer. Note that unless a mini-missile launcher is built into a robot or vehicle, the Heavy Weapons skill is needed to gain any bonuses with it. Vehicle or robot mounted systems use the Weapon Systems skill instead.

In most civilized parts of the galaxy, ownership of any kind of missile system is prohibited for commercial use (i.e. civilians can not own or operate missile systems), restricting availability to the military and select industrial and security operations. The FAR is very strict on this and the TMC feels much the same way, but can only crack down to the extent of the laws they are contracted to enforce. Fortunately for them, most governments have a prohibition on the use of missiles (and most heavy weapons) in the hands of adventurers, criminals and amateurs.

Note that the rules for missiles, missile volleys, and shooting down missiles are all given in **HU2**. Shooting a missile that is not already launched and active has a 30% chance of detonating it and setting off its payload. If the missile is an explosive type, it will then have a 01-60% chance of detonating any other missiles within its blast radius whose S.D.C. the resulting explosion destroys.

Mini-Missiles: A list of mini-missiles is found, page 82 of **HU2**, along with other types of large, longer, ranged missiles. For convenience, the mini-missiles are summarized here, along with a few new mini-missiles.

High Explosive: Range: One mile (1.6 km). Damage: 5D6. Blast radius: 5 feet (1.5 m).

Fragmentation: Range: 0.5 miles (0.8 km). Damage: 5D6. Blast radius: 20 feet (6 m).

Armor Piercing: Range: One mile (1.6 km). Damage: 1D4x10. Blast radius: 3 feet (0.9 m).

Plasma: Range: One mile (1.6 km). Damage: 1D6x10. Blast radius: 15 feet (4.6 m).

Gas Mini-Missiles (new): Full details on the effects of "gas" missiles are found on page 341 of **HU2** (they are identical to the grenades of the same name).

Cost: 800 credits each for damaging missiles and 500 credits each for non-damaging types. Rate of fire: varies by launcher type and payload.

Tranquilizer Mini-Missile: Range: 1200 feet (366 m). Damage: Same as Knockout gas.

Tear Gas Mini-Missile: Range: 0.5 miles (0.8 km). Damage: Same as Tear gas grenade.

Nerve Gas Mini-Missile: Range: 0.5 miles (0.8 km). Damage: Same as Nerve gas grenade.

Mini-Missile Transport Cases: The average mini-missile is about the size of a soda can or bottle and is reasonably portable. Safety is always a concern with explosives, so special cases are designed to protect them for transport in the most non-encumbering and practical way possible. Each case is lightly armored (A.R.: 10, S.D.C.: 50) and temperature insulated. Giant-sized characters (9 feet/2.7 m or taller) can get cases with 50% more capacity without sacrificing maneuverability (cost is doubled).

Hip Case: Cost: 100 credits, Payload: 3 missiles.

Thigh Case: Cost: 110 credits, Payload: 2 missiles.

Bandolier Case (down each side of the chest): Cost: 250 credits, Payload: 8 missiles (4 per side).

Backpack Case (the size of a large backpack): Cost: 500 credits, Payload: 10 missiles.

Backpack Attachment Case (wraps around a backpack): Cost: 300 credits, Payload: 5 missiles.

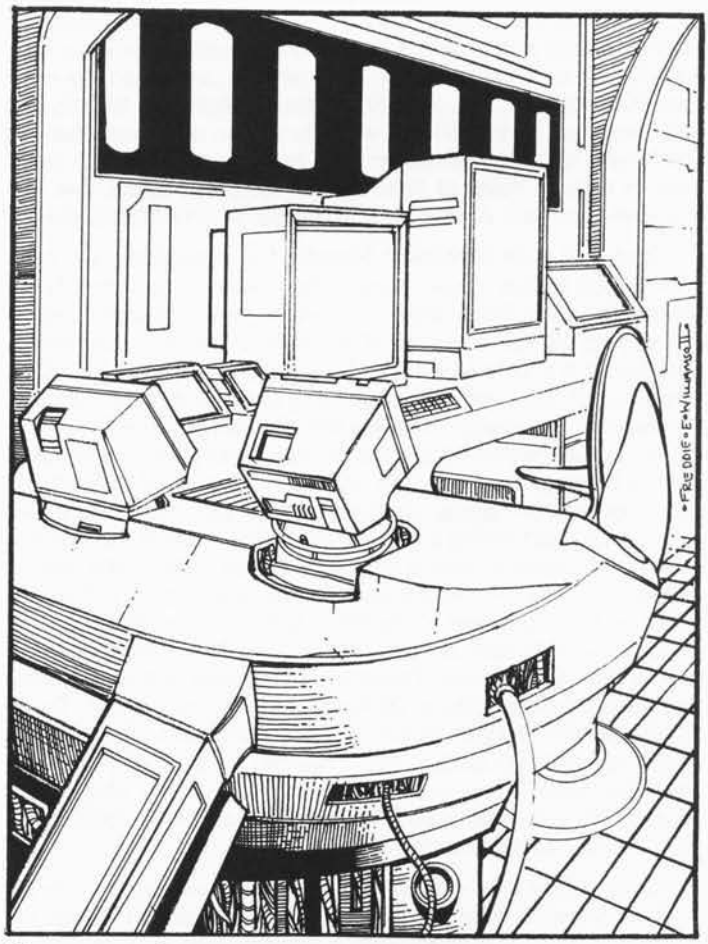
Under Barrel Mini-Missile Launcher: Identical to the under barrel grenade launcher in principle and general configuration, only this weapon launches a single mini-missile from a casing located beneath the barrel of a rifle. Additional rounds must be carried separately (see the mini-missile transport cases above). **Cost:** 10,400 credits for the launcher, missiles must be purchased separately. **Weight:** 12 lbs (5.5 kg). **Range:** By missile type. **Damage:** By missile type. **Rate of Fire:** Single missile, reloading takes two actions. **Payload:** One mini-missile.

Forearm Mini-Missile Launcher: Built into an armored gauntlet or onto a suit of power armor this weapon consists of a casing for the mini-missile and compact launch mechanism. Typical systems have a single missile payload, but robots can have two missiles and giant robots use the small missile launcher stats given in the Robot Construction Rules (**HU2**, pages 208-209). **Cost:** 15,500 credits for the standard system and 27,500 credits for the twin launcher. **Weight:** 10 lbs (4.5 kg); **Range:** Varies by missile type. **Damage:** Varies by missile type. **Rate of Fire:** Single missiles, reloading takes two actions (twin launchers can fire singly or in pairs, but also take two actions to reload). **Payload:** One mini-missile or two in twin systems.

Light Missile Weapon (LMW): Similar to a Light Anti-tank Weapon (LAW), this launcher is tube shaped and rests on the shoulder to fire. It holds three mini-missiles (fired one at a time) or one short-range missile (2D4x10 damage to a 40 foot/12 m blast radius, 3 mile/4.8 km range). Reloading it takes four actions for all three missiles or two actions for one. These are favorite light support weapons among mercenaries who use the large blast radius of fragmentation missiles to clear out enemy bunkers and camps. A 40 foot (12.2 m) blast radius from a short-range missile is a lot of area to spread damage over for such a small weapon system. A trait that earns the weapon its nickname, the "LawnMoWer." The compact size of the LMW enables an ordinary person to use it, the weapon is comparatively easy to conceal, and its versatility (can use mini-missiles or short-ranged ones) makes it extremely popular among soldiers, adventurers, mercenaries, raiders and space pirates. Typically carried by a 2-4 man team, one carrying the launcher, the others to carry missiles. **Cost:** 36,500 credits. **Weight:** 12 lbs (5.4 kg) fully loaded. **Range:** Varies by missile type. **Damage:** Varies by missile type. **Rate of Fire:** Single missile. **Payload:** Three mini–missiles or one short-range missile.

Automated Missile Battery (AMB): This system is man portable if broken down into its four component parts, but can not be fired unless fully assembled. It comes in two models, one firing short-range missiles and another designed for medium-range missiles. The AMB sits on four stout legs and has motorized elevation and aiming capabilities. A simple but effective combat computer directs it. Manual firing is possible, but the automated unit is designed to be set up, programmed, and left to do its duty. The missile battery can be programmed with up to 175 specific radar silhouettes or visual images of targets (yes, it can be programmed to shoot specific people with missiles, but is limited by range). The radar's range is 60 miles (96 km) and visual range is limited to one mile (1.6 km). Priorities can also be set on the targets so that, for example, the unit would target a certain robot unit before engaging the much closer tank, or it would attack the robot exclusively and ignore the tank, and so on. The unit can be reused and reprogrammed when necessary. Renewable solar batteries give these systems years of life. Estimated at 50-90 years; never fully tested.

Many a deep jungle or desert across the galaxy have AMBs sitting and waiting for targets that never came, forgotten as the wars responsible for their "seeding" (placement) ended or the unit was forgotten. Such units remain automated and will attack targets they (mistakenly) identify as the enemy. **Cost:** 125,000 credits for either model. **Weight:** 150 lbs (67.5 kg) fully loaded. **Range:** Varies by missile type. **Damage:** Varies by missile type. **Rate of Fire:** Short-range AMB: One at a time or volleys of 2 or 4. Medium-range model: One at a time. **Payload:** Four missiles in a short-range launcher. Two missiles in a medium-range launcher.



Computers

The following are some of the more common components to any respectable Cyberjacker's computer arsenal. While this gear is often found in the hands of galactic computer criminals, it also receives widespread legitimate use, too. The statistics given are for average-quality computer gear. At the G.M.'s discretion, devices may receive extra bonuses or penalties depending on who constructed them. Higher tech computers from greatly advanced

societies (such as the Atorian Empire, the TGE's personal systems, Struthio computers, and certain races of Phase World) are top-notch, and would give an extra +10% bonus (where applicable) when used. Most of the following equipment can be constructed by *Hardware: Electrical Geniuses* and the penalties for such are listed under each entry.

Satellite Uplink: This hardware allows a computer to transmit and receive data via satellite relay. It is useful for contacting spacecraft from a planet, reaching other computers from a portable computer in the remotest of locations, and for leaving virtually untraceable routes when Cyberjacking. On advanced worlds where satellites have laser communication abilities, a satellite uplink can even be used to send and receive over interstellar distances; however, the lag time is horrific, often requiring hours or days in between responses. Satellite uplinks can be used in portable computers, personal computers, robots (commonly in remote exploratory robots), and other computer controlled or compatible systems. **Cost:** 15,000 credits. **Construction penalty:** -20% and requires the Radio: Satellite skill.

Reality Enforcing Systems: An RES is normally affordable only to major corporations and the government. These prices are for reference and for those rare situations where player characters might be able to afford them (such as a robot with a RES to protect its AI system or a personal computer system). The Electrical Genius power category can design their own RESes using the construction rules given in **HU2**. The cost of a RES system is based on its size and passive security level. The security levels correspond to those given in the passive security penalties list. The sizes represent how many security rolls at that security level need to be made to pass through it. Most systems have separate security areas (one size unit) for each division, department, or class of sensitive information. **Construction penalty:** -40%.

Cost: RES with simple security systems: 20,000 plus 8,000 per secure unit.

RES with moderate security systems: 60,000 plus 15,000 per secure unit.

RES with sophisticated security systems: 280,000 plus 24,000 per secure unit.

RES with super sophisticated security systems: 1.2 million plus 35,000 per secure unit.

RES with superior military security systems: 12 million plus 50,000 per secure unit.

Virtual Reality Accessories (VR Accessories): Virtual Reality Accessories allow non-cyber enhanced hackers to "see" the data realm and interact with it without the need for a keyboard. VR goggles enclose the vision of the user and project the artificial reality of the computer onto the sense of sight. Similar accessories bring the other senses into the cyber-world to further immerse the user in the virtual reality of a graphic universe. Body suits (lined with electronic sensors and available in any number of styles) can translate every motion into electronic commands and null gravity rigs (large circular braces that rotate freely on a multiple axis while the user is suspended within them) allow for total freedom of movement while negotiating cyberspace. VR gloves translate finger motions into commands, reading the actions as if a keyboard or mouse were being used. VR gauntlets are much like VR gloves, but they are oversized and plastic plated, almost like armored gauntlets, in order to accommodate the hardware for a built-in mini-computer. VR gauntlets are normally only available in a galactic setting, but could be found in traditional **Heroes Unlimited** campaigns if constructed by the Electrical Genius. The computers in VR gauntlets are normally average quality. Top of the line VR gauntlets cost 3 times normal gauntlet prices. Characters that can benefit from the use of VR gear include normal hackers and psionic hackers. Bionic characters can buy implants that duplicate these effects; however, they are not cumulative with the bonuses of a Cyberjack (use the best of the two bonuses). **Construction penalty:** -20%.

VR Goggles: Cost: 2,000 credits, Bonuses: +1 to strike.

VR Gauntlets: Cost: 4,000 credits, Bonuses: +5% to skills requiring dexterity.

VR Body Suit: Cost: 7,000 credits, Bonuses: +1 to parry and dodge, and one additional attack per melee.

VR Sensory Equipment (Helmet-Like System): Cost: 8,000 credits, Bonuses: +1 to strike, parry and dodge (replaces goggles).

VR Null Gravity Rigs: Cost: 15,000 credits, Bonuses: +1 on initiative and adds one additional attack per melee round. All VR systems are cumulative except where specifically stated.

VR Filter: For most VR Cyberjackers, this is an essential piece of defensive hardware that protects one against the potentially lethal effects of Cyberjacking combat (see the Cyberjacking skill for details). In terms of Cyberjacking combat, a filter provides rudimentary armor. Filters are typically reserved for military and law-enforcement use only, although that rarely stops corporate and criminal headjackers from obtaining this equipment. There are four basic levels of filters: Light (A.R.: 12, S.D.C.: 30), Medium (A.R.: 14, S.D.C.: 50), Heavy (A.R.: 17, S.D.C.: 75), and Military-Grade (A.R.: 19, S.D.C.: 100). **Cost:** 175,000 credits for a light filter. 300,000 for a medium filter. 425,000 for a heavy filter. 550,000 for a military-grade filter. For any kind of headjack filter, it costs 3,500 credits to repair/restore one point of lost S.D.C.

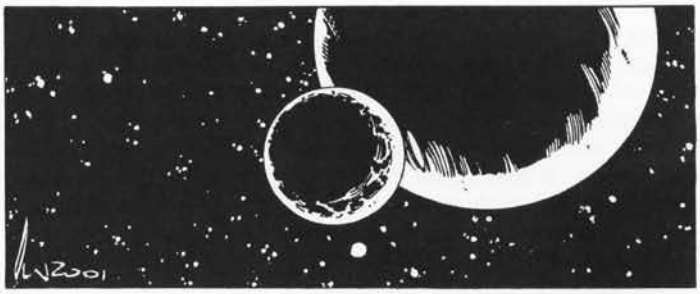
Hacking Computer: Similar to the mini-computer listed in the **HU2** bionic selections list, this top-grade system is designed for hacking and other heavy computer operations. It comes with optional headjack hookups in which the connections are all internal with no wires or jack in the head; instead the head connections are wired through the body with access ports normally being located in the chest or arm.

Optional systems include integrated VR systems that work through cyber eyes and ears and filters (armor). The optional systems are purchased separately, with the built-in VR systems costing ten times the listed prices for VR gear given elsewhere. All prices are listed using a creation/campaign format and each is a separate system. They can not be combined with each other and represent the total bonuses for that system (i.e., the headjack system includes the bonuses for a headjack); all bonuses are while in cyberspace only and do not apply to the character's abilities when not connected to electronic reality. **Basic System: Cost:** 95,000 credits, **Bonuses:** +1 to strike, parry and dodge.

VR Simulation System (not compatible with a headjack): Cost: 230,000 credits, Bonuses: +2 to strike, +2 to parry and +4 to dodge, adds one attack per melee round, and adds +5% to computer skills against passive security.

System with Headjack Connections: Cost: 315,000 credits, Bonuses: +2 to strike, +3 to parry and dodge, adds two attacks per melee round, and adds +10% to computer skills against passive security.

Maximized Headjack System: Cost: 500,000 credits, Bonuses: +2 on initiative, +3 to strike, +4 to parry and dodge, adds two attacks per melee round, and adds +15% to computer skills against passive security.



Miscellaneous Equipment

Felias Information Network Access: The Felias make most of their money from selling access time to their formidable public information databases. The Felias employ filters, both of the living and digital variety, to sort through data as they receive it. The less valuable bulk of that information ends up on their public databases. Ultimately, all valuable or sensitive data will degrade in value as it ages and eventually ends up on the public boards. As one can guess, time on the FIN is not cheap. Even considering the second-rate profitability of the information there, the huge amounts of data it represents from all corners of the galaxy is still worth big money to plenty of people. Just imagine an internet full of data millions of times larger than the one on Earth. All that data is worth money just by its size, but the majority of this information is quality stuff and thus worth the 2,000 credits per hour they charge. Thanks to high-speed laser communications and ultra-advanced search engines, even a database of this size can be searched in a few hours. Knowing exactly what to look for will also dramatically cut down the time required. In most cases, a galactic researcher who makes his Research skill roll will find what he is looking for on the FIN within 15 minutes. **Cost:** 2,000 credits per hour of access.

Grip Gloves: Another innovation from the TGE that has been copied by many other companies, this item is designed with Kisentite micro-filaments that help the glove grip to surfaces in much the same way that insects do. Though admittedly less effective than suction gloves (see below), grip gloves greatly increase their wearer's climbing ability without being obtrusive. When not in use, the micro-filaments retract into the material of the glove. Despite their Kisentite nature, the micro-filaments do not notably increase damage from hand attacks, but they will make gripping a weapon much more assured (-2 to any attacker's roll to disarm).

Using a pair of grip gloves will add +10% to climbing rolls, plus the matching boots will add another +10% to the bonus for +20% total. Normal climbing speed is 20 feet (6 m) per melee, but the grip gloves increase the rate to 24 feet (7.3 m) per melee and the set of boots and gloves makes it 30 feet (9 m) per melee (remember to make climbing rolls every 20 feet/6 m). Surface texture will affect climbing speeds and percentages. Climbing an ice wall will be slow (1/4 normal speed) and dangerous (-35% or more), while a rocky slope might double climbing speed with no penalties to the standard roll. **Cost:** 3,500 credits for grip gloves, 5,000 credits for grip boots.

Personal Gravity Systems: This harness, mainly produced by the TGE, is roughly the same size and shape as a military web belt and pouch harness. Built into the pockets and capsules that line the two shoulder belts and the waist belt are micro-gravity generators and focusing systems that use receivers built into the included boots to provide the wearer with a personal gravity field when operating in the void of space. This system comes in two varieties. The cheaper version works when close to a large object such as a spacecraft or piece of debris. This system is known as the *Close Quarters Personal Gravity System* and it functions normally when within 100 feet (305 m) of an object that weighs 100 times that of the user. The *Personal Gravity System* is much more expensive, but it provides a gravitational reference even when the character is nowhere near a large object. The close quarters PGS is commonly issued to personnel on TGE security craft as well as space stations and orbiting facilities, allowing them to shut down the craft's gravity field to hinder any opponents they might need to repel. **Cost:** 23,000 credits for a Close Quarters Personal Gravity System, 65,000 credits for a Personal Gravity System.

Reference libraries: Reference libraries are portable stores of information used mainly by scientists and wizards for research and reference purposes in their work. Basically, it is a large set of encyclopedias on portable mini-disks with information on a number of things, depending on what the purchaser chose when buying them. The software is built around a highly efficient search and filter program that allows for easy location of data in its stores in a short period of time. A reference library for any skill is available, but it is only written information on the subject. A chemistry library might help a character interpret the readings on a chemical analyzer, but it won't do a whole lot to help him actually make compounds. Likewise, a library on climbing will describe how to do it and what all the gear is, but the reader will still have to execute the skill correctly to scale walls. Experience and practice are what makes proper skill use possible.

So, while the libraries are helpful in certain circumstances, they are in no way a substitute for the actual skills they document. Trying to perform a skill using only a reference library can be done: the user will know how, but have no practice. However, the chance of success is only half the rating of the library and takes three times as long. Thus, a fencing library will be no good in combat, etc. On the flip side, a character using a library for a skill he already has can add 5% to his skill rating or use the rating of the library if it is higher than his own, but it will still take him twice as long as usual because he will have to read and refer to the library, and he must have constant access to the library to get any bonus. These libraries can also be purchased to put into bionic memory modules, robots, computers, AIs, or to augment other items, like the portable medical computer. Note that even if put into a robot, the rules above still apply because the robot has not been programmed to be able to perform the skill, he just has the knowledge as if he were using the library like a human. **Cost:** 75 credits per percentage point per skill, with a maximum rating of 60%.

Video Communicator: The video communicator is part radio and part telephone. It is a wide wristband or paperback book-sized device with a small video screen. Communications can be sent and received on either cellular telephone or radio waves. The unit scans for the clearest frequency and broadcasts on it. Optional hardline accessories are available at little cost (basically phone lines to jack into a wall and the unit). Its multi-band capabilities give it a considerable range and satellite uplink capabilities extend that further. **Cost:** 600 credits for a basic unit and 1,400 credits for a satellite uplink unit. Five credits for hardline accessories.

Stealth Boots: Using the same materials and technology as the Whisper Boots, these advanced models add in micronized sonic dampers that neutralize sounds in their immediate vicinity, greatly increasing the potential to move in silence for the wearer. The dampening zone extends approximately five feet (1.5 m) from the boots and will normally not extend far enough to interfere with speaking. Sounds are not negated, only muted somewhat, so the person must actively restrict the noises he makes for them to be fully effective. The boots will add +10% to Prowl rolls or provide a base Prowl level of 25% to those without the skill or anyone not actively reducing their sound levels. Loud noises such as gunshots or the clash of weapons will not be effectively muted by the system and will give away the user's position. **Cost:** 12,000 credits.

Suction Gloves: Used for the same purposes as the grip gloves, this item employs a more advanced system of chemical adhesives and suction to provide a firmer grip. Each time the climber moves a hand or foot, the system uses a chemical adhesive to complement lines of tiny all-surface suction. When the limb must be moved again, neutralizing chemicals instantly break the seal and evaporate, allowing advancement. This system is much more secure than the grip gloves, but due to the nature of

the chemical adhesive, it provides a slower climbing rate. The suction gloves add +20% to climbing rolls, and coupling them with the matching boots will add another +20% for a whopping +40% bonus; however, the system halves the normal climbing speed to 10 feet (3 m) per melee. **Cost:** 15,500 credits for gloves, 24,000 credits for boots.

Whisper Boots: Soled with a revolutionary substance, these boots (or shoes, they come in multiple forms) reduce the noise they make in contact with other substances significantly when compared to other footwear. At the same time, traction is not reduced and can, in some models, actually increase for better footing. The Whisper Boots should not be confused with the more expensive Stealth Boots that actually use sonic technology to negate sounds, even those not made by the shoes themselves. Whisper Boots are much cheaper than Stealth Boots, but not nearly as effective, adding only +5% to the Prowl skill when silent motion is important. **Cost:** 2000 credits.

Space Travel

By Wayne Breaux Jr.
with additional text by Coffin & Siembieda

Many civilizations have space programs, but in the context of a galactic campaign, those that are as fledgling as modern-day Earth are considered primitive and that precludes them from the galactic community. Conventional space travel with chemical drives like those found on Earth can not come close to light speed, and would take hundreds of thousands of years to cross the Milky Way galaxy. With such pathetic technology, even reaching the nearest star system would take centuries. At their simplest, slower than light (STL) drives can carry spacecraft from star to star, but it takes a great deal of time doing it.

Advanced space travel methods include processes that allow a civilization to truly branch out from its terrestrial roots and reach the stars quickly and efficiently, bringing it into the galactic community. Faster than light (FTL) drives are common in the galactic community and can span interstellar distances in as short as a few hours, days or weeks. Meanwhile, *gravity well manipulators* and other point-to-point *gateways* provide instantaneous transportation anywhere in the galaxy. These methods of space travel are usually available to all space faring civilizations. Like cars and telephones on Earth, they are necessary to keep the galactic community in touch with one another and exchange/trade technology and ideas. Certainly there are those that guard the secrets of their technology, and others who have opposing or truly alien technology, but those listed below are fairly commonplace among the advanced races of the Milky Way.

G.M.s should feel free to combine the various types of space travel as they see fit to accommodate their adventures. If, for instance, the characters need to get to a planet several dozen light years away, a trip that would take weeks with the slower than light speed (or even with an FTL) vessel can be turned into a quick hop by allowing them to purchase round trip *gateway* codes that allow their spacecraft to "pop" in and out, or to book passage on a vessel that can get them to their destination in a matter of days, hours or minutes. Likewise, daring players may choose to have their characters use a *dimensional siphon* to cut time off of a trip while risking serious damage to their spacecraft.

This chapter is merely a discussion of the various kinds of space travel used in the Milky Way. For the costs of these drives as well as game play statistics, please refer to the **Spacecraft Construction Rules** which follow this section of the sourcebook.

Slower Than Light (STL)

STL drives are considered the most primitive form of interstellar travel. While they can be used to travel to other stars, even faraway ones, the time required to make the trip is immense. A trip of just a few star systems' length can take several hundred years using STL technology, and that does not even consider the return trip home! Obviously, this means of traveling great distances in space requires a reliable "suspended animation" system or a "space ark" approach. In the former instance, one is basically frozen or put in some kind of stasis and sleeps away the years of travel. In the latter case, people live, grow old, have children, teach them everything they need to know, and die, and it is a future generation who arrives at the destination. Like we said earlier, very primitive and inefficient for long space voyages.

For civilizations who are just beginning to reach for the stars, STL propulsion is all they have to work with. Once a race joins the interstellar community, however, trade and commerce with other star systems enables the newcomers to upgrade their ships to FTL drives in only 1-4 decades.

Despite its' comparatively primitive nature, STL drives are still radically advanced in comparison to the space technology of modern-day Earth, who can not even make manned flights to other planets in the same solar system let alone a trek to another star. While the propulsion used by STL spacecraft may be very similar to that used by Earth spacecraft, Earth has yet to develop the *stasis/sleep* or *space ark* technology that interstellar STL craft must possess.

Most advanced spacecraft in the Milky Way use STL drives only as a backup in case their primary means of propulsion fails them or for making planetary orbit, short hops and space cruises (yes, like luxury liner cruise ships on the seas of Earth).

Stasis/Sleep Systems

Stasis is an advanced form of sleep technology that lowers the travelers' metabolism, slows the aging process and reduces the need for oxygen and nutrients. It is expensive and requires a space for several large stasis chambers, computers and an independent energy supply. Stasis systems are most commonly used for extended deep space missions that could last years or to transport large numbers of people without having to feed them.

The basic idea behind all sleep/stasis systems is to remove the needs and problems associated with having an active crew over a long space voyage. This includes large amounts of food and water (which takes up storage space), living quarters, and exercise and entertainment facilities to stave off boredom and the damaging effects of insanity from isolation, confinement and boredom, among other things. If the crew, especially a large crew, is locked in stasis sleep for most of the trip, the necessities for maintaining them are dramatically reduced.

Less advanced space faring civilizations use stasis sleep to compensate for slow drives, putting the crew to sleep and possibly rotating them in extended shifts. Advanced space farers use stasis sleep to transport thousands of passengers at a time without the need to feed and entertain them. This is especially common in military troop transports and cheap passenger services, for whom passengers are more like an exotic form of "cargo." Even massive, automated merchant cargo haulers and ore carriers will have a crew locked away in stasis, using them as an emergency measure to be awakened to address problems in transit, and at the end of the trip so they can dock, land or place the ship in orbit, supervise unloading of the cargo and stowing any new cargo, as well as handling any business transactions. This enables the company to cut costs across the board and pay the crew only for the time they are active and a low rate for time in stasis. Thousands are saved on crew accommodations, food, water, storage, waste management, life support, recycling, artificial gravity, etc. Stasis/sleep facilities are also used as an emergency safety measure for the crew in case the hull is breached or the spacecraft is unable to maintain life support. The crew will also seek refuge in a stasis chamber when they lose their engines and are set adrift for god knows how long (weeks, months, even decades) before the ship and crew might be found and rescued.

The two aspects, sleep and stasis, are usually considered the same thing, however, one can sleep without stasis, but one can not go into stasis without some form of sleep. Certain magically and psionically inclined races have mystic or mental methods of achieving stasis without chemicals and artificial means. Likewise, people with different physiologies may require different types or levels of sedation and chemical applications. Regardless of the specifics, all stasis systems put the user into a deep sleep, while simultaneously lowering vital signs (heart rate, breathing, temperature, etc.) to slow the metabolism and administer chemical treatments (through IV) to put the body into a state of hibernation. The dramatically reduced metabolism means the needs for nourishment and water are virtually nil (what is needed is provided by an IV nourishment system), and the aging process is slowed to a crawl – a year seems like a week or even a day.

The body is usually secured in a seat, bed or chamber to prevent any accidental injury from jostling. Moreover, the seat or bed is usually part of the specially designed stasis system that periodically rotates the body and sends mild electrical stimuli to keep muscles from atrophying over long trips. Some use a system of levers and gears to physically work the muscles while the individual slumbers. **Note:** If the stasis system fails to work the muscles, the following penalties apply for each month that the character does not get properly exercised: Reduce P.S. and P.P. by -1, reduce all combat bonuses by half, reduce all physical skills by -10%, and -5 S.D.C. For each week the character spends recovering with the help of a skilled paramedic or doctor, the penalties go down by one step (i.e., P.S. and P.P. go up by one, S.D.C. returns at the rate of five per week, etc.), until the character's stats have returned to normal. Some races, such as mineral aliens, reptile aliens, and vegetation aliens, do not suffer from extended periods of inactivity and can ignore the penalties. Waking up from bio-chem stasis takes very little time, 1D4 melee rounds, but the actual process of waking someone up requires 1D6+6 minutes.

The basic sleep system, commonly known as **Bio-Chem Stasis**, puts the user into a state of sedative-induced sleep via a cocktail of chemicals as outlined above. It is the oldest and least expensive of the stasis systems. This system is suggested for short stasis not exceeding 50 years. The individual ages one month for every year in stasis.

One of the most advanced and popular stasis techniques is **Semi-Solid-Suspension Stasis** or **S4**. In S4 stasis, the character enters a large stasis tube which may or may not be clear, depending on the tastes of the purchaser. Once the individual is inside the tube, it is filled with a jelly-like chemical mass. The jelly has sedatives, and the occupant is quickly rendered unconscious. The jelly is then pumped into his lungs, stomach, and intestines, completing the semi-solid-suspension process. The gel feeds him controlled amounts of oxygen (or appropriate atmosphere) and nutrients while chemically slowing the metabolism and aging processes to a crawl. The gel also functions as insulation and packing material to cushion its occupant from any turbulence. It will even absorb up to 100 S.D.C. damage from a crash or gunfire. The gel is pumped out of the chamber 24 hours prior to the time the character needs to be revived (the actual revival takes only 3D6 minutes). All gel in the lungs is removed, but the stomach/intestinal gel is allowed to pass through the system, providing a thorough cleaning, and can even carry drugs to im-

munize and bolster the individual's body against known diseases and illnesses in the new environment. S4 stasis takes up a significant amount of space, but not as much as traditional Bio-Chem stasis. It is believed capable of preserving an individual for in excess of 150 years. The individual ages one month for every year in stasis. However, it is more costly to operate than the Bio-Chem or Cryo-stasis.

Cryo-stasis is considered the safest, most ecconimcal and best stasis system available by those who promote it (and those who use it right), but its detractors insist it is the most dangerous and many refuse to use it. In this process, individuals placed into stasis are effectively "frozen" super-quick and unfrozen via a special process 24 hours before their arrival to their destination. While frozen, the individual does *not* need food, water, muscle exercise/stimulation, or oxygen, nor do they age a single minute! The only necessity is a constant monitoring of the Cryo-chamber temperature and absolute certainty that the *unthawing* system is in working order. It is the freezing, and especially the unfreezing process that makes cryo-stasis dangerous, for a mistake during either is likely to kill the individual in stasis. Freezing is the least dangerous, because it is usually done under the supervision a licensed cryogenesist while docking at a space port or in orbit around a planet where one can get top flight medical help if it is necessary. However, the unfreezing is usually done in space 24 hours away from civilization. Should something go wrong (only a one percent chance, barring sabotage or physical damage), that individual is likely to die. As a fail-safe mechanism, the unfreezing process will occur whenever there is a serious problem with the ship, energy is cut (the cryo-stasis has is own power supply) or damage or a problem is detected in the cryo-stasis chamber. **Note:** Cryo-stasis is cheaper to use than other stasis techniques, but it requires a larger overall system. It is believed to be safe for periods in excess of 100 years. Its uppermost limits have never been fully tested.

Cyro-Stasis revival process normally takes two or three hours, but a *rush job* can be done in 2D6+10 minutes. However, a rush job has a 50/50 chance of causing the frozen individual to lapse into a comatose state rather than awaken! Roll percentile dice. 01-50% means coma, 51-00% means the character wakes up fine, but with the usual aches and penalties.

Saving a comatose character requires CPR and a roll on percentile dice to *save vs coma/death.* A roll of 01-35% means the character snaps out of the coma within 3D6 minutes. The chance for recovery is 01-50% with treatment from the onboard med-lab, and 01-60% with the help of a doctor and the med-lab. A failed series of rolls means the character never wakes up and dies of shock in a few hours. Rushing him to a hospital (if available) may save the character's life; use the standard Surviving Coma and Death rules found in HU2, pages 18 & 19.

Whether the character is awakened without falling into a coma or not, even a perfect "thaw" makes the character feel nauseous, dizzy and sluggish. Functions at diminished capacity for 1D4+2 days (double if lapsed into a coma first). Penalties include: -20% on skill performance, reduce speed, attacks per melee round and all combat bonuses by half.

Cryo-stasis is comparatively inexpensive. Its risks, a matter of debate.

Space Arks

The space ark is a travel method available to those who do not yet have stasis sleep or Faster Than Light (FTL). Space arks are designed to take a hundred years or more to reach their destination, during which time the descendants of the original crew continue and ultimately complete the mission. As a result, space arks typically are massive vessels that must support at least eight to ten families (but often many more than that, just to maintain genetic diversity among the crew). A space ark is, in effect, a small town or city with engines on it, sent into outer space. This necessitates living quarters, recreation facilities, food production, waste management, life support, artificial gravity, and some way to replenish the water supply (extract water from asteroids is one, harvesting floating ice crystals is another). Food has to be grown on the ship, for there is no way enough could be brought along, requiring hydroponic gardens or other means of food and water synthesis (or it must be found along the way). This is in addition to the systems required for operation and maintenance of the ship itself.

Replacement parts have to be fabricated and repairs made on the spacecraft. If in distress, all the crew and passengers can pray for is the luck to contact friendly alien life forms to provide them with aid, whether it be repairs, parts, food or medicine. Considering how vast space is, such a possibility is remote at best (less than one percent; G.M.'s discretion). Disease in this enclosed environment can wipe out the food gardens, kill individuals key to the operation and maintenance of the ark or obliterate everyone. G.M.s can use this travel method as a plot device for a number of adventures, rescue missions or chance encounters. Even as a campaign setting where the player characters are the inhabitants, crew or protectors of a space ark seeking a new home (may know exactly where they are headed and doing fine, or lost or in trouble, under attack by raiders, pirates or monsters), fleeing persecution (and being pursued?), looking for something specific – a magical or super-tech artifact, cure for some terrible disease, their home world, others of their kind, to start a space colony, or some source of an elusive resource to save their people back home (or on the ship). On the other hand, the space ark could be doing fine and help or rescue the player characters on their mission (and in doing so, place themselves in jeopardy with those after the heroes).

Faster-Than-Light (FTL)

Faster-Than-Light-Travel commonly referred to as FTL, is the most common advanced travel method in the galaxy. There are numerous ways to achieve this FTL, though almost all civilizations do so through the application of science and technology. A rare few merge science with magic or psionic energies, but the results are the same. They are able to propel a spacecraft beyond the light barrier and cover the vast distances of space quickly. Achieving FTL travel is typically seen as the "graduation" or "evolution" of a civilization from a mere backwater race to a genuine member of the vast interstellar community (and all the benefits and problems that entails).

This technology allows rapid travel, but it is still slow compared to the vast distances in space. At the galactic core, where the stars are closer together, the distance between solar systems can be covered in just a few hours. As one moves toward the galaxy's edge, the distance between stars gradually increases, requiring longer and longer times to travel between them, even using FTL propulsion. What would be a two-hour jaunt from one star to another at the galactic core might take three weeks out by the galactic rim.

Each multiple of the speed of light is known as a *factor.* Traveling at three times the speed of light, therefore, is considered *factor 3.* Although FTL star ships can often reach speeds of factor 10 or higher, that might not amount to much depending on one's location in the galaxy. Earth, for example, is roughly 60,000 light years from the galactic core, placing it around two-thirds the way from the core to the rim. Given the distances between stars in this part of the galaxy, a factor 10 trip of four light years to Alpha Centauri (the nearest star) would still require almost *five months.* Thus, FTL is usually augmented by other advanced travel methods, such as point-to-point gateways to "jump" over long distances (described later in this section). Many

advanced galactic civilizations rely heavily on gateways, which allow FTL ships to hop instantaneously across most of the distance to be covered and then use FTL propulsion for the final approach to the destination.

Technically, any object in space that can accelerate — including slow spacecraft, rockets (until their fuel is gone), and alien beings who can fly — will not stop accelerating because there is no friction, air drag, or pressure to slow them down. The closer one gets to the speed of light, however, the harder and harder it gets to actually reach it. Many drives use *minor gravity pulses* or other energies to batter at those forces and ease the breaking of the barrier, while others rely on pure, focused acceleration, something smaller objects and drives can not hope to achieve.

Someone with the power of sonic flight in a properly armored spacesuit could reach amazing speeds through constant acceleration, but he would be unable to break the light speed barrier. The upper limit to such speed acceleration is generally 25% of the speed of light. Someone with sonic flight and alter physical structure: electricity could theoretically break the light barrier by shifting to energy form when they reached the 25% barrier and continuing to accelerate afterward. Assaulting the light barrier on one's own is potentially dangerous, however, since characters flying at more than twice their normal speed will suffer badly on their dodge bonus. Every time a character doubles his speed he suffers -1 to dodge. These negative modifiers will continue until the total negative modifier is -20, or until the character hits 25% light speed (and probably stops accelerating), whichever comes first. If a character hellbent for light speed encounters a rogue asteroid, comet or space debris at that velocity, the chances of him failing to dodge, slamming into it and killing himself are very likely.

Spacecraft that have FTL systems accelerate a bit differently. Almost all FTL craft are able to jump instantly to light speed thanks to their advanced propulsion systems. This is known as "porting," a term referring both to the seeming teleportation of a spacecraft from cruising speed to light speed, and to the Struthio word *poirta*, meaning "bridge" or "spiritual pathway." This latter meaning of the word is at the center of an ongoing debate within the galaxy over the Struthios' claim to have first invented porting technology.

There are 11 different kinds of FTL systems commonly found in the galaxy: *Anti-Gravity Drives*, *Anti-Matter/Fusion Drives*, *Interstellar Ramjets*, *Laser Sails*, *Matter/Anti-Matter Drives*, *Metallic Hydrogen Drives*, *Microwave Sails*, *Negative Matter Drives*, *Nuclear Fusion Drives*, *Photon/Ion/Fission Drives*, and *Tachyon Drives*. These systems are all based on actual theorized propulsion systems that could come close to (but not break) the light speed barrier. For the space faring purposes of **Heroes Unlimited**, these systems have been supercharged to allow for FTL propulsion.

Anti-Gravity Drives (AG Drive)

These drives use energy generators to repulse gravity. As the drive pushes the gravity back, it provides motion for the spacecraft in the opposite direction. The largest drawback to the AG drive is that the farther the vessel travels from the gravity source, the less it can push on it, until it reaches a certain point where the push of the drive has little effect. In space, this is not much of a drawback, because once the spacecraft accelerates, it remains at that speed until it changes velocity on its own or an outside force affects it. However, unless another source of gravity is available or alternate engine types are built into the vessel, the AG driven craft will not be able to decelerate or change course. The main use and popularity of the AG drive is not as a deep space or long-range drive, but are ideal for planetary transport from one planet or moon to another within the same solar system. They are also good for making planet landings. The chemical engines needed to support the weight of 600 ton spaceship would take up most of the spacecraft, but AG drives can do the job without a fuel requirement, leaving space for other purposes and also offers more control and stability for landings and takeoff.

AG drives are as responsive and maneuverable as chemical thrusters, but much more efficient and compact than the latter. The most common use for anti-gravity drives are on mining vessels and cargo carriers that operate on gravitationally active asteroids, planetoids, and planets. Some militaries maintain trans-atmospheric destroyers and battleships that can actually enter and leave an atmosphere to wage war or deploy combat machines. Despite the weakening of such spacecraft by the requirements for trans-atmospheric capabilities (see the Spacecraft Construction Rules for the exact effects of trans-atmospheric capabilities on a spacecraft), the versatility they possess often more than makes up for it. The Atorian Empire is infamous for using AG-driven, atmosphere-capable warships to rain death and destruction upon enemy cities at point blank range. **Bonuses:** In an atmosphere: +2 to dodge, and +5% on stunt maneuvers. In space, the anti-gravity drives are +3 to dodge. **Maximum Speed:** Factor 20

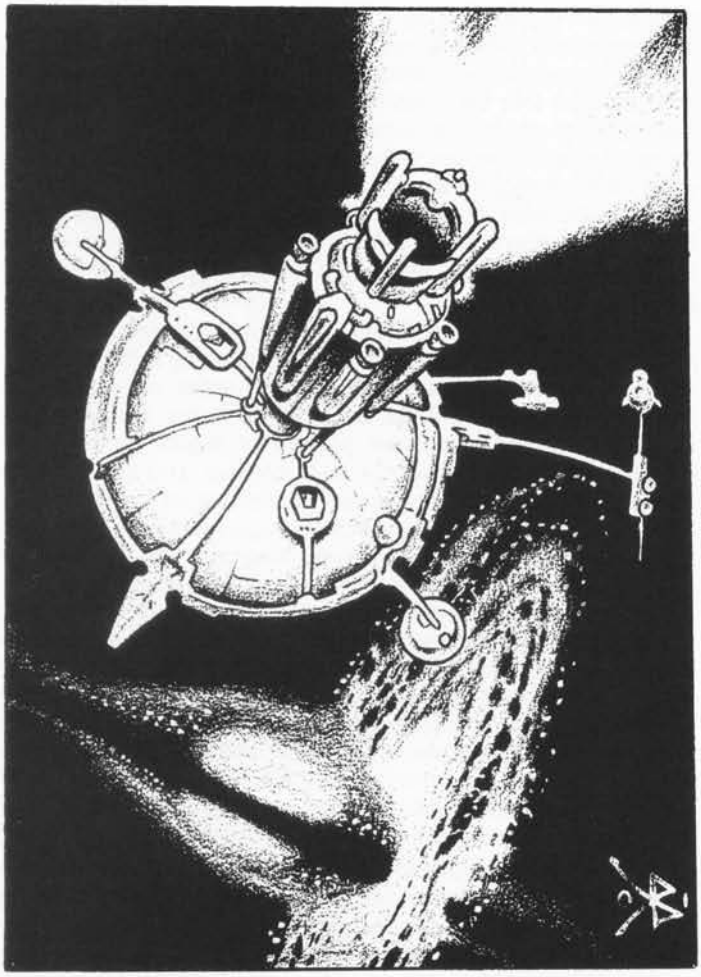
Anti-Matter/Fusion Drives

The Atorian Empire is close to completing experiments in anti-matter/ fusion propulsion. It is currently the fastest form of FTL propulsion, but the engines are still huge and costs are enormous. The electromagnetic fields needed to control the energy of matter/anti-matter fusion would require a spacecraft the size of a battleship or destroyer to hold their generators. While matter/anti-matter propulsion is based on the collision of such particles, anti-matter fusion combines anti-matter particles to produce energy for propulsion. Acceleration and deceleration using this propulsion is surprisingly swift, and the larger warships that could use them would be as quick and maneuverable as a vessels half their size. This is the main reason the Atorian Empresses continue to fund programs for the development of viable Anti-Mater/Fusion Drives. G.M.s should consider the implications of the success of this program on their campaigns. The Atorian Empire would devastate the galactic organizations in their next expansion if production of anti-matter/fusion drives on a significant scale were successful. An entire campaign could revolve around a group of player characters trying to sabotage such research and stop production of such engines and spacecraft — steal plans, sabotaging research and later production facilities, and stealing prototypes.

When (or if) this type of drive is first made available for use, it will only fit into craft 750 tons or larger, but within a decade that size will drop to 500, then 300 within the following 20 years. Depending on when the G.M. introduces this kind of drive, the Atorians will have AM/F drives in fighters within 200 years, possibly in time for their next invasion! Whether the player characters are part of it or not, the G.M. can assume that the knowledge will leak out of the Empire, giving the FAR and TGE a break in their own research to produce AM/F on the heals of the Atorians. Even so, it will take approximately 25-50% longer for the Struthio and others to reach the same levels of AM/F technology as the Atorians. **Bonuses:** (If it ever sees production) +3 to dodge. **Maximum Speed:** Factor 300.

Interstellar Ramjets

An interstellar ramjet drive uses an electromagnetic cone (or EMC) projected ahead of it to pull free floating atoms into large intakes where they are used for fuel. No on-board fuel supply is needed, so the spacecraft is lighter and accelerates quickly, but the lower atom density between distant stars means that the vessel will slow to half of its normal speed when fuel thins out. Such thinning normally occurs at about five light years' distance from any star. The interstellar ramjet is ideal for spaceships that operate in the same solar system, but do not need extreme speed



factor capabilities (such as certain kinds of bulk cargo vessels). The ramjet is fast and light, but its top speed is limited and it is generally restricted to local space for its peak performance. The only major drawback to the ramjet is that it does not come with a "porting" system and must rely on standard acceleration to reach light speed. Porting systems can be outfitted for a ramjet, but it will take twice as long to build up to port speeds. Also, because of the ratio of available fuel to ship weight, a ramjet with a standard EMC generator can pull up to 200 tons of spacecraft without performance suffering. Larger EMC generators can be purchased to pull bigger spacecraft, but the power increase is not proportional to the mass increase, so costs differ. Double the ramjet cost for craft of 201 to 600 tons, multiply it four times for 601 to 800 tons, and eight times normal cost for 801 to 1,000 tons.

Bonuses: +1 to dodge within a solar system, -1 to dodge for every five light years away from the nearest star to a maximum of -4. Despite the distances in space, the ramjet can be assumed to always have at least a minimal source of fuel to get it to factor speed.. **Maximum Speed:** Factor 120, but only when within 10 light years of a star or nebula (interstellar dust cloud). Farther than that and speed drops to a maximum of Factor 75.

Laser Sails

Many solar systems use laser sails for leisure and transport spacecraft. The basis of the system centers on large, laser reflective "sails" mounted on the spaceship. When a concentrated, but not damaging, laser is bounced off of the sails, the vessel moves. A battery of several hundred of these lasers are placed in orbit around the system's sun. From there, they fire outward to coordinates beamed to them by awaiting vessels. The lasers bounce off a waiting craft's sails, pushing it into motion. A similar array of laser stations is placed along the outer edge of the solar system to push craft into it. The coordination of both laser arrays gives a spacecraft the ability to maneuver throughout that solar system. Some of the outer laser arrays are able to pivot in orbit and face outward, enabling a ship to leave the system and fly toward another star. Such trips usually require some form of additional propulsion, due to difficulty in aligning lasers once a ship is a significant distance from the arrays. Some spacefarers, pirates especially, mix laser and microwave sails with other drives for overall versatility and stealth.

Note that spacecraft with laser sails can not simply mount a laser on its hull and fire it upon its own sails. While theoretically possible (something akin to mounting a giant fan on a sailboat to make it move on a still day), this ultimately robs the engines of the power they would need to get going. However, certain star ship captains are bound to tinker with this idea, and perhaps one day a means of using ship borne lasers for perpetual laser sail propulsion will be discovered. Many orbital space ports and space stations will have such lasers for the benefit of incoming and outgoing spacecraft.

A spaceship using laser sail propulsion will have a tell-tale signature like that of most space debris; the kind most crews ignore. Of course when the laser is pushing, the beam will certainly show up on any scans, so careful timing is needed when using this system for stealth. However, pirates and others inclined to make a "silent" approach, will rely on the less detectable *microwave sails* (described elsewhere) for sneaking up on others. See the rules for prowling in spacecraft in the Expanded Space Rules section for full details.

Keep in mind that in space, a vessel will not decelerate once its means of propulsion (e.g., the pushing laser) is cut off. In order for any spacecraft to slow down, it must use maneuvering rockets or reversed drives. Thus, a spacecraft with a laser sail can cover great distances even after the laser stops pushing. In fact, the lasers never push constantly and normally cut off once a ship has been pushed to a desired speed. Acceleration, deceleration and maneuvers will always tip off observers that the object they are scanning is a man-operated vessel and not space debris.

Note: Neither laser or microwave sails can use, porting systems. Other drives must be included to provide it to port to light speed. **Bonuses:** None other than the stealth. **Maximum Speed:** Factor 40 when within one light year from a star and half that when farther away.

Matter/Anti-Matter Drives (M/A Drives)

The fastest, but most expensive, of the proven drives is matter/anti-matter. In these drive systems, positively charged matter particles are collided with negative anti-matter particles to produce tremendous energy. The Atorian Empire is currently the only galactic entity that can afford to use matter/anti-matter drives on a large scale. Their battleships are the only vessels known to use these drives, enabling them to maneuver and accelerate on par with most ships half their size. Although the Empire has nearly 10,000 matter/anti-matter driven spacecraft, it is nowhere near the numbers needed to crush any opposition. Within fifty years, however, every one of their craft could be matter/anti-matter driven, and some will be *anti-matter/fusion* (described earlier). By the time this happens, the FAR and TGE are likely to have stolen the technology or developed their own M/A drives to similar levels. Currently, these drives can only be placed in ships with a mass of 500 tons or more. They also are extremely expensive. Even once the FAR and TGE get their hands on this technology, matter/anti-matter drives are likely to be used only by governments and very large corporations. For the foreseeable future, this propulsion system will not be available to private citizens. **Bonuses:** +2 to dodge. **Maximum Speed:** Factor 200

Metallic Hydrogen Drives

When gaseous hydrogen is placed under millions of times its normal pressure, it solidifies into metallic hydrogen. This dense package of fuel takes up less space than conventional chemical fuels, and can generate considerable energy. This kind of drive is the only viable FTL chemical engine. Compared to other FTL drives, it is fairly inexpensive, making it popular with private star ship captains, local militias, planetary governments and those just engaging in space travel. Its dependency on a *fuel supply* is a noteworthy drawback, but its low expense and the maneuverability it provides more than offsets fuel concerns for those who use it.

Metallic hydrogen drives are the only type that require fuel *storage*, which is why the system requires storage space on the ship itself. For each "module" (a unit of measurement for the available space within a star ship) that the metallic hydrogen system takes up, the spacecraft can travel one light year. Thus, a metallic hydrogen drive that uses 75 modules could travel 75 light years before requiring a refueling (which costs 1% of the cost of the drive. That is, a 50,000 credit drive would require 500 credits of metallic hydrogen to refuel each time it ran out). Additional storage space for fuel can be bought by using the "per module cost" of the drive. Such fuel storage modules can not be used for anything but the storage of metallic hydrogen.

Fighters and shuttles often make use of metallic hydrogen drives because of its quick response, rapid acceleration, and for those with trans-atmospheric capabilities, the lift it provides within an atmosphere. These classes of spacecraft are also largely unaffected by the limited range, given their usual role as short trip vessels that returns to a mother ship, space port or dock on a space station. **Bonuses:** +3 to dodge. **Maximum Speed:** Factor 50.

Microwave Sails

Using a push principle identical to the laser sail, a microwave sail uses photon emissions in sunlight to propel the spacecraft. In an almost reversed process to the ramjet, the waves of energy moving from a sun can push a vessel along at great speeds; however, to move a full-sized spacecraft at the necessary speeds, microwave sails are normally quite large. Fortunately, they are hard to detect on sensor scans because they are not solid metal and have many of the characteristics of traditional sails, being flexible and non-rigid. Easily damaged in combat, microwave sails are usually retractable and backed up by other drive systems.

Even more than the laser sails, microwave sails are well loved by pirates for their stealth potential. There is no expulsion of energy from movement and no detectable laser involved in moving the spacecraft. As a result, ships that use microwave sails are difficult for scanners to detect and identify, especially when the spacecraft and sails have a stealth material coating. The stealth aspect of this drive is unequaled, except by a number of magically inclined races *rumored* to have cloaking or invisibility systems for certain spaceships.

Note: Can not use a "porting" system, and other drives must also be included on the spacecraft to allow it to attain light speed. **Bonuses:** -1 to dodge, not very maneuverable. See the rules for prowling in the Expanded Space Rules section. **Maximum Speed:** Factor 50 when within 5 light years of a star, but drops to half that (Factor 25) when farther away.

Negative Matter Drives (NM Drive)

Negative matter and Tachyon drives (mentioned later) are presented only because the theories exist for their use as propulsion, and many races are doing research on their possible applications. The theory behind this kind of drive is to attach a few chunks of negative matter to a spacecraft so that it is dispersed evenly with no movement resulting. The parcels of negative matter are then moved into place behind the vessel until the ratio of negative matter behind it versus the weight of the vessel itself, is enough to create movement. The resulting movement comes from the fact that the negative matter will repulse the positive matter of the spacecraft, urging it away, but since the negative matter is attached to the spacecraft, it continues to push the ship while being dragged behind, producing continual movement. Increasing the ratio in favor of the negative matter would create faster acceleration. If the galaxy's scientific bodies could build a negative matter engine that works, the resulting speed is theorized to be incredible.

Early NM drives would likely require a static supply of negative matter that would be mechanically shifted by rails or arms to and from the rear of the vessel to other areas as adjustments were made to speed. Later refinements in the system would probably allow for uncharged positive or regular matter to be negatively charged as it was brought into use. This latter version would likely have a matter cluster in the rear of the spacecraft which was divided into segments of varying size, each of which would be activated, or negatively charged, only as it was needed. A final perfection of the system would use negative matter energy in an adjustable energy field instead of actual matter. This final step would greatly reduce the space required for the drive, for no physical matter would be required. It would also be more efficient since the output of the energy field would be easier to adjust than its mechanical predecessors. Of course this whole refinement process would likely take 10-20 years after a working NM drive was produced in the first place, so one may have to wait a few decades for a working engine and a few more for it to fit into anything smaller than a 350 ton spaceship.

Note: A vessel outfitted with a NM Drive would double the normal acceleration times (remember the penalties for moving too fast during combat), except for porting, which always takes the same amount of time. **Maximum Speed:** Unknown! Estimates put it as high as 350 times the speed of light! Acceleration and deceleration would be at least four times normal.

Nuclear Fusion Drives

As the nuclei of atoms are fused inside a electromagnetic containment bottle, massive amounts of energy are produced in a reaction nearly identical to that found in stars. This is nuclear fusion. It is a fast and affordable drive system and is very commonly used in large space craft. In addition to the moderate cost of this propulsion system, it is also of reasonable size, making it an appealing alternative to the less expensive, but slightly slower fission drives. Both of the nuclear drives can be considered the *standard* spacecraft drive engines across the galaxy. There are certainly races that do not use them for a variety of reasons, but by far the majority of spacecraft flying the space ways are powered and driven by some kind of nuclear engines.

Bonuses: +1 to dodge. **Maximum Speed:** Factor 60

Photon/Ion/Fission Drives

Splitting atoms produces plenty of energy, and it is much easier to do than fusing them, thus the nuclear fission or "charged particle drive" is most often the first FTL drive that an advanced race will develop, making this class of drive quite common in the galactic community. Despite the availability of faster drives, nuclear propulsion continues to be popular because of its low cost and reliability, especially when one is outfitting smaller spacecraft like fighters, shuttles, and satellites. The short distances these spaceships travel and their general sub-light speed requirements, make the affordable fission drive very attractive, particularly given its even acceleration and quick response times.

Bonuses: +2 to dodge in craft of 100 tons or less; no bonus for larger craft. **Maximum Speed:** Factor 30

Tachyon Drives

Tachyon drives are still only a theory and no one is known to have ever produced a working spacecraft using Tachyon propulsion, not even the Atorians. Some races use tachyons for high-speed communications that can send a message across the galaxy in a matter of minutes, but the facilities needed for this kind of broadcast are about the size of an Earth-based industrial facility. The technology needed to reduce and apply tachyons to spacecraft drives is so expensive that it is rumored even the Atorian Empire can not afford full-scale research into it. The fact that the TGE has also rejected a full-scale tachyon drive R&D operation supports this sentiment, though there are small research division within the TGE working on applications for tachyon technology. Although reliable sources on the Felias Information Network put the speeds of Tachyon communications at about 2000 times the speed of light, there is little if any reliable speculation on what kind of speeds tachyon "drives" could produce. Estimates vary widely from as low as 350 factors to as high and a thousand. Regardless of the possibilities, a successful venture into drive technology would not produce practical drives for craft smaller than 300 tons for at least 75-150 years.

Bonuses: Unknown. **Maximum Speed:** Unknown. Theorized to range from 350 to 1,000 times light speed. **Cost:** Prohibitively expensive at present; even large empires such as the Atorians would rather spend their money on developing more fruitful technologies. Still, in addition to small R&D divisions within TGE, there are undoubtedly numerous think tanks across the galaxy racing to develop the first viable tachyon drive. When such technology becomes available, it might very well be a technological revolution capable of shaking up the entire galaxy. Just imagine it — the ability for anyone to travel anywhere in the galaxy within just a few minutes. Suddenly the great distances between star systems, which have been the foundation for the galaxy's current political and economic state, will become moot.

Point to Point Travel

The next evolution for interstellar travel is point to point travel — methods of instantly transporting spacecraft from one point in space to another. For the most part, point to point propulsion remains an expensive and limited form of travel whose principles are not completely understood by those who use it.

Hypergravitics/Gravity Wells

Although the majority of the Milky Way galaxy is uncharted, a reasonable portion has been mapped by a number of different alien civilizations. Many of those charts are accessible to the public. The sharing of knowledge and experiences revealed many "pockets of gravity" in open space. These pockets are similar to the *gravity well* surrounding a planet or a star, only they are much smaller. Many decades of subsequent research and experimentation with gravity field-generating devices eventually produced a system that could link two of these gravity wells by stimulating the field of one gravity well and extending it toward another known gravity well. The two fields attract each other and connect, creating a *bridge* (actually a tunnel might be a more appropriate description) or an artificial *wormhole* from one part of the galaxy to the other. Although it is easiest to think of this bridge as a tunnel of sorts, it actually does not take up any space at all. Instead, a spacecraft using Hypergravitics simply enters one gravity well and seems to push through a dark curtain, emerging at its destination a split-second later.

To use this method of travel, a ship must be fitted with some kind of FTL engine as well as hyper-gravity generators. Due to the nature of a hyper-gravity wormhole, any ship passing through at less than light speed will be torn apart by gravitic forces. Thus, a ship must fire up its hyper-gravity generators at or above light speed. hyper-gravity drives are large, expensive, and require a lot of additional engine space, so they are usually relegated to the largest spacecraft. Smaller ships can accommodate hyper-gravity drives, provided one is willing to incur the expense, but these small ship units are like FTL dragsters, with a small cockpit for 1-6 crewmen, huge engines, and little room for anything else.

Hypergravitics can not be used as an *intergalactic* travel method at this period of time, because no points are known in the other galaxies. This is not to say the people in other galaxies do not know about gravity points in ours (although most do not), we just don't know about them. According to rumors, the Atorians have reached the Andromeda galaxy via space ark and mapped gravity points for easy returns, but no one has been able to verify the rumors and most believe it's hogwash. Nevertheless, several other civilizations have space ark projects under way to do that very task, but they are at least 75 years from completion.

Compared to other forms of space travel, hypergravitics is fairly risky. Each time it is used, somebody on the crew must make a successful Navigation: Space skill roll. If the roll is unsuccessful, the attempt to bridge two gravity wells fails, and another navigation attempt must be made. If the Navigation: Space roll is unsuccessful by 20 points or more (e.g., a roll of 95% against a 65% success ratio), the ship's hyper-gravity generators will lock onto the gravity well of a star or less commonly, a planet. Traveling through this gravity well flings the spacecraft headlong at the star or planet, and only a successful Pilot Spacecraft skill roll will avert a crash! An unsuccessful roll means the ship plunges headlong to the surface. In most cases, this means an instant *atomization* of the vessel and all on board. However, the G.M. may, at his discretion, allow for some of the passengers to jettison before the crash or for the pilot to pull the ship out of danger, but with serious damage to the ship. Either contingency can be mined for adventure.

Ships that do miscalculate and smash into a planet will explode with near-nuclear force. The effects of such a blast (especially from ships in excess of 500 tons) can severely damage a planet's ecosystem and kill millions. Furthermore, the gravity disturbance form the opened well will at the least, disturb weather patterns for 1D6x1,000 miles (1,600 to 9,600 km), if not create devastating natural disasters for the next 72 hours.

Plotting a course and activating hyper-gravity generators can take as much as 20 minutes. If a navigation computer has *preprogrammed coordinates*, however, they can be uploaded in three melee actions. The generators themselves take one full melee round to power up and activate.

Aside from the possibility of a lethal miscalculation in navigation, the other major drawback of hyper-gravity drives is that they are useless without a natural freestanding *gravity well* (i.e., not of a star or planet). Hypergravitics can only enhance and manipulate the effects of a pre-existing gravity well; they can not create one. Thus, in deep space without an existing gravity well available, hypergravitics are worthless. Needless to say, this makes charted freestanding gravity wells very valuable real estate. Many of them have already been claimed by the nearest sovereign stellar power, who typically charges ships a fee to use "their" gravity well. Scores of other gravity wells are of disputed ownership or are simply unclaimed, which means travelers can use them for free. On a more sinister note, gravity wells in *war zones*, and sometimes *disputed wells*, are often mined by one side or the other, with killer satellites and missiles that target anything using the well or coming within range of the no man's zone.

Gateway Structures

Gateway structures are huge, circular or multi-sided rings floating in space. When these structures receive a broadcast with the proper destination codes, they align themselves with another gateway somewhere else and create a hypergravitic bridge between the two man-made gateways. Gateways do not open a doorway to other dimensions (see Rifting for that), they simply form a closed tunnel through the corner of one, effectively *folding space* to a fraction of the normal distance between two points. Likewise, the craft itself does not enter another dimension, but flies through the "tunnel" cut through space and time.

Gateways are usually *mammoth* structures, and can accommodate spacecraft of any size, even gigantic space arks and destroyers. These structures are mostly solar powered with nuclear backups. In an attempt to conserve energy, they lay dormant until activation codes are transmitted. The gateway rarely stays open for more than 30 seconds. It is beyond anyone's capabilities to keep one of these artificial gravity wells open for more than a few minutes. After two or three minutes, an active gateway will shut down due to low power and overheating of its systems. In such an event, the gateway must shut down to cool and recharge for 1D4 hours before it can activate again. Popping open intermittently for 15-45 seconds at a time can be done repeatedly with minimal concern, but more than 60 in an hour (which has never occurred) is considered dangerous and *may* require a cool down period.

Using a gateway is very similar to using a hyper-gravity drive or gravity well. The basic procedure is for a vessel to approach the gateway at light speed or faster. On the way, the ship broadcasts transmission coordinates to the gateway. This lets the gateway know what other gateway to align with. Once the transmission coordinates have been sent, the gateway sends a return signal to the ship, and the two remain in constant communication until the ship passes through the gate. After entering, the vessel is instantly accelerated to nearly *eight million times the speed of light!* At this velocity, a ship can cross the entire galaxy in just over 100 hours. When the ship exits through the destination portal, it immediately decelerates to light speed, and can further navigate from there. Prior to entering a gateway, it will take a ship one melee round (15 seconds) to send its transmission coordinates. After that, it will take the gateway one melee round to power up. The gateway remains powered up until the traveling ship stops broadcasting or until the ship enters the gate. While powered up, no other ship can sneak into the gateway. Due to various navigational fail-safes, the gateway will activate only when the ship that sent the transmission enters.

There are five major drawbacks to gateways. The first is navigation. Like hypergravitics, going through a gateway requires a successful Navigation: Space roll. In the event of an unsuccessful roll, the gateway will simply not acknowledge the transmission coordinates. It is the equivalent of an Earthling dialing up a non-existent phone number; in such a case, the gateway will inform the ship of its error and to try again. If the Navigation roll is unsuccessful by 20 or more points (e.g., a roll of 95% against a 65% success ratio), then the ship will have entered the wrong transmission coordinates. This is akin to dialing the wrong telephone number. The trip through the gateway will take place, but it will send the ship to the wrong destination. Depending on how far off course one goes, this can result in serious trouble. Gateways on the edge of the galaxy are notorious for being in a state of disrepair, meaning they can accept incoming ships, but they are unable to send any ships out. Once through a faulty gateway such as this, one must find some other way home, often through unfamiliar, and perhaps hostile space. This scenario alone accounts for nearly 25% of all lost and missing spacecraft each year.

The second major drawback is piloting. If a ship is making a normal approach to a gateway (i.e., not traveling over Factor 2, traveling in a more or less straight line, not making evasive maneuvers, etc.) then no Pilot Spacecraft skill roll is needed. If the pilot *is* making an excessively fast or irregular approach, then a piloting skill roll is required. A successful roll means the ship goes through without any problems. An unsuccessful roll means the ship hits the gateway structure on the way through, damaging both the gate and the vessel. Small ships will be destroyed completely while large vessels will lose 1D6x10% of their S.D.C. (the G.M. may assign other damage such as loss of life support, engines, etc.). The gate will lose 1D4x10% of its S.D.C. and may suffer one of the following (roll percentile dice): **01-20%** Power loss. Will not function until a repair crew fixes the trouble. **21-40%** Can't send a vessel out to another gate, can only receive ships. **41-60%** Can only send vessels out, can not receive them (shoots incoming vessels to the next nearest gateway). **61-90%** Creates a Dimensional Syphon. **91-00%** Internal coordinate system is scrambled, sending travelers 4D6x10 light years away from their desired destination. (Roll percentile dice again. 01-10% chance it will send the vessel to an uncharted gravity well or black hole!)

When an approaching vessel appears to be heading in an irregular flight path towards an active gateway, the gate's defense system will usually open fire on it without warning in a last-ditch attempt to destroy it before the ship hits the portal. This is done to prevent the creation of a Dimensional Syphon.

The accidental creation of a *Dimensional Syphon* is the third drawback. If the piloting skill roll to enter a gateway is missed, the vessel is likely to hit the gateway structure. (**Note:** A piloting roll is only necessary when the spacecraft is flying at excessive speed or recklessly. Routine passage does not require a skill roll.) If struck, there is a chance The gateway will twist and collapse (active gateways are very touchy things). This will forcibly

pull the sending gateway and the ship through the receiving system. Both gateways will then collapse and a permanent passage will be formed between the two former gateways called a *dimensional syphon.* The ship will be shot from the newly formed phenomenon at unbelievable speeds (remember the 8 million times the speed of light figure above?). The ship will have an initial 01-75% chance of impacting something, even a floating piece of space junk the size of a grapefruit, and vaporizing. If the ship manages to survive (76-00% on percentile), the pilot must make a piloting skill roll at -25% to decelerate. If the pilot makes the skill roll, then he will safely bring the ship down to mere light speed, but by then, the vessel will have traveled another 1,000 light years from the dimensional syphon's exit point. If he succeeds, then the ship will slow down to factor speed. If not, the vessel continues on at incredible velocity until it either hits something or slows down. By the time a ship eventually slows down to light speed, add another 1,000 light years distance traveled for each unsuccessful attempt to decelerate. At that point, navigation rolls to fix the vessel's location are at -35%. If the spacecraft shot out of the galaxy, the pilot might never get home. Even a battleship can not convert to a space ark system (no food to grow, etc.) for a return trip that could take 10, 20, 50, 100, or even 1,000 years. Only a vessel with adequate stasis facilities will be able to have a chance of getting home years later — unless some alternative means is discovered.

If the pilot does *not* make the piloting roll, then roll again to see if the ship is:

01-30% torn apart by the stress trauma of the incident (unless there are shuttle craft or life boats, all on board perish).

31-60: Deceleration burns out the engines and the vessel is left floating without means of propulsion 2D6x100 light years off course and probably with other damage.

61-90% Manages to slow down but gets caught in the gravitational pull of a (uncharted?) planet and crash lands on it (good luck). The spaceship is damaged beyond repair, engines and communications systems are shot, the pilot has no idea (none) where they are, and it is left to the G.M. as to whether or not the planet is inhabited or even inhabitable by the castaways.

91-00% Something more occurs. Space and time are warped, sending the ship into the past, future or a different dimension entirely. Getting home is probably impossible and the ship is likely to be damaged.

A fourth, but comparatively minor drawback is that pirates sometimes employ highly skilled hackers to crack the security on a gateway structure and modify its programming to open to a specific gateway when a certain ship accesses it. Thus, an innocent ship, instead of connecting to the gateway the vessel sent coordinates for, is popped right into the hands of waiting pirates, god (and the pirates) only knows where. Thankfully, pirates with such resources and skill are rare, and this sort of ambush happens only once in a great while.

Lastly, gateways are *very* expensive to construct, so they are not all that prevalent throughout the galaxy. The Atorian Empire has built hundreds of them and uses them frequently to keep its quadrants well connected. The FAR has built just under 100 of them throughout the Liloqua quadrant, and operates them like toll bridges, with ships paying a reasonable service and transport fee according to the distance traveled. Typical tolls run about 2D6x100 credits per light year. Once the ship pays the gateway toll, the gate agrees to power up and let the vessel through. Unless it receives prompt payment, a FAR gateway will not power up unless a ship hacks into its computers somehow. This is fairly difficult, however, and requires a successful cyberjacking roll at -35%. A failed result will not only fail to activate the gateway, but it will also tip off the guardian ship(s) nearby. The FAR does not take kindly to those who try to steal a free ride through its gateways. The typical punishment for such an offense is capture and confiscation of the vessel and all cargo, both of which are sold to wholesalers. The Atorians atomize such offenders.

Elsewhere in the galaxy, gateways are rare at best, and usually an artifact from some long-dead ancient civilization. Scouts and explorers have often sought these mysterious structures out to see how they work and what secrets they might yield to further the cause of instantaneous travel. The Titrana and Ilta quadrants each have fewer than a dozen gateways.

Dimensional Syphons

These anomalies bridge the space between collapsed gateways, though some of them occur naturally between old gravity wells and are known as *wormholes* (the same term applied to the artificial "bridges" created by hyper-gravity drives.). Travel through the syphon is nearly as fast as the gateways that formed it (only 10% slower). It requires no coordinates or activation codes and no generators or special equipment to operate, but it only leads to one destination. The spacecraft simply flies in one end and out the other. If the pilot knows the old location of the opposite gateway, his exit point is known, but if he does not, no problem. All the navigator has to do is get a fix (a Navigation: Space roll at -20%), and they know their location.

While all of this sounds perfect and easy, and some governments have purposely created some dimensional syphons, there is a major down side. The passage through a dimensional syphon is very rough. The contest between the unnatural gravity tube and the dimension it intrudes upon creates gravitational and magnetic turbulence inside the syphon. Any ship entering one is not required to make any rolls for piloting or navigation. It simply flies in. Once inside, all electronic systems begin to skip from powerful pulses of magnetic energy. The pulses do not last long enough for life support to be threatened, but sensors, scanners, and communications are virtually useless. In addition, the destructive forces of the syphon will remove 1D4x10% of the vessel's S.D.C. Needless to say, heavily damaged spacecraft must have truly desperate pilots to enter a syphon and risk destruction by its forces.

Black Holes

Black holes are naturally occurring dimensional syphons, but are by no means a standard mode of travel. Traveling through these space-time phenomena couples the hazards of both a dimensional syphon *and* hypergravitics travel, but it is a free and effective means of traveling great distances very quickly.

Black holes occur when a super-massive star reaches the end of its life and collapses in on itself. As the star's mass reaches a single point (or *singularity*), it tears a "hole" in the fabric of space and time. This anomaly appears as a void area in space from which no light escapes, hence the name, black hole. The gravity well of a black hole is such that *anything* that gets close to it will be sucked in, even light! The "point of no return" surrounding a black hole — that threshold beyond which the black hole's gravity becomes irresistible — is called an *event horizon.* Although they remain a theoretical puzzle to Earth scientists, the galaxy's greatest minds learned long ago that black holes merely form a dimensional bridge to another place. Under the proper circumstances, black holes *can* be navigated, but it is fairly perilous and not recommended if there is any other alternative.

Any vessel that crosses a black hole's event horizon will increase in speed exponentially as it is drawn deeper and deeper into the black hole's gravity well. At the heart of a black hole is its singularity, which is what gives the hole its immense gravity. The trick to traveling through a black hole is to shoot through it and skip *around* the singularity. If a ship fails to skirt the singularity, it is instantly crushed. This is why black holes are so dangerous, and why only foolhardy and desperate pilots ever try to navigate them.

In game terms, navigating a black hole is fairly simple, but not necessarily easy. First, the ship must enter the hole traveling in excess of light speed. Traveling at light speed or slower means the vessel can not break free of the black hole's gravity under any circumstances, and is doomed to rush headlong into the singularity. Second, upon entering the hole, the spacecraft's pilot must make a single Pilot Spacecraft skill roll. The success or failure of the voyage, the life or death of the crew and passengers, all rest on this one crucial roll. Moreover, skirting the singularity is not as easy as it may sound. In fact, it is comparable to threading a needle made of pure gravity. Thus, the piloting roll must be made at -25%. If the pilot makes the roll, then the ship flies through without a problem, free to explore whatever lies on the other side. If the pilot fails — well, at least the ship will get crushed flat so fast nobody will know what hit them.

To date, very few black holes have been successfully charted. The few that have, start at one point in the Milky Way and open to another in the same galaxy. However, scientists theorize that a black hole *could* be a bridge to literally anywhere — another galaxy, another universe, another dimension, another time. The extent to which this theory will be proven rests in the hands of those brave souls willing to brave death and fly through these enigmatic hearts of darkness.

A final note. Although the "destinations" of most black holes (where one will end up if he flies through) are unknown, the locations of many black holes are known. There are literally thousands upon thousands of them throughout the galaxy, and any half-competent spacecraft navigator should be able to find any one of them. Most rudimentary astrogating software pinpoints the locations of black holes, much like Earth naval charts would mark the last known location of an iceberg. Proportionally speaking, there are more black holes at the galactic core than elsewhere, contributing to the little-known theory that somehow, the galaxy is devouring itself from the inside out.

Magical Portals or "Rifting"

Rifting is similar to point to point travel, but instead of using science, physics and a tunnel through another dimension, it can only be accomplished through the application of powerful *magic*. For anyone familiar with the **Rifts® Role-Playing Game**, the drives needed for this kind of advanced travel would be massive *Techno-Wizard* devices. They store enough P.P.E. to make one trip by opening a dimensional portal through space and time to a particular destination (in our own dimension or another) and back out. Once the trip is done, the P.P.E. needs to be recharged, which is not an easy thing unless the planet at the other end is rich in magical energies. Large spacecraft can draw P.P.E. from the crew itself, but that requires the willing participation of all involved and a high level mage to perform ritual magic, and rituals take time. For obvious reasons, this method of travel is very uncommon and only appeals to those well versed and comfortable with magic. Even civilizations that do use these magic based warp systems tend to travel between magic rich planets and have conventional backup drives on board for travel to places where magic energy is weak. Needless to say, in the **Heroes Unlimited™** setting, such drives are uncommon even among the races that have mastered magic, such as the *Shissans, Timneh,* and *Manteze.*

Creating a dimensional gateway via magic is more versatile than the other advanced methods of travel because it can be created anywhere to open to anywhere. There is no need to find a man-made gateway structure, gravity well or black hole to use it, although a gravity well always forms a magical nexus and actually makes Rifting easier (+15% to both rolls).

To successfully "Rift" from point to point, a successful *Navigation* roll must be made to plot the spacecraft's destination and a successful *Geomancy* skill (available only to Mystic Study characters, so the navigators on such vessels are almost always Wizards) must be made to plot the dimensional crossing. Failing the navigation roll will put the spacecraft off course by a distance determined by the G.M. (anything from a few light years to half the galaxy). A failed Geomancy roll is much more dangerous, resulting in any number of mystical or dimensional results, including getting trapped in a parallel or alien dimension, time distortion, magical illusions plague the crew, the ship may travel backward or forward in time (time travel is not something that can be deliberately made to happen), and the possibility that a monster, supernatural being or other dimensional traveler could follow the spacecraft through the portal into our universe (as the Riathenors have).

One advantage to magical Rift travel is that if the navigating Wizard is very familiar with the jump destination, say his place of birth, or a port visited many times, the character does not even require pre-loaded coordinates before "jumping" and is +10% to make the jump. An even bigger advantage is, the approximate speed for Rift travel varies with the jump dimensions used and the physics of that dimension, but most can be made at half the speed necessary for conventional space folding systems and gateways. As usual, the idea is to *cross over* from one point in space to another in the same dimension, but a Rift-drive can also allow dimensional travel, and some races do have exploratory teams roaming the Megaverse. However, the process is time consuming, requiring theoretical applications and even when done properly, it is risky — most never return to their original, home dimension. Consequently, few seldom attempt going to another dimension for fear of getting lost in the infinite layers of reality that are the Megaverse. Many non-magic based scientists dispute the existence of "parallel" dimensions like our own, and the handful of travelers who have visited them seldom return to tell their tales or speak of things beyond our comprehension. **Note:** Theoretically, Rift-drives could also travel to other galaxies anywhere in the universe (and some scientists believe that's what actually happens when a vessel "thinks" it has gone to a parallel or alternate dimension). However, the nature of magic is such that the creator and manipulator of the Rift event must "know" about the intended destination to get there. Ironically, it is only Rifts that have gone bad that may port the vessel to some other part of the universe or alternate reality. The use of magic for travel remains an inexact science fraught with inconsistences and peril.

Cruise Mode/Trans-Light Travel

Cruise mode, also known as Trans-Light Travel (TLT), is an advanced form of propulsion that combines traditional FTL, hypergravitic, and gateway technology. Essentially, a TLT system simulates the effect of when a spacecraft misnavigates a gateway and creates a dimensional syphon to slingshot the spacecraft at mind-boggling speeds and skip from one location to another light years away in only 1D4 hours. TLT system sends the ship on a straight-line trajectory to its destination. First, the vessel revs up to factor speed using the FTL component of the drive. Then it kicks in the gateway components of the drive to skip across space, instantly accelerating the ship to roughly one light year an hour. At the same time, the drive's hypergravitics activate, creating a kind of "gravity bubble" around the spacecraft. This deflects small bits of debris and other matter that otherwise would impact and damage the vessel.

Like other means of interstellar travel, this drive also has its down sides. The first is that TLT technology is only good for straight-line travel. The second is that the drive uses up all the fuel in its initial acceleration. After that, the spacecraft is committed to its destination. In order to change course, the vessel would have to slow down, but unless its has additional fuel stores, it will not be able to reactivate its TLT drives.

Another hazard is misnavigation. At the beginning of each TLT trip, the navigator must make his Navigate: Space skill roll.

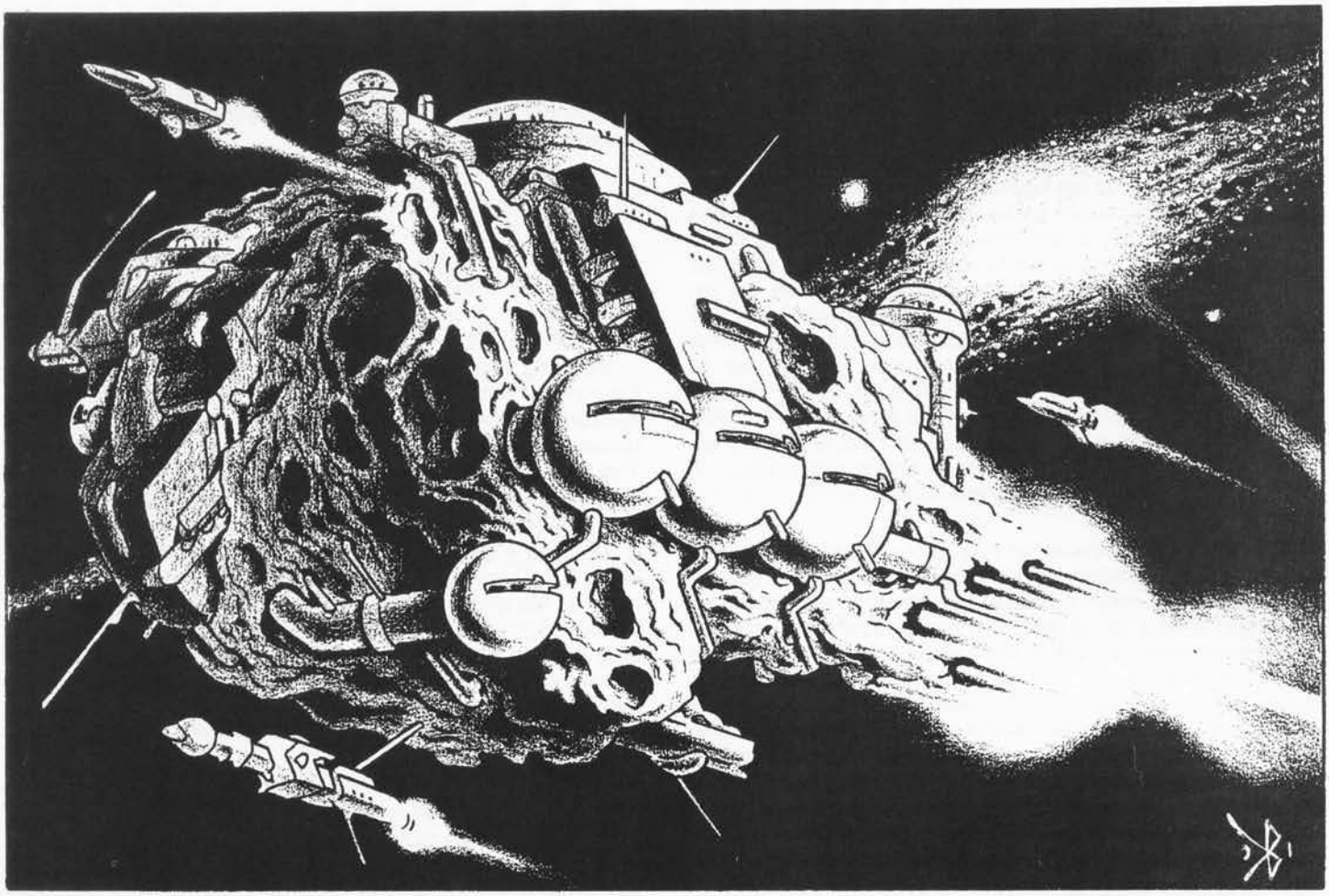
A failed roll means the ship is off course. Thanks to the high speeds of TLT travel, the possibility of getting lost is immense. A good rule of thumb is for every percentage point that the navigator fails his roll, the spacecraft will end up one light year off-target.

A fourth down side is deceleration. Dropping out of TLT speed takes 20 minutes, during which time the ship may not maneuver whatsoever. This leaves even vessels with defensive weaponry vulnerable to any hostile forces that can match speed with the *decelerating* ship. In an emergency, a spacecraft can drop out of TLT speed in less than 20 minutes, but the rapid deceleration takes its toll upon the ship. For every minute the captain shaves off his deceleration time, the ship's hull takes 2D4x10 S.D.C. in damage and the engines may burn out (1% chance per minute shaved off deceleration).

Finally, TLT drives are both difficult and expensive to procure. Although the technology is widespread (the Struthios invented it and have made a great deal of money peddling it across the galaxy), TLT drives require a great deal of mass and energy. As a result, no ship less than 750 tons can accommodate such a drive. This generally reserves it for those rich enough to afford massive vessels in the first place, such as governments, large corporations, and the occasional eccentric zillionaire.

Other Means of Travel

It is a big, big galaxy out there, with much of it remaining unexplored. Many scientists believe that there are numerous other ways of traveling between the stars, a thought shared by numerous explorers who claim to have seen such things first hand. Reality drives, warp travel, chained wormholes and dimension skipping are just some of the theorized and rumored propulsion systems that have yet to be proven, much less commonly used. Likewise, the theorized existence of hyperspace, infra space, mega-space, and ultra space might provide traveling mediums in which mind-boggling speeds could be attained with existing technology. All that remains is for the brilliant and the brave to make these possibilities into reality.



Spacecraft Speed & Acceleration Rules

These rules apply not only to *spacecraft*, but to all aircraft during combat in an atmosphere. They may also be applied to **Rifts®**, **The Mechanoids®** and other Palladium games. When racing across the landscape, speed may be important, but in combat it is secondary to *maneuverability.* The bottom line is simply this, it is difficult to hit a target, even with the aid of advanced computers, when traveling at immense speeds. Even traveling at a speed of Mach four (practically standing still compared to light speed), one flashes past the target in a heartbeat and is miles away in the next heartbeat. This means fighter aircraft and bombers have to *slow down* to accurately attack ground targets.

Many spacecraft can *not* enter an atmosphere, but like our space shuttle on Earth, there are those that can, particularly smaller ships and fighters (see the *trans-atmospheric capabilities* in the Spacecraft Construction section for more details). Spacecraft that can enter an atmosphere will have Mach 10 capabilities to enable them to escape planetary gravity. That speed can be used in combat to reach a target area or enemy aircraft quickly, but is not very effective in actual combat, as noted above. (**Note:**

The maximum speed for any vehicle in an atmosphere is Mach 100/67,000 miles per hour. Atmospheric acceleration is rather slow, requiring several melees. (Anti-gravity engines require half the listed times to accelerate.)

Acceleration Requirements in an Atmosphere

Mach 1 requires 15 seconds (1 melee)
Mach 2 requires an additional 15 seconds (1 melee)
Mach 3 requires an additional 15 seconds (1 melee)
Mach 4 requires an additional 30 seconds (2 melees)
Mach 5 requires an additional 30 seconds (2 melees)
Each additional Mach requires 30 seconds (2 melees)

Combat at Mach Speeds: The usual aerial combat stunts and maneuvers apply to Mach speed combat in space or an atmosphere, but add the modifiers and penalties as follows. For each Mach (670 mph/1,072 km) of speed an aircraft is traveling during combat, there is a penalty of -2 to all combat rolls and -4% to piloting skill rolls. So, a fighter craft traveling at Mach 2 will be at -4 to strike and dodge, and pilot skill rolls, stunts and special maneuvers will suffer from an additional -8% penalty The only exception to this is speed related rolls like *fleeing, climbing, diving* and the *tilt dodge maneuver*. These rules should also apply to *super beings* capable of flying or running at Mach speeds.

Acceleration in space is much quicker, especially with special Accelerators that can be purchased for each drive. Normal acceleration in space is ten times quicker than in an atmosphere (yes, that's five Machs per melee round), but accelerators can move a vessel up to a desired sub-light speed in a single melee round (this is called "teleporting to speed," or the more common slang: "port" or "porting"). Accelerators can be expensive, but the "port" can be very handy and time saving in certain situations (like to escape attackers). During the round that a spacecraft charges up its accelerators, only *defensive attacks* and *tilt dodges* can be performed. If a spacecraft is engaged in evasive action, dodging, or other extreme actions when its "port" takes effect, a piloting skill roll must be made as if the craft were engaged in FTL stunts (described elsewhere in this section). A porting ship does not *have* to be moving in a straight line, it is just much safer that way.

Without porting, a spacecraft can reach light speed in space after *five hours* of constant acceleration, but when time is short, it only requires two melee rounds for a spacecraft with accelerators to port to light speed (factor 1), though it can take up to an hour to enter trans-light travel. Once the spaceship reaches light speed, accelerators can "port" a spacecraft to a desired FTL speed in one melee round. So, for example, an assault craft with accelerators must spend two melee rounds (30 seconds) doing practically nothing while his drives charge up to light speeds, at the end of the second round, the craft reaches factor one in a flash, and the accelerators can begin charging for a port to factor 20. At the end of the next round, the spacecraft zips up to factor 20 for its trip. Note that a ship can accelerate normally while its accelerators are charging, so in the previous example, the assault craft could have reached Mach 10 (from two rounds of acceleration while the port to light speed was charging), and would actually be going factor two when the port to factor 20 took effect (see below). Normal acceleration from factor one to higher factors requires the following time.

Light Speed Acceleration Requirements in Space

Factor 1 requires 15 seconds (1 melee)
Factor 2 requires an additional 15 seconds (1 melee)
Factor 3 requires an additional 15 seconds (1 melee)
Factor 4 requires an additional 30 seconds (2 melees)
Factor 5 requires an additional 30 seconds (2 melees)
Each additional Factor requires 30 seconds (2 melees)

Note: Anti-gravity, Anti-matter, Negative Matter, and Tachyon drives require half the listed times to accelerate. Light Speed can not be attained while in an atmosphere.

FTL Combat Maneuvers & Penalties

The atmospheric combat penalties do not apply in space due to the large distances and great range of the weapons, but FTL combat does have penalties. As stated in **Heroes Unlimited**, combat in *trans-light* is treated as if the spaceships were effectively standing still because their speeds must be identical and maneuvering at that speed is impossible; however, at slower Faster Than Light (FTL) speeds, the suicidal can conduct combat in more traditional ways, including dodging and chicken tactics. The difference between FTL space combat and normal space combat is that even the slightest deviation from course could mean the destruction of the spacecraft as it hits a meteor or space debris, gets dragged into a star's gravity field, has its computer shut down by EM waves, or any number of other dangers that pose little threat to someone battling at reasonable speeds. Moreover, because of the speed involved, one is likely to find himself millions miles off course, perhaps even lost. Needless to say, only the insane or truly desperate gamble with their lives in FTL combat. Apply the following modifiers to the aerial combat system given in HU2.

Piloting: All piloting skill rolls in FTL combat (not normal FTL piloting) are performed at -15%.

Evasive Action: Same as normal, but the Skill Penalty is -35%, and a failed roll means a roll on the damage table below and a possible crash.

Tilt Dodge: The safest maneuver in FTL combat. No changes or additional penalty.

Dodging Planets, Moons & Debris: Just trying anything but following a charted course is a stunt in FTL. The incredible speeds can cover a solar system in minutes. Just trying to judge distance at that speed is difficult even with computer systems. This means in the course of combat, every 1D4 minutes, one is likely to have to dodge a planet, moon, asteroid, meteor, hunk of debris or, when in a civilized region of space, another spaceship!

Dodging a planet: Got too close and is caught in its gravitational pull. Crash is imminent. No chance for survival! Only hope is to use the gravity to "slingshot around the planet. This maneuver is performed at a penalty of -20% and even if successful will sling the ship in a direction away from his target or pursuers (unless they do the same thing) at a speed 30% higher than he was traveling. Slamming into the planet will cause immeasurable damage to that planet. If the G.M. is generous, go to Crash Tables.

Dodging a moon: Roll to dodge at -20 penalty. The low gravity of most moons should not pose too much difficulty. Hitting the moon will cause the spaceship to atomize.

Dodging asteroids, space junk or ships: -15% penalty. Roll percentile dice to determine damage: **01-10%** Sorry, atomized. All hands lost. **11-40%** Hole punched through the ship! Lose 1D4x10% of the vessel's S.D.C. All following piloting and stunt maneuvers are done at the additional penalty of -15%. Other problems may arise. **41-50%** Damage to the ship. Lose 3D6x10 S.D.C. and ALL weapon systems are down! Half can be brought back online in 2D4 minutes. Other problems may arise (if they live that long). **51-65%** Hole punched through the ship! Engine damage prevents accelerating any faster and all stunt maneuvers are done with an additional penalty of -10%. Once decelerated, maximum speed possible is only 1D4x10% of normal. **66-80%** Lost forward section of the ship. Lost all hands in that third of the ship. Lost navigation. Careening out of control. **81-95%** Lost rear section of the ship. Lost all hands in that third of the ship. Lost engines (probably power and weapon systems

too). Careening out of control. **96-00%** Lucked out. Minimal, superficial damage (reduce S.D.C. 10%), everything operational.

Stunts: Stunts and special maneuvers are performed at -50%! A failed roll results in serious damage to the craft (roll on the damage table) and possibly a crash.

Emergency Landing: There is no emergency landing in FTL combat. The only option is to "port" out of FTL travel and if necessary, perform a *crash landing* at the other end (drifting in empty space is a good possibility). Every time the pilot is required to roll on the crash table, he can attempt to "port" out of FTL to avoid it. If successful, he can make an emergency landing instead (if a planet or other body is available) or simply drift. In the latter case, G.M.s may have the characters stumble upon something previously lost in the empty space between stars, etc. Likewise, one may be able to decelerate quickly enough (although probably destroying the engines in the process) to crash-land on a planet without the impact of a plummeting asteroid. Use Crash Table or may crash with crew and passengers intact but the ship is totaled and will never fly again. Wait and hope for a rescue or flee before the enemy arrives to finish them off. Skill Penalty: -30%. A failed roll means the craft continues at FTL speeds and is destroyed or has to roll on the Crash Table.

Shadow: Another safe maneuver in FTL. No changes.

Dog Tail: Still an advantageous position, except following someone in FTL combat is just as dangerous as avoiding them. Skill Penalty is increased to -50%, and a failed roll means the craft is severely damaged (roll on the damage chart) and may crash.

Speed Escape: This one is simple, if your craft is ten factors faster than the pursuer, you get away. If not, you can risk FTL combat or 'port out of FTL for normal combat.

Combat Note: Only an invulnerable character or someone with a Natural A.R. or Robot A.R. of 16 or higher can leave a spacecraft during FTL. And they can only hold onto the hull to remove items with brute force, fire a weapon, or set explosives. No repairs are possible in FTL travel. Also, anyone who falls or jumps from a spacecraft in FTL travel dies. Period. Even invulnerable characters are pulverized by the resulting forces of space and energy.

Random Damage Chart

Whenever a spacecraft in FTL tries a radical maneuver, there is a good chance it will get damaged, either from hitting a small piece of space debris or from the stress of normal forces multiplied by the great speed (think of what a sharp turn does to a car at high speeds and imagine it at a few million miles per hour). This table represents some of the possibilities. G.M.s can expand it if they are so inclined, or they can make up something that fits with their story line.

01-14%: The spacecraft suffers 2D4x1,000 S.D.C. damage. Roll on the Crash Table.

15-39%: Vessel suffers 1D4x1,000 S.D.C., 1D6 systems fail.

40-69%: 1D4 systems shut down. Game Master determines how long this lasts, from 4D4 minutes to permanent (requiring extensive repairs or replacement). Roll on the following sub-table. For each result with two options, use the one that applies, choose them in order (if rolled twice), or apply both of them.

Systems Failure Table:

01-05%: Main engines shut down. Can not accelerate and all maneuvers are done with an additional -15% penalty!

06-14%: Radar and combat computers go down. Must use guesswork and line of sight to hit enemy. -10 to strike and dodge.

15-30%: Secondary or minor system failure, such as kitchen ovens, entertainment hall, water pumps, toilets, cooling, air circulation, internal communication, etc.

31-40%: Maneuvering rockets and/or launch bays shut down.

41-50%: Lose artificial gravity until repairs can be made. Movement on ship is difficult; reduce attack/actions of those on board by two.

51-55%: Internal lights go out (-5% to pilot, navigation, computer operation and repair rolls).

56-60%: 1D4 weapon systems stop functioning.

61-65%: Energy weapon systems fail. Leaves only rail guns and missile defense.

66-70%: Navigation shuts down. All stunts and piloting rolls suffer an additional penalty of -30%!

71-75%: Communications system fails.

76-80%: All missile and trajectory weapon systems fail. Only energy weapons available.

81-85%: Fire and smoke in some (relatively small) area or portion of the ship. All in that area are in danger from the fire and smoke inhalation. Visibility is terrible (-6 to strike, parry, dodge or do anything; -20% to skill rolls). Unless it is contained and put out, the fire will spread throughout the ship at a rate of 5% per every two minutes (8 melee rounds), causing electrical shorts and additional systems to fail (roll on this table for every two minutes).

86-95%: Life support fails. Breathable air will be gone in 1D4 hours.

96-00%: Roll Again.

70%-75%: Any coating (stealth, reflective, etc.) the craft has is sheared off, along with 2 points of A.R. and 30% of the vessel's S.D.C.!

76%-89%: Spacecraft collides with a large piece of space debris. Damage is extensive (75% of S.D.C.) and 1D4 systems shut down. Roll on the Crash Table.

90%-00%: Total system failure! Lights, computers, weapons and life support all fail. The craft violently drops out of FTL travel, taking 4D10% of its total S.D.C. in damage, and drifting through space at a speed of 40% of the speed of light. Characters have 2D4 hours to effect repairs before the atmosphere is used up (survival suits and backup oxygen tanks can prolong this time).

Crash Table

Crashing at FTL speeds is not pretty and not usually survivable, but there are always flukes of fate, especially in a superhero role-playing game. This table is used whenever severe damage causes the spacecraft to crash. It not only represent a crash on a planet, but also a violent end (though not necessarily destruction) to the flight of the spacecraft.

01-10%: Vessel is vaporized! Any survivors are those who managed to jettison in life boats or smaller spacecraft, before it all ended. Even then, the jettisoned vessel suffers damage: reduce S.D.C. by 2D4x10% and 1D4+1 systems go off line (all critical systems should be repairable).

11-30%: All things considered, the spacecraft is left in reasonably good shape. Loses 2D4x10% of its S.D.C. and 1D6+4 systems are down (at least half permanently). If repairs can be made (may require new parts, components, tools or energy source not available on the planet), it can be made space worthy.

31-60%: The spacecraft is a burning wreck beyond salvage. Half the crew and passengers are killed on impact (unless player characters, in which case they are hurt but will live). The blaze can not be contained, and survivors only have 3D6 minutes to rescue and salvage whatever they can before the entire ship is a raging, exploding inferno, and everything (and everyone) inside is destroyed (only a few small odds and ends may survive).

61-80%: The spacecraft breaks up on entering the atmosphere and crashes in 1D4+1 different pieces. Only 10% of those in each piece will survive (player characters are among the survivors and may buck the odds). The spaceship is reduced to worthless scrap metal and there is very little to salvage even in the way of small items (computer, gun, food rations or even a hair comb).

81-90%: The ship landed in one piece but it is a complete wreck. Small items and a third of the cargo (if there was any cargo) has survived and the ship may be suitable as a shelter or base of operation for the survivors. Provided, of course, that it did not crash into a swamp, bog, lake, sea, ocean, the side of an active volcano or other environment where the ship sinks or is otherwise destroyed or inaccessible. Escaping from a sinking spaceship is a whole new adventure.

91-95%: Miraculously survives. The vessel loses 1D4x10% of its remaining S.D.C. but survives. All critical systems can be repaired and brought online. It can even avert a crash landing and limp off into space, but all FTL systems are burnt to a crisp. Nobody's getting home any time soon, and the vessel is a sitting duck for its enemies unless it can sneak away or is left for dead.

96-00%: Plunged into a space anomaly and appears in an unknown area. They can suddenly appear at the other end of the galaxy, a different galaxy entirely, or another dimension like *Phase World™* or *Skraypers™* (or something completely different — alien, primitive, etc.). Depending on the G.M.'s mood, the dimensional anomaly also has one of two effects: First, it can cause an additional 1D4x300 S.D.C. of damage and another system fails, or it can alternately warp the spacecraft not only into another dimension, but into perfect condition (even changing it to M.D.C. if necessary) with fully operational systems and full weapon payloads (this is rare).

Note: The presence of a civilization on this world will complicate things, not always in a good way. Even advanced civiliza-

tions may capture, imprison, experiment on and/or enslave or kill "visitors from another star," rather then help them. If lucky, the people will assist in their repairs or the components, tools and things needed for repairs (if repairs are even possible) can be acquired (traded for, stolen, taken by force, etc.). There is a good chance survivors of a crash are trapped on the planet (or adrift in space). It is also possible the planet is uninhabitable for the survivors, and they face a quick or slow death unless rescued soon. Don't forget that if the crash is the result of combat, the enemy *may* pursue to make sure they are dead or to take prisoners. On the other hand, the enemy is just as likely to assume their opponents could never have survived and leave them for dead.

Spacecraft Construction

By Wayne Breaux Jr. & Bill Coffin

Space travel and spaceship construction rules were originally to appear in the **Aliens Unlimited™** sourcebook, but it became such a large and detailed set of rules that it got cut. What follows is basically a massive expansion of the vehicle construction rules given in the Hardware section of **HU2**, but geared directly toward spacecraft. Since Alien characters can belong to the Hardware power category, they can use this section to create spacecraft instead of (or in addition to) conventional vehicles. Or, Alien Hardware characters can simply purchase one of the standard pre-generated ships described later in this section and use their leftover money to modify it with additional sensors, gizmos and features.

The only characters likely to begin with the money to build or buy a spaceship are those from the *Hardware* or *Robotics* Power Categories. For Galactic Hardware characters, a spacecraft may be built in lieu of a traditional super-vehicle. For Galactic Robot characters, a spaceship may be built in lieu of a robot vehicle. In either case, the budget for such vehicles should be rolled on the Starting Budget for Spacecraft table below. Galactic Secret Operatives can have access to a fighter craft or small ships or shuttles instead of their spy car. This vessel will be a production line fighter or shuttle that the player can customize with four of the following features:

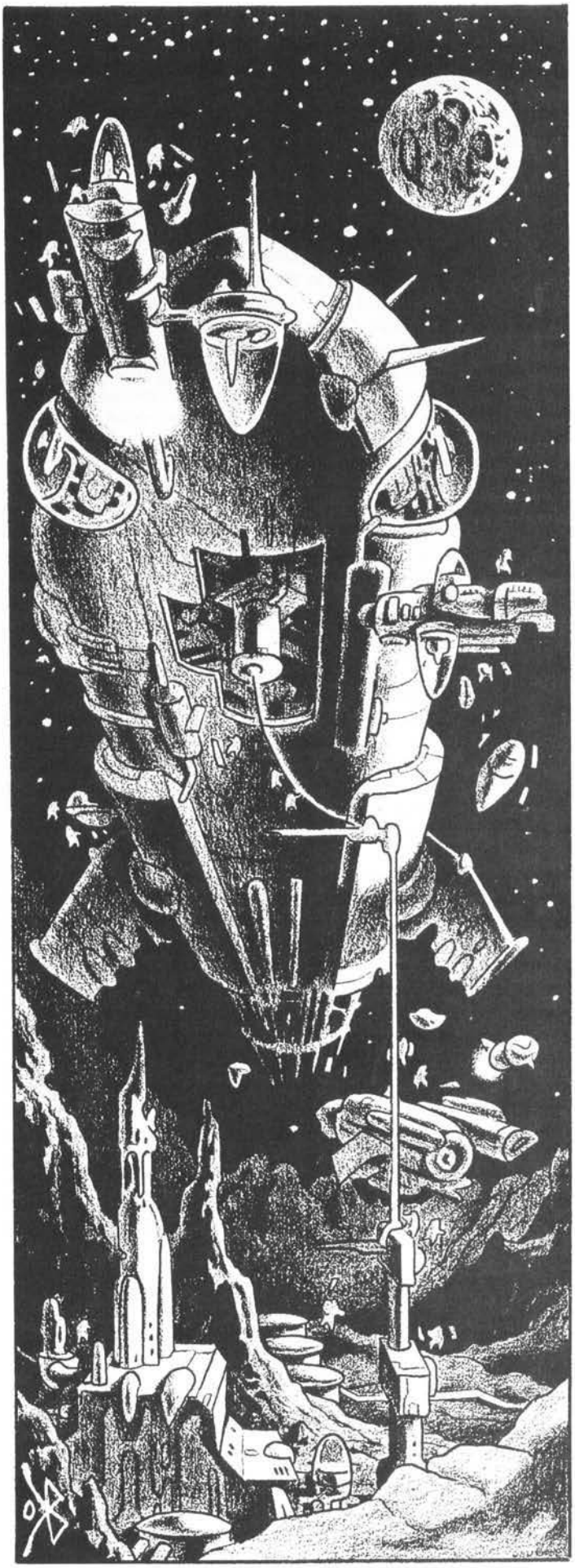
Medium Armor
Factor 2 speed increase
Trans-atmospheric capabilities
Advanced Sensor Package
Armored Flight Suit (identical to the HESS in the **Aliens Unlimited** sourcebook)
Seating for three additional passengers
Light Spacecraft weapon in a rotating, pop-up turret
Mini-missile launcher in a rotating, pop-up turret
Grapple system

Funding

As mentioned previously, galactic Hardware and Robot characters may build or modify a spacecraft during character creation. In either case, the budget for such vehicles should be rolled on the following table, and not the budget tables in their respective HU2 Power Categories.

Starting Budget for Spacecraft

01-15%: Two million credits
16-26%: Five million credits
27-38%: 10 million credits
39-50%: 12 million credits
51-60%: 15 million credits
61-70%: 20 million credits
71-81%: 26 million credits
82-90%: 35 million credits
91-00%: 50 million credits



All prices are given in Galactic Free Trade Credits, or credits for short. It is the major universal money in the Milky Way. To construct any of these craft on Earth, prices would be multiplied by at least 100 times the listed credit cost.

Just as in the **Heroes Unlimited** rules, Hardware characters with especially large building budgets need to have some help from people with plenty of money to invest. If a character has a building budget of 10 million credits or more, roll for a *Sponsoring Organization* and the character's standing with the sponsoring organization (page 216 of **HU2**). G.M.s are encouraged to modify and add to these lists as they see fit – weird or unusual origins are always welcome in the world of **Heroes Unlimited**!

If the player group does not have a Hardware character, but wants to have a spacecraft, they can always fund the project themselves. Characters who are mercenaries, criminals, or treasure-seekers should have no problem finding the money for a spacecraft (assuming they do not just steal one outright, while heroes might "acquire" one from a defeated villain). Likewise, heroes who are not adverse to accepting monetary rewards for their deeds can also find the means for custom-building a cool space vehicle with which to battle evil. Alternately, heroes might be rewarded by a grateful planet, government, organization or people with access to their top shipbuilding yards and a certain amount in credits with which to build their own ship. Such tokens of appreciation are not unheard of, especially for galactic champions who perform exceptional acts of heroism, such as averting global conquest or military invasions, stopping mass destruction, destroying space faring monsters, and tackling other planetary catastrophes.

Characters might also *salvage* and try to rebuild a spacecraft or be given a ship that is secondhand or in somewhat battered condition. Such endearing "junk piles" are surprisingly suitable for all sorts of conversions, modifications, upgrades and improvements. Many space faring adventurers enjoy driving a ship that looks like hell but can outfly, outshoot and outmaneuver the latest top of the line fighter. ("Sure, she don't look like much, but wait'll she kicks in the overdrive!") However, such enviable performance typically comes after the ship's owners put a great deal of resources and shop time into it. Unfortunately, such spacecraft tend to be "hangar queens," requiring constant maintenance and support. Without that, the ships will fall into disrepair and provide substandard performance.

At the beginning of each adventure, and possibly right after heated combat or situations stressful to the spacecraft (prolonged periods at maximum speed, travel through asteroids, etc.), the Game Master should call for a Spacecraft Mechanics skill roll. This roll uses the highest percentage in the group (if more than one character has the skill) and represents the group's ability to do minor repairs and maintain the vessel. A successful roll means the spacecraft functions normally, but a failed roll means something broke or slipped or fell out of line, etc. There is some minor problem with the vessel that will affect its performance for the adventure. Roll on the following table to determine effects.

Secondhand Spacecraft Malfunction Table

01-11%: Engine problems; reduce maximum speed by 10%.
12-20%: Doesn't handle well; -10% on piloting skill rolls.
21-35%: -1 to dodge.
36-50%: -1 to strike.
51-65%: Sluggish response. Takes 50% longer to get up to high speeds and -5% to pilot rolls.
66-80%: One minor system off-line (radio, running lights, sound system, etc.).
81-90%: Battered hull; reduce the usual S.D.C. for the main body by 1D4x10%.
91-00%: One major system off-line (combat computer, one weapon, power to external doors, etc.).

All effects on the aforementioned table are cumulative. At the beginning of the next adventure, the group gets its usual maintenance roll. If it is successful, the problem is fixed, if it is again unsuccessful, the problem degrades and another roll adds penalties to the craft for the adventure. The next successful maintenance roll will negate all accumulated penalties.

Getting a Spacecraft Built

The quickest and easiest way to obtain a spacecraft is to buy one from a dealer of some kind, much like how we buy an automobile on Earth. Of course, most of the vessels coveted by adventurers (especially military models and combat worthy ones) are not normally available for sale to ordinary folks. This leaves the intrepid space traveler with the alternatives of buying a secondhand (and perhaps already modified) spacecraft, stealing a pirate or other criminal's military or souped-up spaceship, buying a restricted (i.e, military) vessel through illegal channels, or the most common solutions, buy a "civilian" model and modify it, or build one from scratch.

Spacecraft can be commissioned for construction at almost any galactic shipyard. Since most of these facilities provide building and repair services to military, law enforcement and private security businesses, they can easily procure military or paramilitary weapons and technology for private clients. Likewise, there are a number of underworld operations, as well as a handful of legitimate interstellar spaceship manufacturers, who are glad to build combat vessels, no questions asked (many using knock-offs of various military designs).

In general, light weapons and defenses are considered legal, since all space travelers have the right to protect themselves in space. This is especially true of independent explorers and colonists. Heavy weapons and defenses are generally considered illegal, but there are so many ships with such technology and so few means to prosecute them all, that most shipyards simply provide illegal hardware and services at no extra cost. This is perhaps the biggest incentive for adventurers to build their own ship rather than trying to buy restricted vessels "off the shelf." Even where there are serious efforts to restrict the kinds of weapons and technology made available to the public, there are in virtually every system *black market shipyards* and *rogue governments* wiling to build contraband vessels and equipment or do illegal business for the right price. Under such circumstances, the standard cost for certain items may (at the G.M.'s discretion) run several times higher than the list price.

Once a spacecraft has been ordered, the average construction time for custom jobs is 2D4 weeks for each million credits of its cost. In general, custom production time can be cut in half if the buyer pays double the ship's cost. Considering how pricy most custom jobs are to begin with, however, this option is not often exercised. Other circumstances, including parts and materials, shortages, missing components, late or hijacked deliveries (pirates are everywhere these days), political instability on the shipyard world ("Sorry, the Atorians just invaded. Your ship has been delayed indefinitely.") can also modify the length of construction time. In this regard, the G.M. is encouraged to use any feasible delays as potential adventure fodder. Perhaps the heroes can speed production on their ship if they catch the pirates who stole their supply of energy modules, or if they forestall the impending invasion on whatever world their shipyard is on, etc.

Before any work is done, most shipyards require some kind of down payment. Typical down payments range from 10% to 40% (1D4x10%). Upon completion, the buyers may need to work out a payment plan if they can not pay for the rest of the ship right then and there. Shipbuilders are known for hiring *bounty hunters* to apprehend those who skip out on their bills, so trying any

funny business with the folks who built one's ship is not recommended.

Repairs and Modifications to Spacecraft

Once the campaign is underway, characters are going to eventually want to add to their spacecraft. If they ran out of money during construction or have not yet maxed out their ship, all they need to do is purchase the desired upgrades and add them on to their vessel. They can do so themselves if the characters possess the appropriate skills for such work, or hire somebody to do the work for them, but that will cost twice as much as the parts. G.M.s, keep track of all skill rolls while characters are performing any upgrades or modifications; failed skill rolls will result in a malfunction down the line. And since most mistakes go unnoticed by those who make them, the malfunction may not present itself unless the mechanic specifically double-checks his work or until the ship trips off the malfunction during space flight.

Alternatively, characters can simply park their ship at a shipyard, order the modifications, and come back when the job is finished. In this respect, having modifications installed is just like custom-building a ship, only faster. The same 2D4 weeks per million credits of cost applies. For work costing less than a million credits in parts and materials, the wait time is 1D6+1 days per 250,000 credits worth of modifications.

When a spacecraft is damaged, the best option is to hire a shipyard to repair the damage for a fee. Repairing straight S.D.C. damage costs 20% of the ship's original list price. For example, a typical Shuttle is 100 tons, has 15 S.D.C. per ton (for a total of 1,500 S.D.C.), and costs 2,000 credits per ton. If a shuttle sustained 600 S.D.C. damage, it would cost 16,000 credits. At 15 S.D.C., per ton, the 600 S.D.C. in damage equates to 40 tons worth of damage. At 2,500 credits per ton, 40 tons would cost 80,000 credits to replace. But since we are only repairing this damage, the cost is 20% of the replacement cost. Thus, the 80,000 credits becomes a mere 16,000 credits — the cost of repairs. In general, repairs take one hour per 10 S.D.C. repaired. In the case of the damaged shuttle craft mentioned above, it would take the average repair facility 60 hours (or two and a half days) to repair 600 S.D.C. worth of damage. Especially good facilities or paying extra may speed repair times, if the G.M. allows it.

Those unable to hire a professional repair crew can try to effect repairs themselves, but they will require several things: The necessary skills (Spacecraft Mechanics and perhaps Alien Technology Mechanics), sufficient tools and replacement parts, and someplace to do the repairs. Only those with the proper skills can attempt spacecraft repairs. Sorry, but there is no winging one's way through this; repairing a ship is simply too complex. Oh, one can try, but one will certainly fail. Finding a repair spot is not that difficult — all that is required is a safe place and the suitable facilities for the repairs to be carried out. This can be in something as simple as an empty hangar, an asteroid cave, or even in deep space. All deep space repairs require is that the technicians wear proper spacesuits when working. Deep space repairs will also take about twice as long, since working in zero gravity tends to be a slower process than working in a terrestrial environment.

The really hard part about self-repair is getting tools and replacement parts. The easiest and most common remedy is to have a spacecraft repair kit on board. **Spacecraft repair kits** come in portable, medium, shop, and factory sizes that correspond directly to the robot kits of the same names (including what repairs they can perform; the factory kit is the equivalent to the robotics laboratory kit), except for the amount of S.D.C. each can replace. Spacecraft kits are built into the vessel during construction and are tailored for the spacecraft, thus they have variable amounts of S.D.C. for overall repairs. Portable kits can hold 10% of the ship's total S.D.C. of materials; medium kits hold 25% of the S.D.C. of the craft; shop kits have up to 75% of the craft's S.D.C.; and factory kits have 150% of the craft's total S.D.C. in them. A spacecraft with a built-in *factory kit* can perform any repairs and construction in the field, as long as it has parts and materials.

All spacecraft repairs use the modifiers given in the Hardware section of **HU2**. Hardware: Mechanical Genius characters gain a 30% bonus to the Spacecraft Mechanics skill. Repairs can replace S.D.C. up to the amount of the kit available and damaged/destroyed systems can be replaced with spares if available. Without a factory kit, constructing parts is *impossible*, and they will need to be purchased from a space station or dealer on a planet. Repairs take half the times listed in the **HU2** robot construction rules, except S.D.C. which requires the full time to replace (1 hour per 10 S.D.C., twice as long if repairs are made in the field). These repair times are divided by the number of skilled workers doing the job. A worker with Basic Mechanics counts as a skilled worker, but only if there is someone with Spacecraft Mechanics or Mechanical Engineer to direct him. The large mechanical crews of a battleship (usually 20 strong) can get a system back on line in a matter of hours (or minutes when spares are available).

Designing a Spacecraft

The actual process of putting a spacecraft together is fairly simple. There are only five steps: 1) pick a basic spacecraft type, 2) add a propulsion system(s), 3) install weapons, 4) add armor, and 5) pick out additional equipment for the ship.

What makes this process potentially very time consuming is the multitude of options available to ship designers at every step of the process. For detail junkies, it might take a while to figure out exactly how to customize one's ship, but sometimes that is half the fun.

Step 1: Basic Spacecraft Type

This is the basic space frame onto which all sensors, systems, armor, and weapons will be placed. Superstructure frames must be purchased from a spacecraft manufacturer. Many large space stations have construction facilities and can be commissioned to build a vessel or parts of a spaceship according to a character's specifications. An option for characters with limited money (or those wanting to squeeze bigger spacecraft out of their budget) is to salvage a space frame. The individual Game Master can decide how he wants to work this, based on his campaign and the characters' needs weighed against the players' wants. A character with appropriate skills who makes a successful roll can cut the basic vehicle chart prices by as much as 60%. Characters without appropriate skills (smugglers, freelancers, etc.) can hire someone to salvage the frame for them, cutting as much as 40% of the cost.

Basic Spacecraft

The table below provides a snapshot of the differences between the eight primary classes of spacecraft in the Milky Way.

Shuttle: Cost/Ton: 2,000 credits. S.D.C./Ton: 15, Modules/Ton: 1, Crew: 1 per 150 tons. Tonnage: 5-300.

Transport: Cost/Ton: 3,000 credits. S.D.C./Ton: 25, Modules/Ton: 2, Crew: One plus one per 1,000 tons. Tonnage: 300-100,000.

Interceptor: Cost/Ton: 3,000 credits. S.D.C./Ton: 25, Modules/Ton: 1, Crew: One plus gunners as needed. Tonnage: 20-100.

Destroyer: Cost/Ton: 9,000 credits. S.D.C./Ton:100, Modules/Ton: 2, Crew: Ten per 100 tons. Tonnage: 400-1000.

Battleship: Cost/Ton: 10,000 credits. S.D.C./Ton: 250, Modules/Ton: 3, Crew: Twenty-five per 100 tons. Tonnage: 1,000-5,000.

Deployer: Cost/Ton: 12,000 credits. S.D.C./Ton: 200, Modules/Ton: 4, Crew: Ten per 100 tons (excluding pilots). Tonnage: 1,000-10,000.

Space Station: Cost/Ton: 20,000 credits. S.D.C./Ton: 200, Modules/Ton: 10, Crew: One per 100 tons. Tonnage: 1,000-100,000.

Satellite: Cost/Ton: 4,000 credits. S.D.C./Ton: 50, Modules/Ton: 1, Crew: None Tonnage: 10-100

Table Notes

Cost/Ton: Represents the price for commissioning the construction of a new space frame of that type. Cost goes by ton, so if one is commissioning a 125 ton shuttle craft to be built, the basic frame of the craft will cost 250,000 credits (125x2000 CR per ton).

S.D.C./Ton: Structural damage capacity per ton. The greater a ship's tonnage, the greater its base S.D.C. And, certain ship types simply have more S.D.C. per ton because they are built to withstand damage better. For example, the aforementioned 125 ton shuttle craft would have a base S.D.C. of 1,875 (125 tons x 15 S.D.C./ton = 1,875 S.D.C.). But a 100 ton interceptor would have a base S.D.C. of 2,500 even though it is of a lesser tonnage (100 tons x 20 S.D.C./ton = 2,500 S.D.C.).

Modules/Ton: Every spacecraft must devote a certain amount of its starting tonnage to its hull, cockpit, and other essential systems. Whatever room is leftover is divided into 125 cubic foot (3.54 cubic meter) areas called *modules*. Modules are used to fit in the ship's engines, weapons, defenses and other equipment. Or, modules may be left empty to be used as cargo space. Many transports, for example, will have hundreds of empty modules since the basic function of the craft is to haul cargo. When calculating the number of modules leftover for cargo, one might find that he has a decimal involved. Say, 4.5 modules or 9.9 modules. For cargo purposes, round down anything below .5 and round up anything at or above .5. Thus, a ship with 3.6 modules left over will, for cargo purposes, have 4 modules available.

Crew: The minimum number of people required to operate the ship. Starship crews typically are proportional to the tonnage of the vessel. Military ships generally have higher crew requirements than civilian craft. The pilot of a spaceship may also operate any *one* of the vessel's weapons while flying the vehicle. All other weapons must be operated by separate gunners. Weapons that are fire-linked are treated as a single weapon system, and during combat require only one roll to strike. If the roll hits, then both weapons hit. If the roll misses, then both weapons miss. Theoretically, all of a ship's weapons may be fire-linked, but the disadvantage to that is that fire-linked weapons can only engage one target at a time. A ship with 20 fire-linked cannons, for example, can deliver crushing attacks to *one* enemy ship at a time, which could put it at a serious disadvantage when engaging multiple opponents.

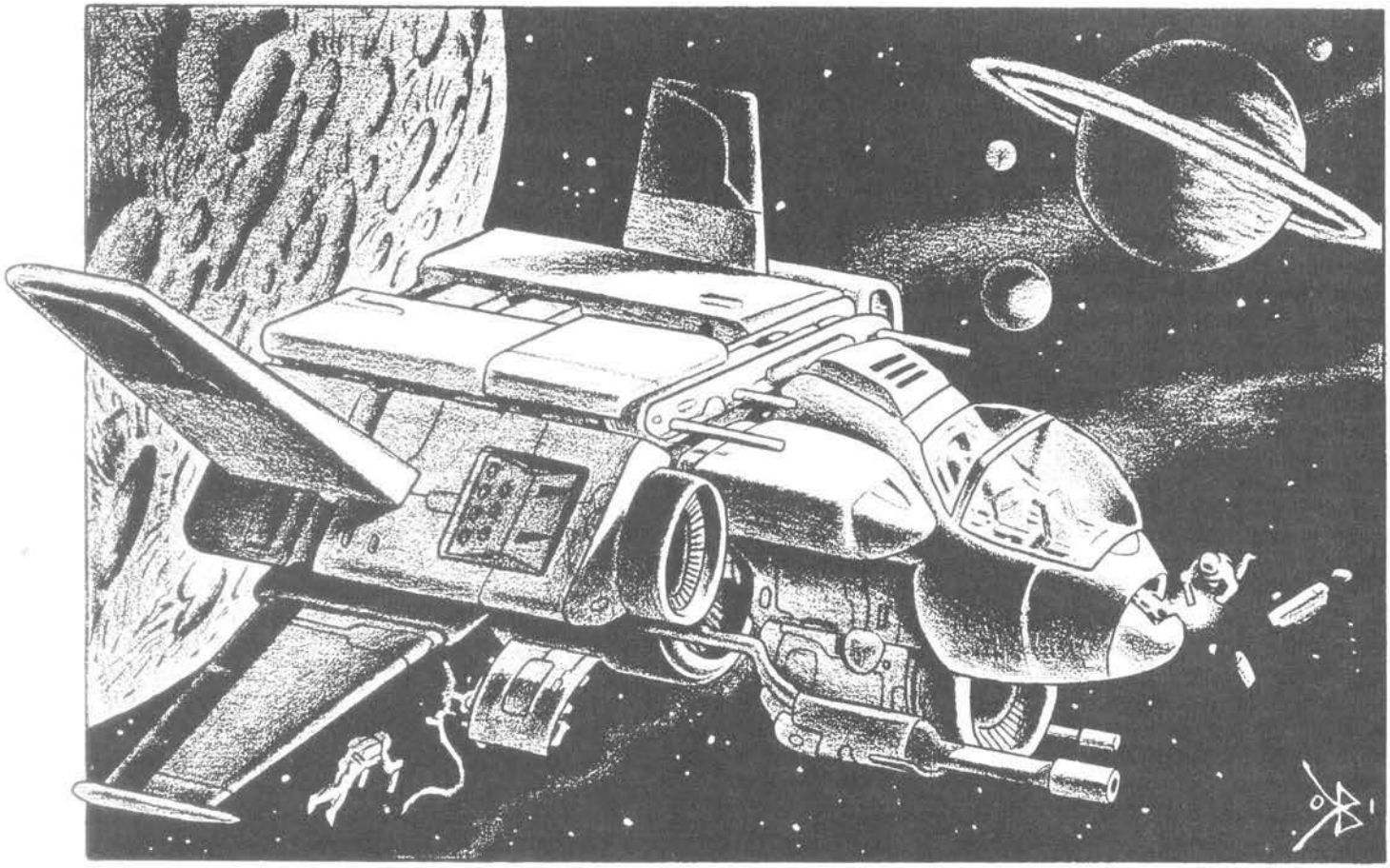
Tonnage: This is the standard measurement of a spacecraft's overall size. A "ship ton" generally measures one foot (.3 m) and one ton (2,000 pounds/900 kg) for ships under 1,000 tons. For ships at or above 1,000 tons, a "ship ton" measures 10 feet (3 m) long and ten tons (20,000 pounds/9,000 kg). Since tonnage also determines the amount of modules (and therefore, the amount of weapons, armor and other equipment), tonnage is sometimes used as a rough estimate of a ship's raw power.

Ship Types

This category represents the eight major classes of spacecraft: *shuttles*, *transports*, *interceptors*, *destroyers*, *battleships*, *deployers*, *space stations*, and *satellites*. All spacecraft fall into one of these categories.

Shuttles are perhaps the most common of the spacecraft classes, being small to medium vessels used primarily to transport passengers and light cargo over short distances. Many shuttles are trans-atmospheric and provide a valuable link between a planet and its space stations, moon(s) or orbiting merchant and cargo ships. Shuttles are popular because they are inexpensive and easy to get parts for. They are not usually very maneuverable, but can be outfitted into decent combat ships with the right upgrades. Shuttles seldom have any kind of FTL capability, but that has never stopped enterprising captains from outfitting a souped-up shuttle into a scrappy interstellar vessel to roam the galaxy.

Transports are basic *cargo ships* designed to haul bulk quantities of passengers or merchandise. Cargo transports are typically like warehouses with engines, sporting large internal cargo bays and external cargo docks for carrying numerous external payloads. Some cargo vessels are skeletal structures with a flight deck/command center, crew quarters, vital systems and drives placed along a linear, circular, or square frame with the rest of the ship rigged to haul external cargo bays. Technically, any spacecraft can haul lots of externally attached cargo in deep space because there is no gravity to slow the ship down. While



this might work for transporting things to another ship in deep space or a space station (perhaps not for passengers), transporting such cargo to any planet with gravity and an atmosphere becomes impossible, since it would break off and/or burn up during reentry. That is why so many merchant captains use large cargo transports to haul passengers or merchandise internally. Most transports are modified to land on a planet's surface directly, enabling quick turnaround times in port. To a space hauler, time is money, and having to shuttle merchandise to and from a planet's surface is a waste. Because they come in a variety of tonnages and can support extensive modification, transports are a favorite choice for rebels, cash-strapped militias, pirates, and others looking to build relatively cheap warships.

Passenger transports may range from luxurious cruisers to floating buses or warehouses packed with personal stasis pods. Since many galactic citizens can not afford their own spacecraft, hiring a slot on a passenger transport is the best way to travel from world to world. Fares vary according to the level of comfort. Riding in a stasis pod the whole way typically runs about 100 or 200 credits per light year. Riding in an ordinary ship cabin (cramped, but livable) runs about 500 credits per light year. And riding in a luxury cabin can range from 1,000 to 50,000 credits (or higher!) per light year, depending on the accommodations. Upper-end luxury cruisers provide every possible amenity for their passengers, including live entertainment, sumptuous food, and other pleasant diversions. They also often have formidable (but discreetly concealed) on-board security detachments and interceptor wings to repel pirates.

Interceptors are the smallest category of combat spacecraft. Also known as "fighters," these small, agile combat vehicles are designed as scout and attack ships. Their small size makes them hard to hit by the larger weapons of most spacecraft and they are commonly used as scouts and surgical strike weapons to get in close to larger spaceships and disable key systems such as communications arrays, sensor pods, key weapon systems and launch bays.

The best defense of a large spaceship against interceptors is to have its own fighters. The limited modules and the general small size of the fighter restrict it to short flights and these spacecraft are rarely used for long or extended trips away from their host or mother ship. In addition, their size also limits the type of sensors, drives, and specialty equipment that can be installed, making the active sensors of a host ship a blessing for the vulnerable spacecraft. *Deployers* (carriers) are the most common launch ships for fighters, but the other large military spacecraft will have at least a small complement of them too, as will most *space stations*. Other spacecraft, such as cargo or passenger transports, will often have interceptors aboard for scouting and defense, or as escorts. Needless to say, interceptors are also used by warlords, mercenaries, raiders and pirates, especially those who wish only to travel within a single solar system. Using places such as asteroid belts and derelict moons to base their combat vehicles, such fighter pilots can make a handsome living as marauders with their tenacious interceptors.

Heavy Interceptor. Although the common image of the interceptor is a sleek, maneuverable 20-ton war-bird, anything ranging from 85-100 tons and outfitted for rapid, responsive combat is considered a heavy interceptor. Such heavy fighters bridge the gaps between traditional fighters and the larger military vessels such as small destroyers. They are commonly deployed in conjunction with squadrons of other, smaller fighters to act as medium to heavy support fighters, bombers, or command units for the lighter interceptors. However, devastating units composed entirely of larger fighters of this type are regularly used to raid military outposts, bases on asteroids or space stations. Those significantly larger than standard (50-80 ton) interceptors function as armed escorts, small powerful strike craft, or weapon platforms, while the largest (85-100 tons) are outfitted as small-scale destroyer or deployer spacecraft and function as support units for the full-scale destroyers or deployers or combat fleets of small to mid-sized war machines. These heavier variants can employ more weapons and armor than the standard in-

terceptors and are more maneuverable than true destroyers and deployers. However, they are NOT as maneuverable as the small interceptors (-5% piloting penalty, and reduce dodge bonus by half), plus they are more expensive. This class of "heavy" fighters also make ideal vessels for mercenaries, bounty hunters, and pirates, and appeal to some explorers and adventurers. Unlike smaller fighters and the lighter shuttles, they can be armed and armored and still have space for a sizable crew (4-8) while retaining some storage space and accommodating FTL drives.

Despite the name and combat oriented nature of the interceptor/fighter, this class of spacecraft also includes any number of civilian one, two and four person recreation vehicles used in the local space around planets and space stations much the way jet skis and motorcycles are used on Earth. Most of the higher-end passenger transports will have a dozen or more of these unarmored, unarmed vehicles aboard for recreational use (rented by the hour). Such small, light spacecraft also differ in that they commonly have a large windshield or bubble-styled cockpit canopy to allow the user to enjoy the view.

Destroyers are the smallest of the large, heavy military vessels. These spacecraft are moving weapon platforms of great size and firepower, but with enough maneuverability to respond to and engage smaller, fast moving spacecraft. The role of the destroyer is to escort and defend the larger, more specialized *battleships* and *deployers* (fighter carriers), but they can also make devastating assault ships in their own right, especially when facing an inferior space fleet. The versatility of the destroyer comes from a vast array of weapon systems and a small complement of fighter craft. Dozens of weapon systems cover the hulls of these vessels, though rarely are they all necessary or even active. When a destroyer enters combat, the optimum weapons for use against the enemy are determined, often well before the actual fighting begins. Weapons are deployed for their most effectiveness in dispatching the enemy or getting a job done. So, for example, a destroyer facing laser resistant fighters would employ its ion or particle beam guns and/or missiles.

Even though all weapons on such a spacecraft will have manual firing posts, such systems are rarely used, and the gunners are commonly stationed in one or more centralized fire control stations. From here, they remote fire their weapon via sensor readouts and virtual imaging. There are commonly 4 to 6 such fire control stations in a destroyer. This arrangement allows the gunner to instantly switch to another weapon system should his current one be disabled, and it minimizes the risk of a gunner being killed when his weapon is destroyed. This approach also preserves manpower, saves lives and increases efficiency. In the event that the relay computers or the main combat computers are disrupted, the gunners can then scramble to operate the manual controls of their weapon emplacements.

Destroyers are commonly deployed by a unified world government or group of allied worlds, space police and powerful security forces. Pirates, mercenaries and adventurers rarely have the manpower to keep a fighting ship of this size and cost in operation unless it has been heavily automated. Even if one were to automate a destroyer so that a tiny crew could run it, the cost of such modification would be so astronomical that it would price the spacecraft out of reach of all but those for whom destroyers are truly intended — large military and corporate users.

Battleships are tied with *deployers* as the largest class of warship. Often bristling with arms and armor, these giant ships are floating fortresses, capable of delivering punishing firepower wherever they go. Many of them sport major-league weaponry capable of shattering smaller ships or planetary targets with ease. Such weaponry is *very* expensive, however, and usually can only be afforded by superwealthy and powerful organizations (like the TGE), large groups of allied planets (like the FAR) and interstellar powers such as the Atorian Empire, or TMC. Battleships also tend to have large crews as well as infantry troops trained for boarding other ships or launching space borne "amphibious" planetary assaults. These mammoth warships rarely operate alone, serving as the heart of a larger battle group consisting of several deployers, numerous destroyers and many times more interceptors. The high cost of acquiring and maintaining such a mammoth spacecraft means many worlds and planetary systems can not afford them, instead relying on smaller warships and converted cargo vessels to meet their defense needs.

Deployers are the galactic equivalent of Earth-type aircraft carriers. Although heavily armed and armored, their real strength comes from the large complements of interceptors they host. Deployers often stand back from the main fighting of a battle and launch their interceptor fleets to do the dirty work. These fighter ship launch platforms usually work in concert with battleships and destroyers as part of a coordinated battle group, with the deployers providing up-close dogfighting and ship assault capability, while the other ships deliver major ship-borne firepower and support.

In recent years, a civilian version of the deployer has been introduced, providing a means for non-FTL capable vessels to move from system to system. For shuttle captains and those piloting small transports without FTL drives, hitching a ride on a civilian deployer/carrier is the best means of moving to another star system.

Space Stations are large habitats in space. They are usually designed as a kind of way station or outpost between planetary settlements in deep space, or as orbital space ports for those visiting a particular planet. Most space stations are the equivalent of small cities, and support a large population. They are typically civilian funded and commercial in nature, but entirely military, scientific, and even religious space stations are found throughout the galaxy.

Space stations are mainly made up of residential quarters, retail or recreational levels, docking facilities, and hangars or bays for visiting spacecraft, although some specialize in manufacturing or engage in work too hazardous to keep on the home world. Large space stations will be more like cities, with clusters of residential space forming known hotels and retail areas into malls or bazaars. Repair and construction facilities are at least minimal on most stations, while the largest ones will have complete construction facilities, and others are devoted just to construction or manufacturing, with ore refining and parts fabrication taking up the areas that aren't filled with construction and repair bays. Other stations will be filled by recreational businesses only, with casinos and pools, malls, tracks, bars and brothels, and any number of other relaxing venues. Many industrial stations have recreational stations not too far away, especially if they are located away from any suitably advanced planet.

Space stations are, by nature, non-moving, usually held in the orbit of a planet or moon. Some may simply float free in deep space, or around a star with no planets at all. Aside from small engines designed to keep the station's location constant, these mammoth space communities have no real means of propulsion. Instead, their bulk is dedicated to people and/or specialized operations (like a space port). Depending on the location, hostilities in the region, and the temperament of its builders or owners, a space station may have the equivalent of battleship-class arms and armor, as well as deployer-class interceptor wings. However, the majority of space stations are not meant as war platforms, and only host such hardware in times of trouble, or to secure the station in a particularly dangerous section of the galaxy.

Satellites are small, relatively cheap stationary vehicles set in orbit around a planet or moon. The vast majority of satellites are for relaying communications of some sort, or to provide the planet/moon or space station with a line of defense. Defensive

satellites are considered "disposable warships" that are not expected to survive a pitched battle, but might buy the planet enough time to repel attackers with other military craft.

Step 2: Propulsion

When choosing the propulsion system, also think about how fast one wants or needs to go, as each type has its limits. Determining factors usually end up being cost, module space, and exactly what purpose the vessel is being designed for. High-speed couriers probably should not be investing in laser sails, whereas a pleasure cruiser probably has little real need for acquiring a tachyon drive.

Spacecraft Drives

Anti-Gravity: Cost/Ton: 2,500 credits per ton plus 1,000 credits per factor of speed. Maximum Speed: Factor 20. Module Cost: 0.1 per ton of the ship itself.

Anti-Matter Fusion: Cost/Ton: 100,000 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 250. Module Cost: 0.5 per ton.

Interstellar Ramjet: Cost/Ton: 1,000 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 100. Module Cost: 0.3 per ton.

Laser Sail: Cost/Ton: 635 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 40. Module Cost: 0.1 per ton.

Matter/Anti-Matter: Cost/Ton: 25,000 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 130. Module Cost: 0.5 per ton.

Metallic Hydrogen: Cost/Ton: 750 credits per ton plus 10,000 per factor of speed. Maximum Speed: Factor 50. Module Cost: 0.5 per ton.

Microwave Sail: Cost/Ton: 500 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 50. Module Cost: 0.2 per ton.

* **Negative Matter:** Cost/Ton: Undetermined. Estimated at 250,000 credits per ton, plus 10,000 credits per factor of speed. Maximum Speed: Undetermined. Estimated at 500. Module Cost: Estimated at 0.3 or 0.5 per ton. Note: Nobody in the known galaxy has created this drive system, so it remains in the realm of theoretical possibilities.

Nuclear Fusion: Cost/Ton: 1,000 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 60. Module Cost: 0.5 per ton.

Photon/Ion/Fission: Cost/Ton: 1,000 credits per ton plus 10,000 credits per factor of speed. Maximum Speed: Factor 30. Module Cost: 0.3 per ton.

* **Tachyon:** Cost/Ton: Undetermined. Probably more than Negative Matter. Maximum Speed: Undetermined. Estimated at 1000! Module Cost: Undetermined; probably 0.5 to 1 module per ton! Note: Nobody in the known galaxy has created this drive system, so it remain in the realm of theoretical possibilities.

Hypergravitics: Total Cost/Ton: 1.1 million credits. Maximum Speed: Mach 10. Module Cost: 25

Cruise Mode/TLT: Total Cost/Ton: 2.5 million credits. Maximum Speed: One light year per hour. Module Cost: 50

* The Asterisk indicates drives that exist only on paper and in theory. Costs may be higher and Maximum Speed may be 1D4x10% lower.

Table Notes

Drive Type: These are the major propulsion systems as described in the Space Travel section of this sourcebook. For those designing a spacecraft, there are 13 different kinds of propulsion systems available: anti-gravity, anti-matter/fusion, interstellar ramjet, laser sail, matter/anti-matter, metallic hydrogen, microwave sail, negative matter, nuclear fusion, photon/ion/fission, tachyon, hypergravitics, and cruise mode/TLT. For craft without FTL capability, any one of these propulsion types can be purchased, only nothing is paid extra for factor speeds. Thus, a non-FTL interstellar ramjet would only cost 1000 credits per ton, and would be able to reach speeds of 99% light speed.

Cost/Ton: The basic drives must be large enough to move the craft they are placed in, thus prices are based upon the overall tonnage of the superstructure. Factor speeds must be purchased separately, including *factor one which is light speed.*

Maximum Speed: This is the maximum possible speed that can be squeezed from the specific drive type. Souping up a spacecraft (10%) beyond those speeds listed for each drive is *rumored* to be possible by hotshot technicians who can coax drives into exceeding their maximums. Theories abound concerning this, but no hard answers are as yet forthcoming.

Module Cost: The number indicates how many modules each type of drive takes up. As drive costs go up with the tonnage it must move, so does drive size. Each type of drive takes up different amounts of space because of design, capabilities, and limitations in technological capabilities. For example, chemical drives are cheap, but take up large amounts of space (as much as half the ship) because of fuel and thruster sizes, while an Interstellar Ramjet is fast and compact but expensive.

Note that a ship can have more than one form of propulsion so long as it has enough modules for it. Deep exploration vessels often have two or even three different drives as backup measures in case the primary fails. When far from the nearest friendly outpost, one's drive is one's life.

Drives are considered integral to a spacecraft and are protected by its S.D.C. and armor (the rear 1/3 of the vessel's S.D.C. would represent its drives), but they can also be mounted externally, both on pylons and directly to the vehicle. Externally mounted drives occupy only ½ the listed modules, but will need to be armored to protect them from enemy fire. Unarmored drives have a total S.D.C. equal to the tonnage of the spacecraft (i.e. 100 tons = 100 S.D.C.).

Damage to the drives will modify the maximum speed possible. All drives operate at a percentage equal to that of their remaining S.D.C. (i.e., a craft with 60% of the S.D.C. remaining on its drives can only travel at 60% of its normal speed).

Step 3: Weapons

The galaxy is full of pirates and other armed opponents, so weapons on spacecraft are almost a necessity. Besides, what self-respecting adventurer would be caught dead on a spacecraft without big guns?

The listed costs for weapons are for *fixed* firing weapons (can only shoot in the direction they are pointed and cannot move). Rotating turrets cost *twice* the listed prices, and *concealed, retractable or pop-up turrets* cost triple. Rotating turrets are +1 to strike and concealed turrets can not be targeted with "called shots" while they are retracted/concealed. Weapons built into both rotating and concealed turrets cost 4 times normal prices. Concealed turrets also require 50% more module space than that listed. Light and medium weapons can be made retractable on any craft while heavy weapons can only be retractable on spacecraft larger than 500 tons. Anti-ship and larger weapons can not be concealed or retracted, except in spacecraft 1000 tons or larger. All weapons can be built into rotating turrets, although anti-ship and larger weapons rarely rotate and those that do only have limited arcs of fire (typically 30-45 degrees).

All energy weapons fire single concentrated blasts and have unlimited payloads, since they draw off the ship's central power supply.

Rail guns typically have 100 rounds each, although additional packs of 100 rounds can be stored at the cost of 0.25 modules per ammo pack. Similarly, missile launchers usually accommodate 10 missiles. Additional missile packs may be stored at the cost of 0.5 modules each.

As noted in the armor section, **reflective coatings** on spacecraft can protect against laser blasts. Variable frequency lasers are designed to overcome this protection. After 1D4 attacks, the vessel's combat computer will have discovered the laser frequency that does the most damage to a resistant craft. Once the right frequency is found, the laser then does *full damage* to that spacecraft. Variable frequency lasers cost *three times* the cost of normal lasers. For example, a variable frequency (x3 cost) light laser in a pop-up turret (x3 cost) will cost 6 times the price of a normal light laser (300,000 credits) and occupy .75 modules.

A spacecraft with enough modules can have just about any weapon system installed with a few exceptions. Each "class" of weaponry can comfortably fit into a spacecraft of 150 tons per category. Thus, **light weaponry** easily fits into spacecraft 150 tons or less, **medium weapons** into 300 ton ships, **heavy weapons** slip easily into craft 450 tons or larger, **anti-ship class weapons** are reserved for craft 600 tons or larger, and **battleship class weapons** are normally used in vessels 750 tons or larger. Spacecraft *can* accommodate weaponry from the next class up, but at *twice* the usual module space and twice the usual cost, since the oversized weapon system must be supported by additional power generators and other equipment. Ships can NOT accommodate weaponry more than one size class up. **For example**, a 300 ton cargo ship falls into the tonnage range for medium weaponry. If its captain so desires, he can install a heavy rail gun — a heavy weapon, from the next size class up — at the cost of 10 modules (twice the usual space cost of 5 modules) and 700,000 credits (twice the usual 350,000 cost).

Missile launching racks and the missiles must be purchased separately. Missiles themselves do not take up module space unless they are reloads, in which case, the standard reload is 0.5 modules. Unless the ship has an *automatic reloading mechanism* (see the Additional Equipment section for costs and details), crew members will have to manually reload the rack themselves. Manual reloading generally takes one melee action per missile reloaded. Even manual missile reloading will require support with a machine (i.e. fork-lift), superhuman strength or several men. Short-range missiles are +1 to strike, medium-range are +2 to strike, long-range are +4 to strike, and ballistic missiles are +5 to strike. Typical payload is 6-10.

A weapon battery is a coordinated grouping of several small weapons of a single type that fire simultaneously at a single target. The laser battery cluster (or LBC) is a larger version of this weapon system that incorporates nearly 50 medium class lasers. The LBC is normally placed in the nose of assault craft in the place of a great cannon. Another common placement is on each side of a battleship to protect it from all manner of assault. The widespread volley-type attack of a battery weapon is very effective, even against small, fast moving targets like fighters and power armor. **Note:** If such an attack hits, small objects less than 100 tons take 10% damage, vessels up to 250 tons take 50% damage, and larger ships take full damage. Weapon batteries can only fire twice per melee round.

Great cannons take up the entire front section of battleships or destroyers (can not be used on anything smaller). It is either one gigantic beam generator, or three to four smaller generators that combine their firepower into one deadly beam. In any case, it is the single largest and most powerful spacecraft weapon available in the Milky Way galaxy, firing a beam 250 feet (76 m) wide. Great cannons can only fire *once per melee*, although vessels with more than one can fire in succession for a sustained barrage (they can not fire simultaneously). Atorian warships are notorious for this.

The listed ranges are for space conditions, in an atmosphere, reduce the range for energy weapons by 90% and half for projectile weapons and missiles. Note that the lightest spacecraft weapon is the equivalent of 20mm or 30mm vehicle weapons. The larger weapons have barrels the size of automobiles to trailer trucks. Light spacecraft weapons could be mounted on cars or large ground vehicles (some giant robots use them as gun pods), but they are rare. Medium spacecraft weapons could be mounted on ocean warships designed for heavy combat and troop support. Larger weapons mounted on any other vehicles is impossible unless the vehicle is huge (space stations and massive buildings fall into this category). Mounting any spacecraft weapon on vehicles other than spaceships costs *10 times* the listed price (concealed or rotating turrets are not possible) and light weapon gun pods for giant robots cost *50 times* the listed price.

The listed S.D.C. ratings are used whenever a specific weapon system is targeted with a called shot. If the rating is depleted, the weapon system will cease to function. Any armor protecting a weapon system must have its S.D.C. depleted first (after which its A.R. no longer applies) before the S.D.C. of the weapon can be attacked.

Multiple weapon systems can be purchased and fire-linked to act as a single weapon. However, this reduces the number of targets the ship can engage at once. Fire-linking is merely a matter of configuring the weapons' operations software and does not cost anything extra. However, to link or unlink weapons requires both a successful Computer Programming and Spacecraft Mechanics or Weapons Engineer skill roll.

Can not hit small, fast targets. Most spacecraft weapons are huge and designed to be used against large, slow moving targets, such as other massive spacecraft, space stations, or planetary targets. These huge weapons are not designed to track and shoot down small, fast or maneuverable spacecraft like fighters, or tiny humanoids zipping along on a hovercycle, jet pack or flying under their own power (as robots, power armor, and super beings are want to do). Hitting such small and/or fast targets is like trying to knock a fly out of the air by shooting it with a pistol or machine-gun. Consequently, the penalties given below apply whenever a specific class of weapon is used against a spacecraft smaller than 200 tons. The attacker using the big guns still gets its full bonuses, but applies the listed penalties to the final result before comparing it to any dodge roll. Note that the penalty is based on the *design and size of the weapon* and not the size of spacecraft it is built on.

Light weapons: No penalty; good against small, fast targets.

Medium Weapons: -3 penalty.

Heavy Weapons: -6 penalty.

Anti-Ship Weapons: -10 penalty; the target practically run into the blast.

Battleship Weapons: -14 penalty; the target would practically have to run into the blast.

Light Spacecraft Weapons

Ion Beam: Range: 7 miles (11.2 km). Damage: 2D4x10. Modules: 0.6. Cost: 80,000 credits. S.D.C.: 100.

Particle Beam: Range: 5 miles (8 km). Damage: 2D6x10+10. Modules: 0.8. Cost: 120,000 credits. S.D.C.: 100.

Laser Beam: Range: 6 miles (9.6 km). Damage: 1D6x10+6. Modules: 0.5. Cost: 50,000. S.D.C.: 100.

Light Rail Gun: Range: 2 miles (3.2 km). Damage: 2D4x10. Modules: 0.5. Cost: 20,000 credits. S.D.C.: 150.

Short-Range Missile Rack: Range: Varies. Damage: Varies with missile type. Modules: 2. Cost: 100,000 credits. S.D.C.: 200.

Short-Range Missile Pack (10): Range: Varies. Damage: Varies. Modules: 0.5. Cost: 10,000 credits. S.D.C.: 20.

Medium Spacecraft Weapons

Ion Beam: Range: 15 miles (24 km). Damage: 4D6x10+10. Modules: 1.2 Cost: 250,000 credits. S.D.C.: 200.

Particle Beam: Range: 12 miles (19.2 km). Damage: 5D6x10. Modules: 1.6. Cost: 350,000 credits. S.D.C.: 200.

Laser Beam: Range: 13 miles (20.8 km). Damage: 4D6x10. Modules: 1. Cost: 150,000 credits. S.D.C.: 200.

Medium Rail Gun: Range: 9 miles (14.4 km). Damage: 3D6x10. Modules: 1.5. Cost: 125,000 credits. S.D.C.: 250.

Medium-Range Missile Rack: Range: Varies with missile type. Damage: Varies with missile type. Modules: 4. Cost: 200,000 credits. S.D.C.: 300.

Medium-Range Missile Pack (10): Range: Varies. Damage: Varies. Modules: 1. Cost: 20,000 credits. S.D.C.: 40.

Heavy Spacecraft Weapons

Ion Beam: Range: 29 miles (46.4 km). Damage: 1D6x100. Modules: 4. Cost: 450,000 credits. S.D.C.: 350.

Particle Beam: Range: 24 miles (38.4 km). Damage: 2D4x100. Modules: 4.5. Cost: 650,000. S.D.C.: 400.

Laser Beam: Range: 27 miles (43.2 km). Damage: 1D4x100. Modules: 3. Cost: 350,000 credits. S.D.C.: 400.

Heavy Rail Gun: Range: 22 miles (35.2 km). Damage: 1D6x100. Modules: 5. Cost: 350,000 credits. S.D.C.: 500.

Long-Range Missile Rack: Range: Varies with missile type. Damage: Varies with missile type. Modules: 6. Cost: 450,000 credits. S.D.C.: 500.

Long-Range Missile Pack (10): Range: Varies. Damage: Varies. Modules: 2. Cost: 125,000 credits. S.D.C.: 50.

Anti-Ship Weapons

Ion Beam: Range: 60 miles (96 km). Damage: 2D6x100. Modules: 5. Cost: 950,000 credits. S.D.C.: 550.

Ion Battery: Range: 60 miles (96 km). Damage: 3D6x100+50. Modules: 9. Cost: 1.4 million credits. S.D.C.: 750.

Particle Beam: Range: 50 miles (80 km). Damage: 2D8x100 (or 4D4x100). Modules: 6. Cost: 1.3 million credits. S.D.C.: 650.

Particle Battery: Range: 50 miles (80 km). Damage: 4D6x100. Modules: 10. Cost: Two million credits. S.D.C.: 800.

Laser Beam: Range: 55 miles (88 km). Damage: 2D4x100. Modules: 4. Cost: 750,000 credits. S.D.C.: 600.

Laser Battery: Range: 55 miles (88 km). Damage: 3D6x100. Modules: 8. Cost: 1.1 million credits. S.D.C.: 800.

Anti-Ship Rail Gun (Light Mass Driver): Range: 27 miles (43.2 km). Damage: 4D4x100. Modules: 8. Cost: 950,000 credits. S.D.C.: 1,000.

Anti-Ship Rail Gun Battery: Range: 27 miles (43.2 km). Damage: 5D6x100. Modules: 12. Cost: 2 million credits. S.D.C.: 1,200.

Battleship Weapons

Ion Cannon: Range: 120 miles (192 km). Damage:1D4x500. Modules: 16. Cost: 1.7 million credits. S.D.C.: 2000.

Particle Cannon: Range: 100 miles (160 km). Damage: 1D6x500. Modules: 20. Cost: 2 million credits. S.D.C.: 2500.

Laser Cannon: Range: 155 miles (248 km). Damage: 4D6x100. Modules: 15. Cost: 1 million credits. S.D.C.: 2500.

Heavy Mass Driver: Range: 85 miles (136 km). Damage: 1D4x1000. Modules: 40. Cost: 4.4 million credits. S.D.C.: 4500.

Great Cannon: Range: 500 miles (800 km). Damage: 1D6x1000. Modules: 125. Cost: 7.5 million credits. S.D.C.: 7500.

Ballistic Missile Rack: Range: Varies by missile. Damage: Varies with missile type.. Modules: 15. Cost: 1.5 million credits. S.D.C.: 2,000.

Ballistic Missile Pack (4): Range: See below. Damage: See below. Modules: 5. Cost: 250,000 credits. S.D.C.: See below.

Ballistic Missiles

Cluster Warhead: Range: 1000 miles (1600 km). Damage: 2D6x50. Speed: 4020 mph (mach 6). Blast Radius: 100 feet (30.5 m). S.D.C.: 50.

Anti-Matter*: Range: 2000 miles (3200 km). Damage: 1D6x100. Speed: 4020 mph (mach 6) Blast Radius: 200 feet (61 m). S.D.C.: 75.

Neutron:** Range: 1300 miles (2080 km). Damage: 4D6x10 (to living organisms). Speed: 4020 mph (mach 6). Blast Radius: 200 feet (61 m). S.D.C.: 60.

Anti-Ship: Range: 1100 miles (1760 km). Damage: 1D6x50. Speed: 4020 mph (mach 6). Blast Radius: 200 feet (61 m). S.D.C.: 50.

* These are *small anti-matter warheads*, not the planet shattering A-M bombs the Atorian Empire has access to. Only the Atorian Empire has A-M missiles or bombs. The bombs cost about 50,000,000 credits each.

***Neutron missiles* are a regular part of the Atorians' arsenal, but few others put as much use into them. Neutron missiles only kill living things. They will not damage non-organic structures or objects. The Empire uses them against organically composed spacecraft, and as anti-personnel and defoliants. They are also very useful in acquiring military bases and important factory/industrial installations.

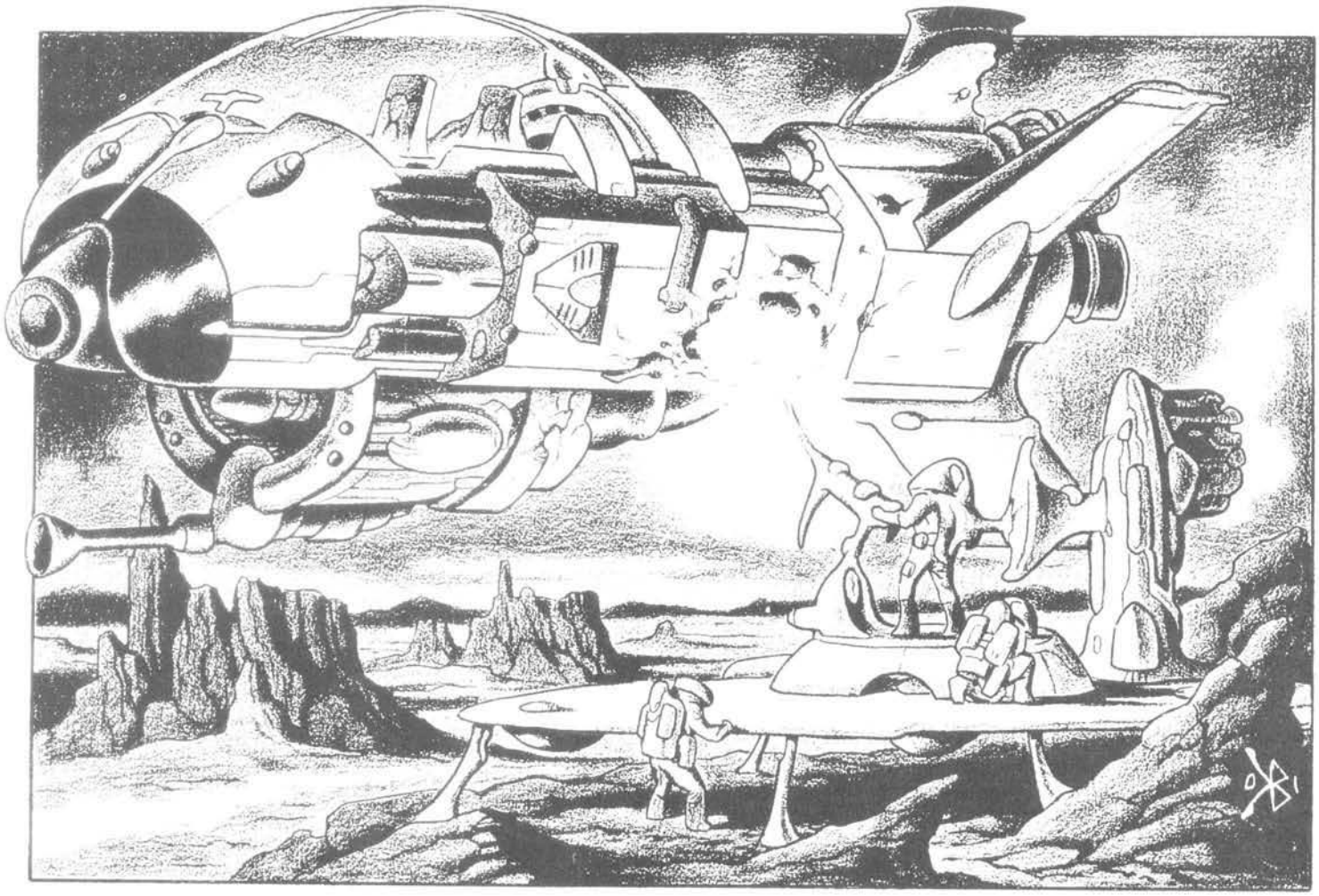
A character in full environmental armor or a sealed armored structure within a spaceship (i.e. inside a shuttle craft or shield room in the interior of the ship) is immune to damage from neutron missiles (no damage). Likewise, full conversion cyborgs, androids, robots, and I.A.s and robots with transferred intelligence are also immune. Partial Cyborgs take half damage. Mineral beings and those who can transform (and are presently transformed) into stone, metal, ice, liquid or energy take no damage. Inhabitants of space stations and medium to heavy spaceships (and not protected by environmental body armor or additional shielding inside) take half damage. Organic life forms (people, animals and vegetation) inside ordinary buildings, automobiles, aircraft and out in the open each suffer full (4D6x10) damage! This is a terrible weapon that has been *banned* along with biological and nano weapons, by the Federation of Allied Races (FAR) and many other civilizations.

Step 4: Armor

Because space travel is done at such high velocity, spacecraft must all be armored to some degree. Consider this: An object orbiting the Earth travels at such speed that an impact with a grain of sand carries the impact of a .38 caliber bullet! Now consider how much that effect is multiplied by when traveling faster than light! As a result, most spacecraft are armored. Certainly, vessels meant for interstellar travel should be well armored. Spacecraft meant to travel solely within a star system can probably get away without being armored or lightly armored, but that will reduce their combat endurance markedly.

There are three basic types of armor: Spacecraft armor, turret armor, and launching/landing bay armor. While only one set of spacecraft armor needs to be purchased, a set of armor must be bought for *every* turret and every launching/landing bay that is to be protected. On especially large warships, all that armor often takes up a substantial amount of ship space.

Each class of armor, light, medium, heavy and battleship, can comfortably fit into a spaceship of 150 tons per category. Thus **light armor** easily fits onto craft up to 150 tons, **medium armor** fits onto craft 300 tons and larger, **heavy armor** fits onto craft up 450 tons and larger, and **battleship armor** fits onto craft



600 tons and larger. Spacecraft *can* accommodate armor from the next class up, but at *twice* the usual module space and *twice* the usual cost. Ships can not accommodate armor more than one size class up. **For example**, a 300 ton cargo craft can easily accept light or medium armor, but if the ship captain wished to install heavy spacecraft (one class up from medium) armor, it would require 200 modules and cost 1.8 million credits.

Spacecraft armor can be made transparent, providing windows and portholes for the vessel's occupants. On ships without such conveniences, holographic, digital or laser imaging devices will be used. These transmit the outside view to a screen or a projected image within the craft for the occupants' viewing convenience.

Spacecraft Armor

Light Armor: A.R.: 12. S.D.C.: 10 per ton. Modules: 20. Cost: 1000 credits per ton.

Medium Armor: A.R.: 13. S.D.C.: 20 per ton. Modules: 20+0.1 per ton. Cost: 2000 credits per ton.

Heavy Armor: A.R.: 15. S.D.C.: 40 per ton. Modules: 40+0.2 per ton. Cost: 3000 credits per ton.

Battleship Armor*: A.R.: 16. S.D.C.: 80 per ton. Modules: 80+0.25 per ton. Cost: 4000 credits per ton.

Turret Armor

Light Armor: A.R.: 12. S.D.C.: 100. Modules: 0.1 per turret. Cost: 10,000 credits per turret.

Medium Armor: A.R.: 13. S.D.C.: 200. Modules: 0.1 per turret. Cost: 15,000 credits per turret.

Heavy Armor: A.R.: 15. S.D.C.: 300. Modules: 0.2 per turret. Cost: 20,000 credits per turret.

Battleship Armor*: A.R.: 16. S.D.C.: 400. Modules: 0.2 per turret. Cost: 25,000 credits per turret.

Launch/Landing Bay Armor

Light Armor:** A.R.: 12. S.D.C.: 100. Modules: 10. Cost: 25,000 credits.

Medium Armor: A.R.: 14. S.D.C.: 200. Modules: 20. Cost: 50,000 credits.

Heavy Armor: A.R.: 15. S.D.C.: 300. Modules: 30. Cost: 75,000 credits.

Battleship Armor*: A.R.: 17. S.D.C.: 400. Modules: 40. Cost: 100,000 credits.

Table Notes

* Any spacecraft using battleship classed armor that is not a battleship classed spacecraft will be -2 to dodge and reduce its overall speed by 10%. Battleship armor is far superior to heavy armor and can not be damaged by light or medium weapons regardless of the attack rolls. Such small weapons simply bounce off or flash ineffectually. When facing a battleship, craft with lighter weapons should rely on called shots to remove vulnerable targets like weapon turrets and launch bays.

** The launch/landing bay armor can be used for any external ship system that needs protection and is larger than a turret. This includes external drives, windows/view ports, armored satellite bays, stationary cupolas for power armors, and so on.

Step 5: Extra Equipment

Now that the spaceship's hull is intact, armed, and armored, the rest of its systems need to be installed. Some equipment and programs are specialized and listed separately or away from similar systems. It should also be stated again that module costs are not direct representations of the size of a system or object, and some programs have large module sizes because of specialized computers or other auxiliary equipment needed to properly run them.

There are three basic categories of extra equipment for spacecraft: *defense mechanisms*; *sensors, systems, computers, and programs*; and *other equipment*.

Defense Mechanisms

Alumina Cloud Dispenser: When activated, this device expels a cloud of alumina dust out to 250 feet (76.3 m) from the ship. The reflective dust renders all laser beams (even variable frequency lasers) ineffective for as long as the cloud is in effect. This cloud affects the ship's own lasers as well as incoming enemy laser fire. The cloud also has a 01-45% chance of detonating any missiles that enter it. Once a missile or missile volley detonates within the cloud, the shock wave will disperse the alumina dust entirely. Likewise, moving out of the cloud will disperse it. And even if a ship deploys an alumina cloud and remains motionless, the cloud will only remain effective for a single melee round (15 seconds) since there is no gravity to stop the expelled alumina particles from continuing to move and disperse. Consequently, after 15 seconds, the cloud's density becomes too thin to protect the vessel. When deployed by moving vessels, alumina clouds act as a single parry attempt against incoming laser fire. When deployed by stationary vessels, alumina clouds act as an A.R. of 18 against incoming lasers. Strike rolls of 19 or higher manage to penetrate the cloud and do damage. All others are stopped dead.

The cloud also interferes with sensors, reducing their effectiveness by 33%. The cloud affects all sensors (and therefore gives the scan operator a -33% penalty to Read Sensory Equipment) and negates any computer or laser targeting bonuses to strike. Again, this will affect the ship's own sensors as well, so it is only used when necessary. It also works well as cover for a quick jump to light speed (as long as it is NOT deployed in front of the vessel). **Cost:** 1,000 credits per ton for the dispenser, 100 credits per ton for each alumina dust charge. **Modules Required:** 1 for the dispenser, and 0.1 per alumina dust charge.

Anti-Missile Chaff: This defense mechanism is designed to be launched from the target ship and to draw the missiles away from it to hit the chaff ball instead. Chaff for spacecraft are actually small globes packed with electronics. When launched, they emit energy signature patterns and electronic signals similar to those missiles are programmed to home in on. The chaff makes a parry roll against the missile attack at +8; if successful, the missile or missile volley hits and detonates on the chaff globe instead of the spacecraft. Anti-missile chaff will not work on long-range or ballistic missiles because of the advanced guidance systems of these missiles. A chaff system comes with ten chaff globes. **Cost:** 80,000 credits for the chaff dispenser and 500 credits for each chaff globe. **Modules Required:** 0.5 for the dispenser and 10 chaff globes; 0.1 for every additional ten globes.

Electronic Countermeasures (ECMs): ECMs are powerful systems designed to interfere with the proper operation of electronic combat systems such as targeting computers, radar locks, laser targeting, sensors, and other systems. ECMs are especially useful for protecting spacecraft from attacks that use computer tracking, locking, and auto-guidance, including robots, missiles, and ship based weaponry. ECMs do little against direct fired weapons like those used by power armors and interceptors. In game terms, an active ECM unit provides the vessel with a bonus of +4 to dodge any incoming attack except guided missiles, against which an ECM provides a dodge bonus of +6. **Cost:** 350,000 credits. **Modules Required:** 16.

Force Field Generators: These are huge versions of the personal force fields described on page 192 of the **Aliens Unlimited™** sourcebook. Because a spacecraft can not fire through its own force fields, a single field rarely covers the entire craft. A spacecraft will normally have four to six small fields that, when overlapped, will cover the majority of the (or the entire) vessel and act as an umbrella or extra layer of armor. Generally, only one or two force fields will be up at any given time to protect the vessel in an area receiving the heaviest damage or concentration of enemy fire.

Normal force fields are placed on the rear, each side, and forward of a spacecraft. Force field generators can be purchased that allow their energies to be shifted in case one area begins to weaken, such as the rear shield during an escape. These kinds of systems are expensive and have a total amount of S.D.C. that can be absorbed before the system shuts down. This S.D.C. is usually evenly divided among areas of the craft and can be shifted as needed once damage has been sustained. Force fields take an action to activate and another to deactivate. Damaged force fields recharge lost energy at the rate of 10 S.D.C. per hour they are deactivated. An active force field will not recharge lost energy.

Force fields cover a specific area and can not be moved to protect another, but smaller **pinpoint shields** can. These shields only cover about 5% of a spacecraft and are used to actively *parry* incoming attacks. Each pinpoint shield requires its own operator to function properly (Pinpoint shield operating programs can be purchased to replace an operator, but cost 300,000 credits). Pinpoint shields are +2 to parry and receive no other bonuses unless the Weapons System or Electronic Warfare skill is taken, in which case, the operator is +4 to parry attacks with the shield (apply any other P.P. or combat bonuses to strike the operator may have). Automated pinpoint shields are +2 to parry. **Maximum S.D.C.:** Full-sized shields: Half of the craft's total S.D.C. Pinpoint Shields: 400 each. **Cost:** 600 credits per S.D.C. point of the force field or 1,500 credits per pin-point shield. **Module Requirements:** .2 for each 100 S.D.C. of the shield and 0.2 for each pin-point shield.

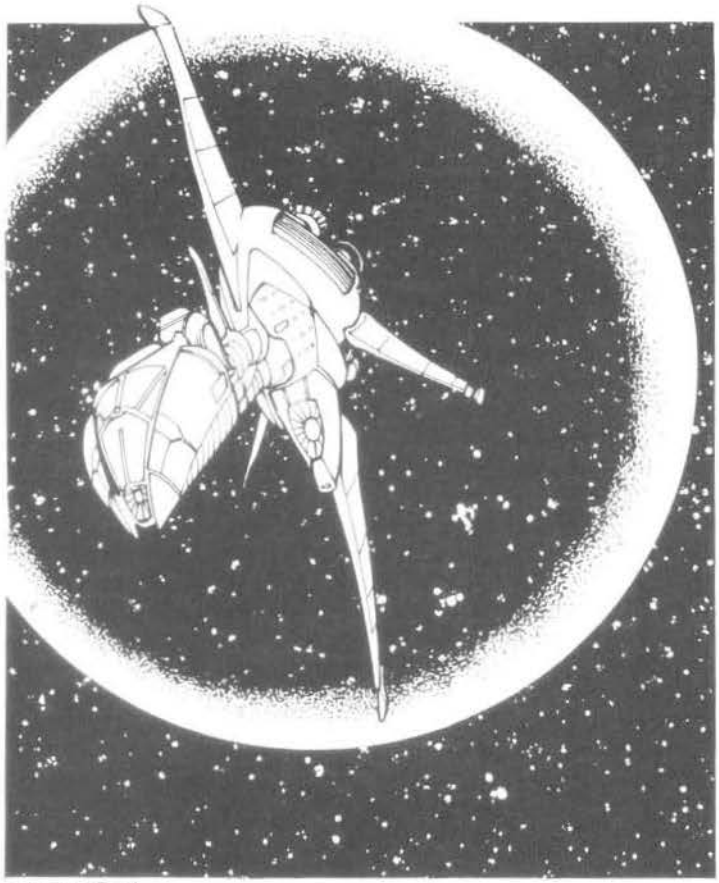
Magnetic Shield: This is a kind of protective force field that surrounds the spacecraft, but it is quite specialized in that it only disperses the *charged particles of ion* and *particle beam weapons*, reducing their damages by 50%. The magnetic field also has a 01-30% chance of confusing incoming mini-missiles and short- and medium-range missiles, making them detonate prematurely. Roll for each volley, including any launched from the protected vessel. **Cost:** 2,000 credits per ton. **Module Requirements:** 6.

Reflective Coating: This is a laser reflective coating of ceramics that protects the spacecraft by deflecting half of the damage from lasers. Variable frequency lasers can do full damage to a craft with this coating, but only after 1D4 attacks because the right frequency must be found. Reflective and stealth coatings can not be used on the same craft. **Cost:** 1,000 credits per ton. **Modules Required:** None.

Stealth Coating: A thin coating of radar and heat absorbent composite is attached to the entire hull of a craft. The coating reduces heat and other emissions as well as the craft's radar signature. The overall result is to make the craft very hard to detect with standard sensors. If the spacecraft's pilot has the spacecraft prowl skill, this coating adds 20% to that skill, and if he does not, it subtracts 25% from the roll of opponents trying to locate or track the vessel. The coating also provides a bonus of +3 to dodge against incoming missiles. **Cost:** 10,000 credits per ton. **Modules Required:** None.

Sensors, Systems, Computers, & Programs

The Basics: Except for specialized computers or sensors, this covers all of the computers and programs needed for the common everyday operation of a spacecraft. It includes 100,000 mile (160,000 km) communications, a navigation computer with



coordinates and general information on planets and races (40% general skill rating), climate control, and atmosphere circulating systems. Crew quarters are tight and only amount to a bunk and storage box. **Cost:** None. Comes standard with all spacecraft body frames, but if a frame is salvaged, the "basics" need to be purchased for 50,000 credits.

Basic Sensor Package: All spacecraft come with limited collision warning systems for docking, security cameras near air locks or docking bays/launch tubes, and telescopic or thermal optics for assessing damages and/or necessary investigation, but these systems rarely have ranges of more than a dozen miles (19.2 km). This is a full range of optics and sensors including 200,000 mile (320,000 km) communications, 1,000 mile (1,600 km) optics (a combination of thermal, infrared, ultraviolet, and light amplification), 10,000 mile (16,000 km) radar/scanning range, and hull and hallway surveillance cameras (coverage is 75% of the craft). **Cost:** 250,000 credits. **Modules Required:** .5

Advanced Sensor Package: This is an extended version of the basic sensor package. It is often used in conjunction with the geologic systems listed below to give research teams or military forces detailed information on the surface conditions of a planet. It has all of the optics and sensors of the basic sensor package, but at double the ranges and the surveillance cameras cover 90% of the craft. In addition to these relatively short-range systems, the advanced package includes a long-range radio and/or laser telescope with a viewing/scanning range of 4 light years. At that range, it can positively identify a battleship class craft, but wouldn't be able to pick out details, nor would it be able to monitor and track the battleship except through intermittent scanning. Note that while this system can see objects the size of buildings from orbit, it is not geared toward scanning planets up close or peeking down through the atmosphere. That is the province of the geologic computers given later. **Cost:** One million credits. **Modules Required:** 2.

Autopilot Computer (Autocomp): This computer is necessary for spacecraft whose entire crew will be in stasis, but their most common use is in automated ore transport craft which are loaded with ore before the autocomp FTLs to a predetermined rendezvous point. An autocomp has a base piloting percentage of 45%, making it suitable for ordinary flight patterns, but not particularly reliable for handling combat or docking. That percentage can be upgraded, however. When an autocomp and super navigation computer are linked, the percentages of each must match, but once they do, the two each get a 10% bonus. **Cost:** 200,000 credits. Upgrades cost 10,000 credits for each 5% increase above the base 45% with a maximum of 80%. **Modules Required:** 2.

Geologic Sensor Array: These systems are normally placed in satellites, but can be used just as well by a spacecraft. Range is 200 miles (320 km) through an atmosphere and 100 times that in space. Various programs allow the computer to map geologic formations, use thermal scans and gravity differentiations to locate and identify mineral deposits (55%), measure water temperature and currents, identify ice conditions, track movements of marine and flying animals, relay tidal motions, monitor water levels in lakes, track flows of river water and snow melts, trace water pollution and flood conditions, measure soil moisture and erosion, and monitor the effects of diseases, insects, and drought on crops. These features are often coupled with the military programs below for planetary surveys or surveillance. Though not 100% accurate, these sensors can detect the presence of heat given off by living things through several inches of intervening metal or composites. That data can be cross referenced with existing profiles to possibly identify life forms. This kind of scan is particularly successful when significant information is known about the targets, such as when crew members are being monitored by the spacecraft with these sensors. When the life forms are in the prime environment for these scans, such as out in the open on a planet's surface, they can be monitored in real time and details down to bio-scans on each party member can be maintained. **Cost:** 4.1 million for the complete system including programs, computers, and equipment. **Module Requirements:** 10

Motion Perimeter and Collision Warning System: An array of motion detectors around the ship will warn the crew as soon as something man-sized or larger breaks the field of the sensors (typically 6000 feet/1828 m). It will also indicate the speed, ETA of landing or impact (usually 3-15 seconds) and the number of approaching objects. It also sounds one of three different warnings: One for one or more small, slow moving objects that represent negligible or minimal danger, a louder more frantic alarm for medium-sized (compared to the ship) or fast moving objects (missiles?), and a blaring collision alarm for objects half to same size or bigger than the vessel, or if the objects are moving at really fast speeds (fighters). A limited motion sensor array can be placed at positions in the front, rear, and main docking bays, but this leaves "dead zones" where the motion detectors do not reach. However, it is half as expensive as listed and still provides the docking bonus. **Cost:** 1000 credits per ton of the ship. **Module Requirements:** 0.5. **Bonuses:** +10% to piloting skill when docking (warns if one is getting too close to another ship, wall, strut, etc.) and +1 to dodge for vessels under 300 tons.

Military Sensor Array: This is the pinnacle of combat computer technology. It is commonly placed in satellites that orbit battleships or deployer warships to supply the vessels and their fighters with the best possible combat information. Coordination programs allow a single communications officer to link with and feed data from these computers to a dozen fighter squads (72 interceptors), providing them with substantial bonuses, including +2 on initiative, +1 to strike and dodge, and +5% to combat oriented piloting rolls.

A single spacecraft receiving data from such computers, including the mother ship that relays to fighters, can make use of their full capabilities, giving it +2 on initiative, +1 to strike with all

weapons, +2 to dodge (unless larger than 500 tons, then only +1), and +10% to combat related piloting rolls.

It can track and identify up to 500 targets to a range of 2,000 miles (3,200 km), and keep track of up to 250 more out to a range of 4,000 miles (6,400 km). Ranges are halved in an atmosphere. When used with a geologic computer, this system can take pictures of military installations, map troop movement, monitor weapon production and storage, and track submarines and ground-based vehicles. Objects as small as a golf ball can be seen from a distance of 300 miles (480 km) through an atmosphere or 26,000 miles (41,600 km) in space. Possession of this kind of equipment is illegal in many star systems. **Cost:** 8 million credits. **Modules Required:** 8.

Satellite Uplink Computer: In order for a spacecraft to send or receive any useful information from a satellite, it has to have an uplink computer to process and feed the data. If it does not have these systems, the satellite must be reeled in and docked for a physical link to transfer information. **Cost:** 150,000 credits. **Required Modules:** .2

Super Navigation Computer: The basics package mentioned previously contains a basic navigation computer. Its navigation skill equivalent is 65%, which is not bad until one tries to use it for FTL, gateway, or point-to-point travel, and then it drops to 30%. The basic nav computer was designed to help guide a craft around solar systems and in orbit. Advanced space travel is simply out of its league, and it can not be upgraded. The super navigation computer is specifically designed for the more demanding tasks of detailed and/or tricky flight plans, advanced decision making, and FTL or other precision forms of travel. Its skill equivalency rating starts at 50% and can be upgraded in 5% increments. Each aspect of navigation, sub-light and FTL/advanced travel, must be purchased separately, and both begin at the base of 50%. When used in conjunction with an autopilot computer, the systems complement each other (see the autocomp entry for details). Programs standard to this computer system include navigation and piloting, star maps, planetary information, gateway location coordinates (but no activation codes unless they were purchased separately), and gravity well locations (for point-to-point). Of course, ship crews can go without all of this hardware if they have skilled navigators among the crew. But for ships trying to cut down on personnel, a super navigation computer is the way to go. **Cost:** The basic computer and programs cost one million credits. Sub-light percentage upgrades cost 10,000 credits per 5% increase (max 98%). FTL percentage upgrades are 15,000 credits per 5% increase (max 98%). **Required Modules:** .5

Scientific Sensor Array: Thermograph, infrared, and ultraviolet optics with a range of 4 light years and computer programs to enhance, sort, and categorize findings. Adds 15% to navigation rolls when linked to a navigation computer or used by a character skilled in navigation. It is a more precise version of the advanced sensor package without the surveillance cameras or radar. The system can detect and identify objects as small as a battleship from light years away, but as with the advanced sensor package, such scans take 5D4 minutes to compute and are not very good at tracking spacecraft, especially fast moving ones. Other systems are better suited to keeping track of such small, fast moving targets, most notably when a military computer system is used in conjunction with this system. **Cost:** 420,000 credits. **Required Modules:** 1

Targeting Radar and Combat Computer: This is a basic version of the extensive military system detailed above. These smaller systems are rarely illegal and normally fall under self-defense laws. It can track and identify up to 120 targets to a range of 500 miles (800 km), and keep track of up to 75 additional targets to a range of 700 miles (1,120 km). Ranges are halved in an atmosphere. The targeting computer adds a bonus of +2 to strike with mounted weapons and +1 to dodge. These bonuses are not cumulative with those of the military system. **Cost:** 500,000 credits. **Required Modules:** .3

Other Spacecraft Systems

Atmosphere Recycling System: The most valued commodity in space is breathable atmosphere. Only a limited supply can be brought for any given trip, so conservation and recycling is a good idea, especially if combat causes some to leak out. A spacecraft generally has a number of days worth of breathable atmosphere in it equal to its tonnage divided by the number of crew members. A recycling system will extend this time by a multiple of ten. Thus a 50 ton combat craft with one pilot would have 500 days worth of air while a four man crew would have 125 days worth of breathable atmosphere. **Cost:** 250,000 credits per 50 tons (round up). **Module Requirements:** 0.3 per 50 tons.

Artificial Gravity: Similar to the gravity well generators used in point-to-point activation, but much smaller, this system is placed along the bottom of a spacecraft and run continuously to provide artificial gravity for the craft's crew. **Cost:** 500,000 credits. **Module Requirements:** 10

Crew Automation: These advanced computer automation systems each reduce a ship's crew requirements by one person. This system may be bought multiple times to keep reducing a ship's crew requirements. **Cost:** 100,000 credits each. **Module Requirements:** 0.5 modules.

External Cargo Dock: In addition to their internal cargo bays, transports often feature numerous external cargo docks, lock points onto which large cargo containers can be attached. Using these simple docks, transports can technically carry unlimited amounts of cargo, provided they do not try to land on a planet with gravity or an atmosphere. **Note:** Most shipping companies generally do not assign to any transport more than double its internal cargo capacity in external cargo. This is pure loss management — better to hire a few transports to haul one's cargo than to place it all on one ship and risk it getting lost.

External cargo docks can also be used as generic docking collars, allowing spacecraft to mate with each other so passengers may move from ship to ship without having to get in a spacesuit and float across. In this respect, pirate and military craft often have at least one external cargo dock for boarding actions. Likewise, search and rescue ships will have at least a few of these so they can lock onto stricken vessels and tow them home. **Cost:** 2000 credits per external cargo dock. **Module Requirements:** 0.1 module per external cargo dock. Most cargo vessels will have at least four to six of these to they can accommodate numerous external payloads.

Extra Modular Capacity: Through superior engineering, additional module space can be added to the spacecraft without increasing its overall tonnage. No vessel can support more than 150% its original module capacity. That is, a vessel that begins with 100 modules may upgrade its modular capacity to a *maximum* of 150. **Cost:** 2,500 credits per every one-tenth extra module, or 25,000 credits for one extra module.

Crew Quarters/Standard Accommodations: All spacecraft come with crew accommodations as standard equipment, but those quarters only amount to a bunk and a chest or locker. Often, the entire crew sleeps in one room with several bunks lining the wall placed on top of one another. The standard accommodations give each crew member a small, but private room with a large bunk or small bed, a sink and computer, and a large locker or open shelves (closets are rare). These accommodations must be purchased for each crew member separately. Bathroom facilities are usually communal. **Cost:** 5,000 credits. **Module Requirements:** 0.2 per person.

Crew Quarters/Luxury Accommodations: These are stylish quarters with all of the conveniences of a space station or planet side. It includes an entertainment center, private bathroom, car-

peted floors, paneled walls, and quality details. Accommodations must be purchased for each person who is to enjoy them. **Cost:** 150,000 credits. **Module Requirements:** 0.5 per person.

Individual Environmental Rooms: These are special rooms or areas of the ship where the environmental conditions (temperature, air, gravity, etc.) of the room can be independently adjusted to accommodate alien visitors with different physiological needs. **Cost:** 90,000 credits per slightly larger than standard accommodation (may be designed for a single inhabitant or several) or 240,000 for a luxury accommodation. **Module Requirements:** 0.2 to 0.5 per person.

Launch Bays: These modified cargo bays can each hold 100 tons worth of vehicles, robots, power armor, or spacecraft. Additional bays can be purchased and combined to hold larger craft (i.e., five bays could make one that accommodates a 400 ton assault craft and 5 fighters). Normally, only half of the total amount is used while the rest of the space (approximately 60 modules) is reserved for spare parts, ammunition, extra missiles, storage, and other equipment and facilities.

External bays are attached to massive hull locks in a manner similar to external cargo bays. They have 500 S.D.C. and can get additional armor. If the total S.D.C. is depleted, the bay is useless, but not destroyed, and any remaining fighters in it are stuck until the bay is repaired. An external FCL bay is destroyed along with any spacecraft still in it when it reaches -125 S.D.C.

Internal FCL bays are integrated into the spacecraft's overall design and construction. They have no S.D.C. of their own and cannot specifically be attacked. Only the launch/landing doors are visible on the outside. They have 150 S.D.C. and can receive additional armor at extra cost. Depleting the S.D.C. of a launch/landing tube will prevent launch from that area; however, if more than one FCL bay was purchased, spacecraft can usually be transferred to another bay for launching.

A fighter craft or combat robot can be scrambled in about 2 minutes (4+1D4 melees) if it was on standby. Normal prep time is 10+1D4 minutes. **Cost:** External bays: 450,000 credits per bay (100 tons). Internal bays: 750,000 credits per bay (100 tons). **Module Requirements:** Internal launch bays require straight tonnage instead of modules; a 100-ton internal launch bay requires 100 tons of the craft. When designing ships with launch bays, it might be a good idea to add these in first to prevent having to re-figure available modules later. External launch bays require a one module docking collar for every 100 tons of launch bay. Otherwise, they require no modular or tonnage space from the craft. This is one of the reasons why external bays are so popular. External bays can be attacked and disabled much more easily than internal bays, however, which is their major drawback.

Power Armor and Survival Suits: Any of the survival suits and/or power armors listed in the **Aliens Unlimited™** equipment section can be purchased for use by the crew of a spacecraft. They can be stored in the craft and deployed by airlock, however, it requires four melee rounds for the airlock to cycle and release one power armor or a pair of survival suits. To decrease this deployment time, FCL bays can be used on larger craft, or smaller craft can purchase a hull lock dedicated to these units. The larger hull lock allows two power armors or four survival suits to be deployed at one time, plus it only requires one melee round to do so, instead of four. **Cost**: As listed in the equipment section of **Aliens Unlimited**. Also, see the hull lock entry elsewhere in this section. **Requirements**: Survival suits take up no module space, but power armors require .5 modules each (if not stored in a modified hull lock).

Grapple System: These are cables with magnetic attachment claws on their ends. They are used to attach one ship to another so they can be drawn together for boarding. Although normally an emergency or salvage system, they are often employed by pirates and law enforcement entities for forced boardings. Spacecraft weighing twice the tonnage the grapples are rated for can snap them and break free. **Cost:** 20,000 credits per 100 tons of craft to be secured. **Module Requirements:** 0.1 per 100 tons capacity.

Recreation Facilities: This represents one form of recreation for each time it is purchased. Includes video game rooms, pool tables, tennis courts, swimming pool, restaurants, running areas, parks/gardens, etc. The nicer transport craft will have all of the above and more (like casinos). Each recreation area can serve the entire crew of a spacecraft. To accommodate more people, like passengers on transport craft, a given facility must be purchased additional times to increase its size. **Cost:** 50,000 credits. **Module Requirements:** 2 for each facility purchased as well as 2 additional each time a facility's size is increased.

Trans-Atmospheric Capabilities (TAC): These modifications are necessary for any spacecraft that will be entering a planet's atmosphere. Modifications include increased heat shielding, some aerodynamics, chemical engines for maneuvering, and lighter alloys for construction. Because of these modifications, a trans-atmospheric craft takes half damage from any plasma/heat weapons, is +1 to dodge, and only has 1 module per ton despite its entry on the Basic Vehicle table. Chemical engines are included in the cost of trans-atmospheric capabilities, but craft larger than 275 tons will require anti-gravity drives to get trans-atmospheric capabilities. Anti-gravity drives must be purchased separately at full price and module cost. These atmospheric drives have base speeds of MACH 1. Any additional speed can be purchased from page 139 of *Heroes Unlimited™, Second Edition.* Any spacecraft with TAC modification can enter a planet's atmosphere from space, but the vessel must be able to achieve escape velocity (Mach 5+) to leave the planet for space. **Cost:** 10,000 credits per ton for shuttles, interceptors and any other craft at or below 800 tons. 25,000 credits per ton for any spacecraft larger than 800 tons. Satellites and space stations can not accommodate trans-atmospheric capabilities. **Modules Required:** 0.1 per ton for ships up to 800 tons. 0.25 per ton for those over.

Automatic Hull Breach Sealing System: This system is designed to prevent the loss of atmosphere resulting from a hull breach. When a section of the hull is damaged and atmosphere is beginning to be lost, the pressure changes trigger retracted shields that slide into place and stop the atmosphere loss by blocking the hole. The result is a minimal (1%) loss of atmosphere from a hull breach. The system has primary, secondary and tertiary backups so that repeated breaches in the same area can still be handled. In cases of extreme emergency, sections of the craft will be sealed off to prevent total loss of atmosphere, such as sealing the engineering section if all three of its backups have been breached. **Cost:** 10,000 credits per ton. **Module Requirements:** 0.1/ton.

Atmosphere Tanks: An extra supply of breathable atmosphere can be carried on board for use in environmental suits, for emergencies, or to extend operation time by augmenting a recycling system. Each tank will provide one day of breathable atmosphere for 5 people (50 people if a recycling system is also used). **Cost:** 12,000 credits/tank filled with atmosphere or 10,000 credits each empty (normally used to store atmosphere in the case of a hull breach). **Module Requirements:** 0.1 per tank.

Pressurized Cabin: All spacecraft receive pressurized cabins automatically. This includes command centers, crew quarters, engine rooms, and connecting corridors. If a secondary command center, recreation facilities, or additional quarters are to be installed later, they will need to be pressurized. **Cost:** 8,000 credits per module point to be pressurized.

Automatic Missile Reloading System: This equipment is built into the hull in front of a retractable missile launcher. When

the launcher is retracted (takes one action), the reloading system's sensors check for any empty missile tubes. It will then reload those that need missiles if it has spares remaining. This takes one action. A launcher can be fired, retracted, reloaded, and be ready to fire again on the third action. **Cost:** 20,000 credits per launcher. **Module Requirements:** 0.1 per missile launcher plus the space required for spare missiles.

Long-Range Gravity Communications: Spacecraft that operate far from their home base of operations can have problems with communications. Standard radios are much too slow for any uses beyond a few thousand miles. They just take too long to get there. Laser communications are much better, and can be used up to 5 light years away without debilitating lag times. However, if a spacecraft has journeyed to the other side of the Milky Way, even tachyon communications will take nearly 200 years to get home! For damaged or lost spaceships, two centuries is a bit long to wait.

Adapting the principle of a dimensional syphon, scientists were able to develop a powerful device that generates a tight gravity tube that works on the same principles as a syphon. It links two points in space by forming a path through a parallel dimension. The small passage created is only large enough for a laser beam to fit through. Laser communications are beamed through in this manner. Message lag time across the Milky Way is reduced to an acceptable 8 hours! Shorter distances have effectively no lag time. Although gravity communication generators are large and require vast amounts of power, they are still miniature when compared to tachyon communicators. The power needed to send a single laser communication through gravity communication methods will overload and permanently shut down the drives of any vessel weighing 200 to 400 tons. Smaller craft do not have enough power to even attempt this. Spacecraft weighing 500 to 1,000 tons will lose power for 1D6 hours. Those over 1,000 tons will lose power for 2D6x10 minutes (20 minutes to two hours). As can be guessed, this kind of communication is only used in emergency situations. Planet-based gravity communicators can send a message once every other melee with power drains in between, but no total loss of power. **Cost:** 3 million credits. **Modules Required:** 20

Magnetic Towing Drives: Designed for use in salvage work, this towing system has been adapted for use by craft with satellites. The satellites are pulled along by the mother craft and do not need drives of their own. This allows more sensors and weapons instead of drives to be placed in the satellite, but it will have no maneuvering capabilities. A common compromise is to put maneuvering rockets instead of drives in the satellite to give it dodging capabilities. Most satellites will have drives, however, and the magnetic towing drive is used to conserve fuel and for the satellite to better match the speed of its mother craft. This system can also be used as a tractor beam. For this to function properly, the magnetic tower must be rated for a weight equal to at least three times that of the target vessel. For each multiple that the beam strength is greater than the craft weight, divide the captured craft's pilot percentage. So if a 100 ton craft is trapped in a magnetic beam rated at 300 tons, the pilot attempting to free himself would divide his piloting percentage by 3 in all such attempts. This kind of beam will not work on nonmetallic or composite craft. **Cost:** 10,000 credits per ton to be towed. **Module Requirements:** 2 plus 0.1 per ton to be towed.

Maneuver Enhancement Package: By adding maneuver rockets, fine-tuning the steering and rotation, and making other modifications, a spacecraft can become considerably more nimble. **Bonuses:** +1 to initiative, +2 to dodge, and +10% to all piloting skill rolls. Multiple maneuver enhancement packages can be bought for the same ship, but with each subsequent purchase, the price of the package doubles and is limited to a total of THREE. Thus, a 50 ton interceptor with three maneuver enhancement packages would have to pay 350,000 credits (50,000 credits for the first package, 100,000 credits for the second package, and 200,000 credits for the third package). The module cost for each package remains constant, so in the case of the 50 ton interceptor, the three maneuver enhancement packages would cost a total of 15 modules (5 modules per package). **Cost:** 1,000 credits per ton. **Module Requirements:** 0.1 per ton. Only additional rockets will cost module space.

Stasis Pods, Escape Pods and Life Boats: There comes a time when a crew must abandon ship, and for that purpose, prudent captains will purchase enough stasis pods, escape pods, or life boats for their passengers and crew.

Stasis pods are small stasis/sleep units that are armored to withstand the rigors of space. They can fit a single person, and come equipped with a distress beacon with a range of one light year. Stasis pods have no means of propulsion (other than the initial push they are given when shot from the mother craft) and the occupant remains in stasis for the duration of his flight. Stasis pods have a life support endurance of one century, after which, they will shut down and the occupant will die. Stasis pods are trans-atmospherically capable, and will survive a crash landing on a planet. After the crash landing, the pod will release the occupant from stasis. Since it is possible for stasis pods to land on planets with inhospitable environments, the occupant will have the option of keeping the pod closed until a readout on the atmosphere can be obtained from the pod's sensors. **Cost:** 15,000 credits. **Module Requirements:** 0.1 each. Interceptors often have stasis pods built into the cockpit chair that enclose automatically when the pilot ejects from his craft.

Escape pods are like stasis pods except they do not keep their occupants in stasis, have distress beacons that reach five light years, and can accommodate up to four passengers. Escape pods typically have enough food, atmosphere, and fuel for three weeks. For each passenger over the escape pod's limit (four), the pod's endurance goes down by one week. Thus, five passengers can make it two weeks, six passengers can make it one week, seven passengers can make it about three days, and eight passengers will make it about a day before everybody dies a terrible, cramped death. Escape pods also have no internal propulsion system, and can land on planets just as stasis pods can. **Cost:** 30,000 credits. **Module Requirements:** 1 module each.

Life boats are larger escape pods that hold up to 12 people (but 16 can cram into it) with enough supplies and fuel for two months. Life boats can also be fitted with micro-nuclear fusion engines capable of reaching 1% light speed. **Cost:** 75,000 credits standard and 1,000,000 credits with light speed capabilities. **Module Requirements:** 3 modules each.

Full Capability Escape Craft (FCE Craft) are actually modifications made to the ship's bridge or command center so that it may detach and act as a functional spacecraft of its own in times of emergency. It has its own drives, atmosphere supply (2 months), food stores, and can be armed with up to four light weapons or two medium. Speeds are equal to 1% of light, but additional speed up to factor 10 can be purchased for its nuclear drives (see the Adding Speed to Spacecraft table for prices). FCE craft weigh 65 tons, require only one crew member, can accommodate up to 25 passengers, and have 1,000 S.D.C., plus they can be armored normally. They are common on large military vessels or scientific craft that can not afford to lose the information stored in the craft's computers. **Cost:** 3.5 million credits. **Module Requirements:** 8 modules each.

FTL Accelerators: These high-tech afterburners allow ships using traditional FTL drives (such as nuclear fusion, anti-gravity, etc.) to jump from a standstill to factor one speed instantly. Eliminating the need for a lengthy acceleration time makes this hardware much coveted by pirates, guerrillas, and other spacers who

might have need for a fast getaway. **Cost:** 500,000 credits. **Module Requirements:** 10 modules.

Gateway Activation Equipment: This is the broadcast equipment and computers needed to store and broadcast the activation codes for gateway structures. The gateway codes themselves are sold by the individuals owning the structures, usually governments or large companies. This basic equipment includes hundreds of public use codes for the gateways along travel routes and trade corridors. **Cost:** 250,000 credits. **Module Requirements:** 10.

Sleep and Stasis Systems: These systems put passengers into suspended animation for long space journeys. They are invaluable to slower-than-light spacecraft or ships that have a need for transporting many passengers on minimal life support resources (such as low-rent passenger transports and prisoner ships). A stasis/sleep system uses some form of biochemical, cryogenic, or semi-solid suspension to put the passenger into a coma-like state for the duration of the journey. Sleep/stasis systems are fairly "intelligent" machines capable of fine-tuning themselves to the physiological requirements of any alien race in its database. A standard stasis/sleep system database has information on all the aliens mentioned in both this and the **Aliens Unlimited** sourcebooks. **Cost:** 5,000 credits per unit. **Module Requirements:** .1 module per unit.

Self-Destruct System: The spacecraft is outfitted with a series of explosive or engine overloading systems that can generate enough damage to completely destroy the vessel from the inside out. Needless to say, this is rarely a contained event and the blast radius and damage can be considerable. Damage is equal to the total S.D.C. of the spacecraft and covers a blast radius equal to twice the tonnage of the spacecraft in yards/meters. Don't be too close when this one goes off.

There is usually a safety delay involved with this system and a number of steps involved in order to prevent accidental destruction. A typical self-destruct sequence takes one second to activate for each ton of the spacecraft's weight, followed by a countdown equal to twice that long as a fail-safe to allow the sequence to be shut down if necessary. Override codes are usually available to shorten the countdowns, as are manual means of setting them. The less dangerous destruction of a fighter craft can usually be activated in a minute or less, while the massive explosion to take out a battleship can take as long as 16 minutes. Most self-destruct systems can easily be shut down before their activation sequences are complete and many spacecraft captains who find themselves contemplating the necessity of using them will begin them in advance with the knowledge that they can be preempted if necessary. **Cost:** 500 credits per ton. **Module Requirements:** 2

Standard Spacecraft Designs

Below are the statistics for spacecraft commonly used by the advanced civilizations of the Milky Way. These are meant to be generic spaceships, found pretty much anywhere in the galaxy. The FAR, TGE, and TMC all use craft that match these specifications. These stats may also be used for Atorian warships, but many Atorian designs will also be featured in the upcoming **Aliens Unlimited™ Guide to Imperial Space™** sourcebook.

General Traits and Systems: Many features are common to all spacecraft. Airlocks, drive engines, breathable atmosphere supplies, waste handling systems, space survival suits, and advanced computers are some of the necessary systems for proper operation of a spacecraft, but the forms and features of each will differ from race to race as well as with the budget of the character or organization building the vessel.

Racial Considerations: The physical form of an alien race will dictate the shape and proportions of their spacecraft and its *atmosphere and gravity* will mimic that of their home world. The G.M. should use common sense when comparing the race that pilots a vessel with individuals visiting from another planet, especially if they are a radically different species. A ten foot (3 m) tall *Titon* with its stocky build will probably not be able to get into most areas on a spacecraft constructed for five foot (1.5 m) tall aliens from a high gravity world. On the flip side, the short alien would find a Titon vessel to be vast and open with looming passageways and enormous rooms. Certain spacecraft, like those of the *Cameroon*, could not be boarded at all because of their small size.

Alien physiology is also a consideration, especially finger shape and size. The stubby, rounded digits of a humanoid rhino would need oversized buttons and switches for easy use. Such an alien would find the computers and systems of a skeletal alien very hard to use.

As a general rule, if the G.M. feels that an alien would be significantly larger than the race which constructed the craft he is trying to use, the larger alien should suffer the following penalties: -2 to strike, parry, and dodge (in the cramped quarters), -5% on delicate or technical skills, and no flying, leaping, or other radical physical activities.

If the larger alien is roughly twice the height or width of the spacecraft's builder race, the penalties should be -4 to strike, parry, and dodge, -15% on all skills, and physical activity is limited to crawling or squeezing through the craft's passages at a speed of 3.

Smaller aliens on larger vessels have their own troubles and penalties. Certain skills or actions will be hampered by the size of the ship. A six foot (1.8 m) alien will have difficulty picking a lock or flying a spacecraft when the locks or consoles are five to seven feet (1.5 to 2.1 m) off of the floor and controls are spaced for someone with a nine foot (2.7 m) arm span. Penalties are -5% per foot of difference in height between the two races. Plus they are -1 on initiative and dodge when operating ship weapon systems or piloting. (Hand to hand combat inside the vessel is unaffected, although hallways are long and large so speed may become a factor in covering distances — basically the giants travel two or three times the distance.)

Another major point is the home environment of the builder race. Because this is a fantasy game, all spacecraft with gravity generators are considered to have the full normal gravity of their home world. All activities and operations in these spaceships are performed normally. In addition to gravity, we also have to consider the atmosphere and environment of the race's home world.

A spacecraft will be climate controlled to maintain a temperature comfortable for the crew and will be filled with an atmosphere breathable by those same aliens. The possible atmospheres are the same ones presented in the character generation rules for Aliens in **HU2** and can range from little more than actual vacuum (i.e. no atmosphere) to poisonous gases or even water. Full details on the effects of varying atmospheres are given in the Planetary Atmospheres entry in the Adventuring on Planets section and would apply on spacecraft of the same home world type (including penalties and other effects), except that of the abrasive atmosphere which may have the climate of the home world, but will lack the damaging abrasive characteristics that could harm delicate machinery. Characters without any alien lore skills should be very cautious when boarding other spacecraft, for the crew may not be the only dangerous thing they will find. The bottom-line is that visitors may have to wear environmental suits and have separate environmental rooms or areas on the ship designed specifically for their physiological needs or will suffer and possibly die!

Rifts® Conversion Notes: Most nonmilitary spaceships, fighters, and space stations have their S.D.C. converted directly to M.D.C. for the value of their main bodies (i.e. 600 S.D.C. becomes 600 M.D.C.). Other "hit location" values will need to be assigned by the G.M. Destroyers, other heavy assault craft, and satellites have their S.D.C. divided by 8 (48,000 S.D.C. would become 6,000 M.D.C.) to determine their main body M.D.C. with other hit locations having to be assigned. Battleships and deployers and similar mega-ship double their S.D.C. before dividing by 8 to find the M.D.C. rating of their main bodies.

In both S.D.C. and M.D.C. settings, roughly *one third* of the damage capacity of a spacecraft is that of the engines and drives. Internal drives have the armor rating of the vessel, while external ones have their own armor. Depleting the S.D.C. (or M.D.C.) of the engines and drives with called shots will cripple the spacecraft. Unable to move, it is set to drift and a sitting duck for further attacks, capture and boarding raids.

Note: All spacecraft described in the pages that follow list the basic or standard armor, weapons, features and capabilities. Most can be modified and augmented.

Flitter-Class Light Shuttle

The Flitter is a stripped-down, no-frills shuttle craft capable of taking a beating. They are found throughout the galaxy, and large spacecraft use them as upscale escape pods, cheap search and rescue craft, and expendable exploratory modules. Certain militaries are fond of packing these things full of warheads and plotting them on an automated suicide course for the nearest enemy ship. Thanks to the small size of these spacecraft, larger ships can carry a full wing of them. In some parts of the galaxy, cost-conscious captains will add FTL capability to these tough little vessels in order to make them cheap but capable starships.

Tonnage: 100 tons
Dimensions: 100 feet (30.5 m); 100 tons (200,000 pounds/ 90,000 kg)
Crew: 1
Drive Type: Nuclear Fusion (Non-FTL).
Total S.D.C.: 2,500 including armor.
Weapons: Light lasers (2; fire-linked).
Armor: Light armor (A.R. 12, S.D.C. 1000).
Other Systems: Basic sensor package, satellite uplink computers, artificial gravity, external cargo docks (2), standard crew quarters (2), grapple system (1000 tons, max), trans-atmospheric capabilities, and pressurized cabin.
Cargo: 7 modules
Cost: 2.6-3 million credits.

Atlantis-Class Shuttle

Very much like the space shuttles of Earth, this class of spaceship is more often than not simply a workhorse used for transport of cargo over short distances, such as across the void separating two spacecraft or one craft and a space station or planet. Weapons and armament tend to be light, and often are intended for non-military uses, such as blasting orbital debris, mining asteroids, and surviving various particle impacts. A shuttle usually requires a bay to dock in and many of them are trans-atmospheric, increasing their versatility and usefulness immensely. Large storage or passenger areas are also common on shuttles of this type.

Tonnage: 300 tons
Dimensions: 300 feet (91.5 m); 300 tons.
Crew: Two. May include reserve crew members and several support personnel (4-12).
Drive Type: Photon/Fission (Factor 1).
Total S.D.C.: 7,500 including armor.
Weapons: None.
Armor: Light Armor (A.R. 12, S.D.C. 3000).
Other Systems: Basic sensor package, autopilot computer (75/37%), satellite uplink computer, atmosphere recycling system, artificial gravity, external cargo docks (4), standard crew quarters (14), grapple system (1000 tons), trans-atmospheric capabilities, atmosphere tanks (2), pressurized cabin, escape pods (4), gateway activation equipment, sleep and stasis systems (6).
Cargo: 131 modules.
Cost: 6.5-8 million credits.

Insurgent-Class Attack Shuttle

The Insurgent is about as combat-worthy as a shuttle-styled ship can be. It is something of a make-do spacecraft for rebels and militaries too poor to acquire bona-fide warships. So, they grab what ordinary shuttle craft they can, upgrade them to the max, and voila! Instant low-rent interceptor. The Insurgent would be laughable compared to "real" warships if it did not have such a good combat record. Staffed with experienced pilots and armed with decent tactics, an Insurgent attack can prove most deadly to cargo/passenger transports and even smaller military craft. Throughout the galaxy, more than one planet has shaken off the yoke of tyranny with small and tenacious fleets of these unlikely war birds.

Tonnage: 50 tons.
Dimensions: 50 feet (15.3 m); 50 tons.
Crew: One pilot, two gunners, and 1-4 passengers or additional crew.
Drive Type: Anti-Gravity (Factor 10).
Total S.D.C.: 2,750 including armor.
Weapons: Light particle beams (3; fire-linked) short-range missile rack (30).
Armor: Medium armor (A.R.: 14, S.D.C.: 2000).
Other Systems: Alumina cloud dispenser (10 charges), anti-missile chaff (10 globes), reflective coating, advanced sensor package, satellite uplink computer, targeting radar & combat computer, atmosphere recycling system, trans-atmospheric capabilities, maneuver enhancement package (1), and stasis pods (3).
Cargo: None.
Cost: 3-4 million credits.

Warshrike-Class Light Interceptor

This is the basic one-man fighter. Despite its factor capabilities, the ship is designed for short-range operations and requires a larger spacecraft as its base of operations and for long hauls. Extended trips can certainly be taken, but the small cockpit gets cramped and boredom sets in unless some kind of suspension system is purchased. Warshrikes are a popular escort craft for large transports and entire wings of them will be found in some military deployers. Although fast and nimble, the Warshrike is not very well armored, which makes them a little quick to die in pitched battles. That is why most Warshrike pilots either train themselves to dodge incoming fire, or stick to "strike and fade" combat tactics where they are gone before the enemy ever has a chance to return fire.

Tonnage: 20 tons.
Dimensions: 20 feet (6.1 m) long; 20 tons
Crew: One.
Drive Type: Ion/Fission (Factor 2).

Total S.D.C.: 400
Weapons: Light laser beams (4; fire-linked), short-range missile rack (12) or mini-missiles (40).
Armor: None.
Other Systems: Alumina cloud dispenser (5), anti-missile chaff (10), reflective coating, basic sensor package, satellite uplink computers, targeting radar & combat computer, atmosphere recycling system, grapple system (800 tons), automatic hull breach sealing system, maneuver enhancement package (2), and stasis pod (1).
Cargo: None.
Cost: 2-3 million credits.

Cavalier-Class Medium Interceptor

The Cavalier is another FTL capable fighter similar to the Warshrike, except its added tonnage allows for more weapons, armor, and other miscellaneous upgrades. The Cavalier is a tough and flexible multi-purpose fighter, popular with legitimate militaries, corporate security forces, mercenary groups, rebel armies, pirates, and adventurers. Their larger size makes them not quite economical for many deployers to use in force, but some will use these craft as squadron leaders for Warshrike groups. Cargo transports will often be seen with several Cavaliers attached externally to the hull via a cargo dock as an impromptu defensive measure. Although these ships require multiple crewmen, with the right kind of automation, they can become a single-pilot fighter.

Tonnage: 60 tons.
Dimensions: 60 feet (18.3 m); 60 tons (54.5 k tons).
Crew: One pilot, two gunners.
Drive Type: Photon/Ion/Fission (Factor 30).
Total S.D.C.: 2,400 including armor.

Weapons: Light ion beams (4; fire-linked), light lasers (4; fire-linked), and short-range missile rack (50).
Armor: Medium armor (A.R.: 14, S.D.C.: 1,200), medium turret armor (4) (A.R.: 13, S.D.C.: 200 each).
Other Systems: Alumina cloud dispenser (20), anti-missile chaff (20), reflective coating, military sensor array, targeting radar & combat computer, atmosphere recycling system, external cargo dock (2), grapple system (1000 tons), trans-atmospheric capabilities, automatic hull breach sealing system, automatic missile reloading system, and stasis pods (3).
Cargo: None.
Cost: 8-10 million credits.

Dragon-Class Medium Interceptor

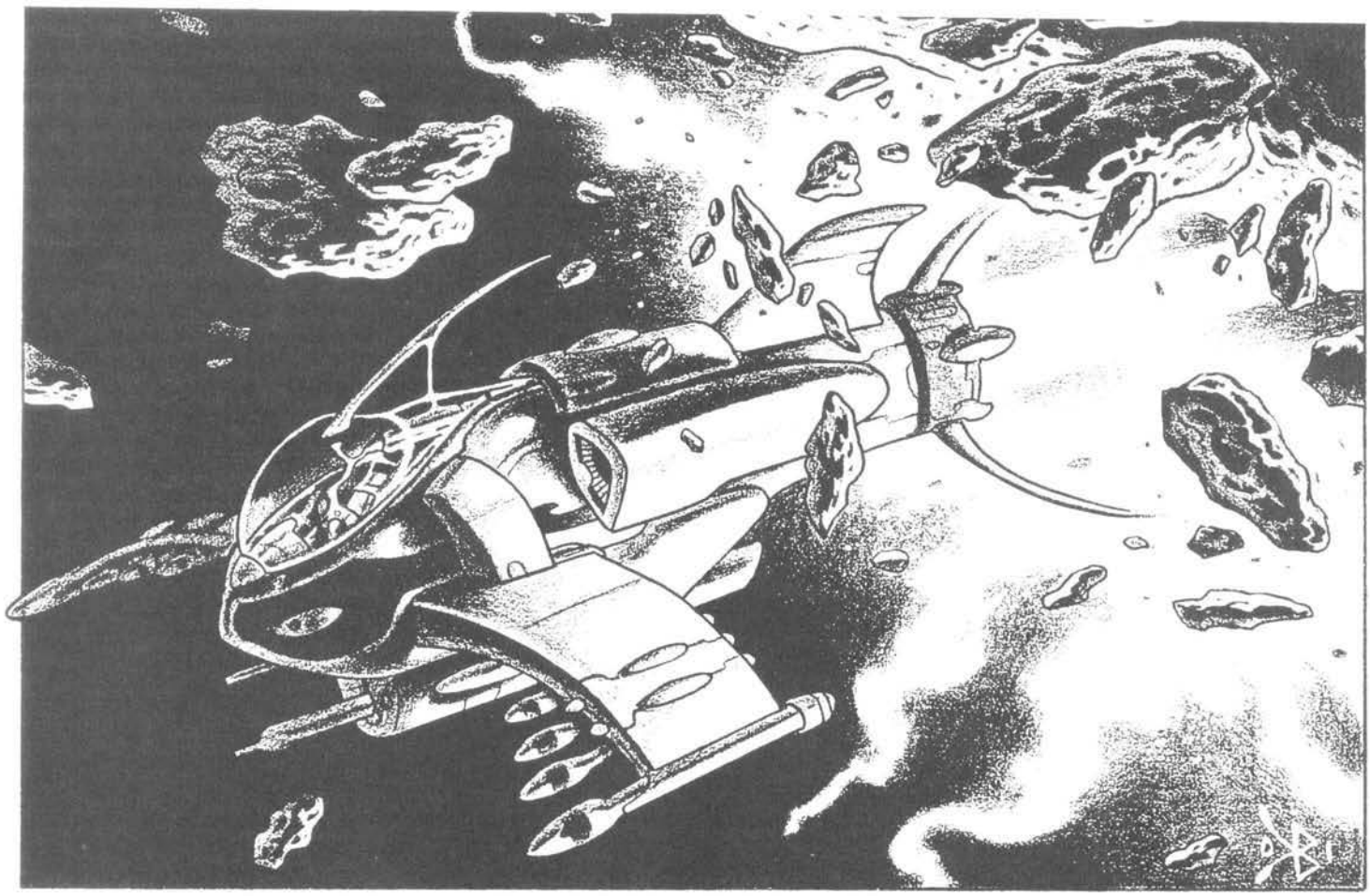
The Dragon is a space fighter used largely by the more nefarious forces of the galaxy, such as pirates, mercenaries, criminals, and the Toogarth Empire. The designers and producers of these ships are unknown, but whoever they are, they have succeeded in flooding the galaxy with these cheap but deadly warships. Dragons are especially good at ship-to-ship dogfighting, where their extensive fire-linked weaponry brings punishing firepower upon a single target. Their lack of turrets, however, makes them vulnerable to rear attacks, requiring Dragon pilots to be very good if they are to survive extended encounters.

Tonnage: 75 tons.
Dimensions: 75 feet (22.9 m); 75 tons (68.1 k tons).
Crew: 1
Drive Type: Nuclear Fusion (Factor 40).
Total S.D.C.: 3,000.
Weapons: Medium rail gun (2; fire-linked), medium-range missile rack (20).
Armor: Medium armor (A.R.: 14, S.D.C.: 1,500).
Other Systems: Military sensor array, satellite uplink computers, atmospheric recycling system, external cargo docks (2), grapple system (1000 tons), automatic breach sealing system, stasis pod (1), and extra modular capacity (17.4).
Cargo: None.
Cost: 6.3-7 million credits.

Barbarian-Class Heavy Interceptor

A common fighter-bomber configuration, the Barbarian is also the largest interceptor variant commonly encountered. Its armaments and armor make it more suited to hitting large ships from afar rather than taking on smaller, more nimble craft like the Warshrike or the Cavalier. To that end, Barbarians often fly into combat with either a few smaller interceptor escorts, or with several power-armor wearing troops on board to provide close defense. So that they may hit hard and deep into enemy territory, Barbarians have exceptional drive capabilities for a craft their size. This, coupled with their cargo capacity and perhaps a few modifications, also makes them ideal pirate and smuggling vessels, which explains why so many of them can be found (without proper identification, of course) in seedier parts of the galaxy.

Tonnage: 100 tons.
Dimensions: 100 feet (30.5 m).
Crew: 1 pilot/gunner plus 1 gunner/bombardier.
Drive Type: Anti-Gravity (Factor 20).
Total S.D.C.: 4,000.
Weapons: Light particle beam (2; fire-linked), medium-range missile launcher (20).
Armor: Medium armor (A.R.: 14, S.D.C.: 2,000), medium turret armor (5).



Other Systems: Alumina cloud dispenser (10), anti-missile chaff (10), reflective coating, electronic countermeasures, force field generator (2,000 S.D.C., plus two pinpoint shields), military sensor array, super-navigation computer, targeting radar and combat computer, atmosphere recycling system, external cargo docks (2), automatic breach sealing system, automatic missile reloader system, stasis pods (2), FTL accelerators, gateway activation equipment, and extra modular capacity (18).

Cargo: 20 modules.

Cost: 12-15 million credits.

Peon-Class Light Cargo Transport

The whimsically named Peon is a big, sad sack transport that basically any serious interstellar merchant can afford. There are no frills on this craft, not even life support. Those driving it must remain in their spacesuits for the duration of the trip, making these ships most suitable for trips within a single solar system. Their Spartan, inexpensive nature makes them great starter ships for cash-strapped merchant captains, or enterprising adventurers who plan to modify the ship extensively. With the proper upgrades, a Peon might hardly deserve its lowly name any longer.

Tonnage: 1000 tons.

Dimensions: 1000 feet (305 m), 1000 tons.

Crew: 2

Drive Type: Microwave Sail (Factor 10).

Total S.D.C.: 25,000

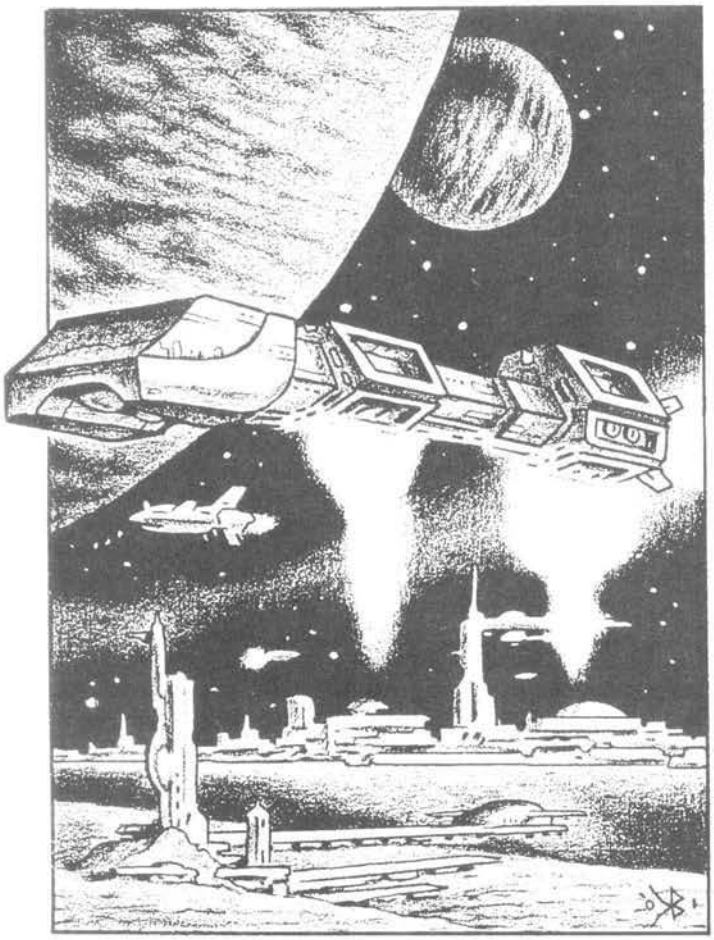
Weapons: None.

Armor: None.

Other Systems: Basic sensor package, satellite uplink computers, external cargo docks (10), and escape pod (1).

Cargo: 1,800 modules.

Cost: 6-9 million credits.



Roundabout-Class Medium Cargo Transport

The Roundabout is an increasingly common cargo vessel found throughout the FAR and outlying star systems. Able to carry enough arms and armor to defend itself without having to sacrifice speed or maneuverability, the Roundabout is considered the smallest cargo vessel that can routinely survive solo flights through dangerous territory. Roundabout pilots are a special breed who often take pride in their willingness to deliver anything to anyone at any time. Roundabouts sporting military upgrades are also frequently found along the hot zones of the galaxy, often serving as mercenary warships or providing freelance escort duty to larger cargo ships less able to defend themselves.

Tonnage: 5000 tons.

Dimensions: 5000 feet (1,525 m); 5000 tons.

Crew: 6; may include a dozen passengers or additional crew.

Drive Type: Metallic Hydrogen (Factor 50).

Total S.D.C.: 125,000.

Weapons: None.

Armor: None.

Other Systems: Advanced sensor array, autopilot computer (45%), satellite uplink computers, atmospheric recycling system, artificial gravity, standard crew quarters (10), recreation facility, long-range gravity communications, escape pods (3), gateway activation equipment, external cargo docks (10).

Cargo: 7,430 modules.

Cost: 24-27 million credits.

Samson-Class Heavy Cargo Transport

The Samson is a bulk hauler meant to carry huge amounts of cargo for long distances. Apart from its size, it is virtually identical to the Roundabout-class cargo transport. They are the galactic equivalent of the modern Earth oil tanker, a kind of super-freighter that often flies in sizeable convoys with large military escorts for defense. It is said that the entire galactic economy really rests on the efforts of these huge, lumbering craft, who handle the vast majority of goods shipments between star systems. Unfortunately, this makes them very appealing targets to pirates and hostile forces in war zone systems. So that they can maximize their cargo space, most Samsons carry no weaponry — just enough armor to survive the acceleration to factor speed and the hope of escape. Still, in some parts of the galaxy, one might find Samsons willing to load up on heavy guns and missile racks — as well as a few fighter bays — and act as rudimentary deployers. These well-armed cargo ships are often nicknamed "Goliaths" and are restricted in most systems. Still, this new breed of "armed hauler" have become heroes to the interstellar merchant community who see these brave ships as taking the fight to those who ordinarily prey on galactic commerce.

Tonnage: 10,000 tons.

Dimensions: 10,000 feet (3,050 m), 10,000 tons.

Crew: 11; may accommodate another 20-40 crew or passengers.

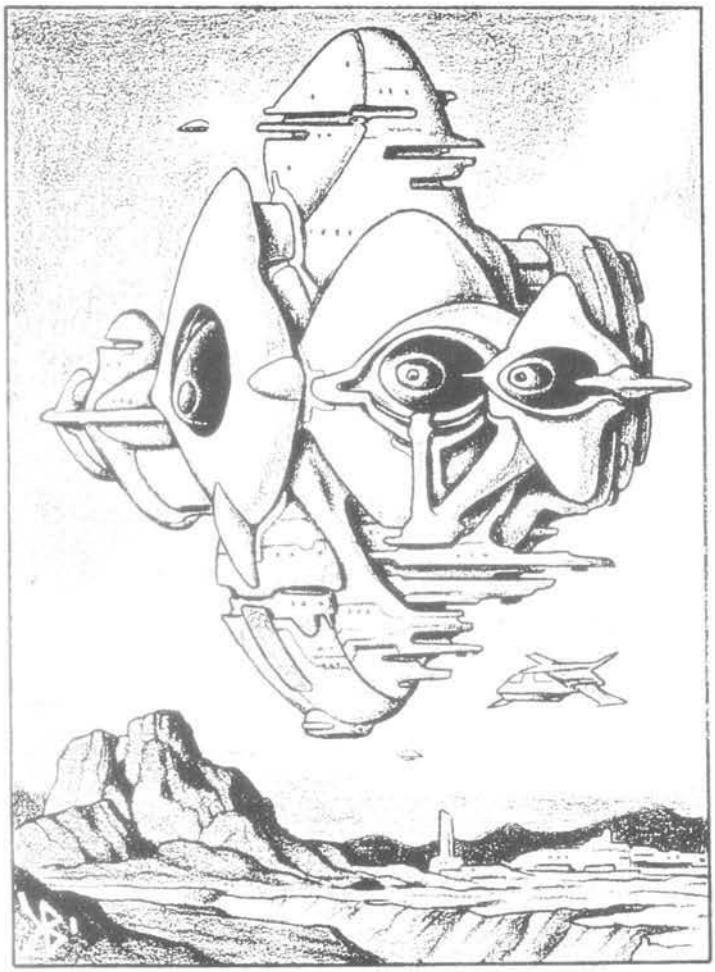
Drive Type: Metallic Hydrogen (Factor 50).

Total S.D.C.: 250,000

Weapons: None. **Armor:** None.

Other Systems: Advanced sensor array, autopilot computer (45%), satellite uplink computers, atmospheric recycling system, artificial gravity, standard crew quarters (10), recreation facility, long-range gravity communications, escape pods (3), gateway activation equipment, and external cargo docks (10).

Cargo: 14,930 modules. **Cost:** 40-44 million credits.



Xanadu-Class
Luxury Passenger Transport

For those who wish to travel the stars in style, the Xanadu is the only way to go. Loaded with comfortable cabins and luxurious entertainment decks, Xanadu cruisers are rarely hurting for passengers. Many of these ships take on a personality and style of their own, becoming a weird kind of celebrity vessel. To book a trip on such craft, the waiting list is often in excess of 1D4+1 years! Xanadu also are extremely safe, with at least a platoon of battle-hardened (but very polite and discreet) security professionals on board able to handle most critical situations. Many Xanadu also keep a wing of Warshrike or Cavalier space fighters on board to repel pirates, warlords, and anybody else thinking to plunder such a rich vessel.

Tonnage: 10,000 tons.
Dimensions: 10,000 feet (3,050 m); 10,000 tons.
Crew: Captain, four lieutenants plus six other officers. This is just the operational crew, however. There is an additional crew of 200 deck hands, bartenders, entertainers, and other staff members who serve the passengers. There are also 32 trained security professionals on board at all times. The Xanadu can accommodate up to 1,000 passengers!
Drive Type: Photon/Fission (Factor 30).
Total S.D.C.: 250,000
Weapons: None.
Armor: None.
Other Systems: Advanced sensor package, satellite uplink computer, atmosphere recycling system, artificial gravity, standard crew quarters (243), luxury crew quarters (1,000), fighter craft launch bay (typically contains 20 Warshrike-class light interceptors crewed by the on-board security personnel), shuttle launch bay (typically contains 10 Flitter-class shuttles), recreation facilities (100), escape pods (350), long-range gravity communications, automatic breach sealing system, gateway activation equipment.
Cargo: 4,000 modules for passenger cargo, 10,000 modules for operational cargo (food, recreational gear and vehicles, etc.) and approximately 700 modules worth of open space that has been turned into large verandas, plazas, courtyards, arboretums, etc., to give the ship a more pleasant, roomy and relaxing interior.
Cost: 250-270 million credits, excluding the cost of fighters and shuttle craft.

Gladiator-Class Light Destroyer

The Gladiator is considered a "planetary assault craft" that bridges the gap between the heavy fighter and light capital-class warship. Gladiators are used most frequently as escort and patrol spacecraft as well as space station defenders. They serve many functions, including quick-response, rapid-strike warships capable of hitting behind enemy lines and surviving the battle on the way out, as well as "amphibious" invasion spacecraft capable of landing troops on hostile moons and planets. The FAR uses Gladiators extensively as research and exploration vessels, sacrificing some weapons and armor for additional sensors and laboratory space. Any cargo is typically used to make synthetic environments for exotic flora and fauna meant to be brought back to a core world for public display. The TMC also uses modified Gladiators (extra arms and armor) as its primary enforcement vessel in most of the areas in which its services have been contracted. To pirates and lawbreakers everywhere, the arrival of one of these vessels is never a good sign.

Tonnage: 500 tons.
Dimensions: 500 feet (152.5 m), 500 tons.
Crew: 50; may accommodate another 30-60 crew or passengers depending on its configuration.
Drive Type: Nuclear Fusion (Factor 40).
Total S.D.C.: 90,000 including armor.
Weapons: Anti-ship particle battery (4), anti-ship particle beam (8), heavy rail gun (8), heavy laser beam (8), long-range missile rack (4; 12 missiles each).
Armor: Battleship armor (A.R. 17, S.D.C. 40,000), battleship turret armor (32; A.R. 16, S.D.C. 400 each).
Other Systems: Alumina cloud dispenser (25), anti-missile chaff (30), electronic countermeasures (ECM), force field generators (25,000 S.D.C.; 10 pinpoint shields), magnetic shield, reflective coating, military sensor array, satellite uplink computer, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (4), standard crew quarters (60), grapple system (10,000 tons), recreation facilities (3), automatic hull breach sealing system, automatic missile reloading system, long-range gravity communications, escape pods (15), FTL accelerators, gateway activation equipment, and self-destruct system.
Cargo: 58 modules.
Cost: 64-70 million credits.

Marauder-Class
Medium Destroyer

These craft are warships, pure and simple. There is no reason for anyone to own one except for the express purpose of making war. Because of this, they are outlawed for civilian use throughout the FAR and in most other "civilized" systems. Such regulation is hardly necessary, however, since the price and crew requirements of the marauder place it well out of reach of most warlords, pirates and other blackguards. Only legitimate militaries or powerful corporations tend to have the wherewithal

of obtaining and maintaining a single Marauder, let alone a whole fleet of them. And a good thing that is, since just a small group of expertly-crewed Marauders can blockade a small planet, pummeling it into submission over time.

Tonnage: 750 tons.
Dimensions: 750 feet (228.8 m); 750 tons.
Crew: 75; may include an additional 40-80 crew or passengers.
Drive Type: Interstellar ramjet (Factor 50).
Total S.D.C.: 135,000 including armor.
Weapons: Great cannons (2), ballistic missile racks (8; 16 missiles each), anti-ship laser batteries (8), anti-ship laser beams (16).
Armor: Battleship armor (A.R. 17, S.D.C. 60,000), battleship turret armor (17; A.R. 16, S.D.C. 400 each).
Other Systems: Alumina cloud dispenser (25), anti-missile chaff (30), electronic countermeasures (ECM), force field generators (30,000 S.D.C.; 10 pinpoint shields), magnetic shield, reflective coating, military sensor array, satellite uplink computer, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (4), standard crew quarters (100), grapple system (10,000 tons), recreation facilities (6), automatic hull breach sealing system, automatic missile reloading system, long-range gravity communications, escape pods (25), FTL accelerators, gateway activation equipment, self-destruct system.
Cargo: 54 modules.
Cost: 90-100 million credits.

Gigantor-Class Heavy Destroyer

The Gigantor is typically deployed as an escort craft for battleships or deployers, or to hold the point for formations of smaller warships. Like the Marauder, it sports battleship-class weaponry, especially the infamous *great cannons*. This kind of firepower makes these vessels especially formidable for their size. Compared to a bona-fide battleship, these craft are fairly inexpensive, and numerous "second-class" galactic governments will stock their navies with these craft in lieu of any battleships. They also are fond of covering Gigantors with external cargo docks so smaller destroyers and interceptors can piggyback on them, making these craft crude deployers when so modified. Due to numerous engineering oversights when this craft was designed, extensive added modular capacity had to be included into the basic chassis, adding substantially to the Gigantor's already noteworthy price tag.

Tonnage: 1000 tons.
Dimensions: 1000 feet (305 m); 1000 tons.
Crew: 100; plus an additional 40-80 crew or passengers if so desired.
Drive Type: Interstellar ramjet (Factor 50).
Total S.D.C.: 180,000
Weapons: Great cannons (4), ballistic missile racks (8; 16 missiles each), battleship laser cannons (8).
Armor: Battleship armor (A.R.: 17, S.D.C.: 80,000), battleship turret armor (20) (A.R.: 16, S.D.C.: 400).
Other Systems: Alumina cloud dispenser (25), anti-missile chaff (30), electronic countermeasures (ECM), force field generators (50,000 S.D.C.; 20 pinpoint shields), magnetic shield, reflective coating, military sensor array, satellite uplink computer, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (10), standard crew quarters (125), grapple system (10,000 tons), recreation facilities (10), automatic hull breach sealing system, automatic missile reloading system, long-range gravity communications, escape pods (32), FTL accelerators, gateway activation equipment, self-destruct system, and extra modular capacity (500).
Cargo: 96 modules.
Cost: 112-124 million credits.

Leviathan-Class Battleship

Leviathans are designed for assaulting a wide variety of targets, from fortified planetary positions to entire fleets of small interceptors. The Leviathan is equipped to handle it all, and to respond with lightning speed to anywhere it may be needed. With such a formidable mix of weapons, armor, and raw engine power, the Leviathan is an enviable piece of military hardware for any government or large corporation. Due to their high production costs, however, few can actually afford to buy them, which keeps their numbers fairly low. The largest users of these craft are the FAR and to a greater degree, the Atorian Empire, who have their own specially modified version of this craft. Exactly what those special modifications are is an Imperial secret, something the FAR would dearly like to learn more about. All in all, Leviathans are designed to wage entire wars on their own, and governments such as the FAR and the Atorians often send them into systems as a lethal show of force before sending in a much larger battle fleet. These flagship craft are also often sent on long-term missions of exploration and diplomacy, providing assistance to planets in times of natural disaster and other hardships.

Tonnage: 5000 tons.
Dimensions: 5000 feet (1,525 m); 5000 tons.
Crew: 1,250; can accommodate an additional 200-300 crew or passengers.
Drive Type: Anti-Matter Fusion (Factor 250); Matter/Anti-Matter (Factor 130; backup drive).
Total S.D.C.: 1,650,000 (including armor).
Weapons: Great cannons (8), battleship laser cannons (8), ballistic missile racks (8; 64 missiles each), anti-ship laser batteries (16), anti-ship laser beams (32), long-range missile racks (16; 120 missiles each), and heavy laser beams (64).
Armor: Battleship armor (A.R.: 17, S.D.C.: 400,000), battleship turret armor (152), (A.R.: 16, S.D.C.: 400).
Other Systems: Alumina cloud dispenser (50), anti-missile chaff (100), electronic countermeasures (ECM), force field generators (500,000 S.D.C.; 100 pinpoint shields), magnetic shield, reflective coating, autopilot computer (95%), geologic sensor array, military sensor array, satellite uplink computer, super-navigation computer (95% sub-light, 95% FTL), scientific sensor array, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (100), standard crew quarters (1,500), power armor lockers (250), grapple system (100,000 tons), recreation facilities (100), automatic hull breach sealing system, pressurized cabins (500 modules — crew cabins and rec facilities), automatic missile reloading system, long-range gravity communications, magnetic towing drives (10,000 tons), stasis pods (1,500), escape pods (40), life boats w/ light speed capability (25), full capability escape craft (20), FTL accelerators, gateway activation equipment, sleep and stasis systems (1,500), self-destruct system, shuttle launch bay (500 tons; 5 Flitters).
Cargo: 2,500 modules.
Cost: 1.6 to 1.9 billion credits.

Eviscerator-Class Battleship

Eviscerators are a relatively new battleship design meant to take advantage of the large "great cannons" that ships of this size are able to employ. Essentially a variant of the Leviathan, the Eviscerator features entire batteries of great cannons to operate as mobile bombardment platforms. Their ultra-heavy weaponry is meant to be used exclusively as a large-target device. Understandably, these ships are highly specialized and as such, are actually fairly vulnerable on the battlefield. Should enemy craft get in close to these vessels or swing behind the firing arc of their great cannons, they will find most Eviscerators unable to mount a compelling defense. That is why these warships often

are part of a larger battle group consisting of at least two or three Leviathans, deployers, and assorted other warships.

Tonnage: 5000 tons.
Dimensions: 5000 feet (1,525 m); 5000 tons (4,540 k tons).
Crew: 1,250; can accommodate an additional 100-200 crew or passengers.
Drive Type: Anti-Matter Fusion (Factor 250); Matter/Anti-Matter (Factor 130; backup drive).
Total S.D.C.: 1,650,000 (including armor).
Weapons: Great cannons (18), ballistic missile racks (8; 80 missiles each)
Armor: Battleship Armor (A.R.: 17, S.D.C.: 400,000), battleship turret armor (152). (A.R.: 16, S.D.C.: 400).
Other Systems: Alumina cloud dispenser (50), anti-missile chaff (100), electronic countermeasures (ECM), force field generators (500,000 S.D.C.; 100 pinpoint shields), magnetic shield, reflective coating, autopilot computer (95%), geologic sensor array, military sensor array, satellite uplink computer, super-navigation computer (95% sub-light, 95% FTL), scientific sensor array, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (100), standard crew quarters (1,500), power armor lockers (250), grapple system (100,000 tons), recreation facilities (100), automatic hull breach sealing system, pressurized cabins (500 modules — crew cabins and rec facilities), automatic missile reloading system, long-range gravity communications, magnetic towing drives (10,000 tons), stasis pods (1,500), escape pods (40), life boats w/ light speed capability (25), full capability escape craft (20), FTL accelerators, gateway activation equipment, sleep and stasis systems (1,500), self-destruct system, shuttle launch bay (500 tons; 5 Flitters).
Cargo: 2,512 modules.
Cost: 1.7-2.1 billion credits.

Horde-Class Deployer

This is the archetypical deployer — stripped down of all but minimal armor, weapons and extra equipment for the sake of holding as many small and medium interceptors as possible. Horde deployers are not particularly well suited for open combat and instead prefer the classic tactic of hanging back, launching its full fighter complement, and letting the smaller craft do its dirty work. These vehicles are often sent into battle accompanied by several escort craft — either three to five destroyers or one or two battleships. Recently, the FAR has shown some remarkable success in sending one Horde deployer and one Armada deployer into hot zones with each ship providing cover for the other. So far this tactic has worked well against numerous pirates and would-be warlords. Whether it will stand up to a battle-hardened enemy such as the Toogarth or the Atorians remains to be seen.

Tonnage: 10,000 tons.
Dimensions: 10,000 feet (3,048 m); 10,000 tons.
Crew: 1,000 crewmen, usually 170 pilots.
Drive Type: Interstellar Ramjet (Factor 100); Anti-Gravity (Factor 20; backup drive).
Total S.D.C.: 2,100,000 including armor.
Weapons: Anti-ship laser battery (4), heavy laser beam (8), long-range missile rack (16; 48 missiles each).
Armor: Light armor (A.R. 12, S.D.C. 100,000); no turret armor at all.
Other Systems: Alumina cloud dispenser (20), anti-missile chaff (30), electronic countermeasures (ECM), force field generators (10 pinpoint shields), magnetic shield, reflective coating, autopilot computer (95%), military sensor array, satellite uplink computer, super-navigation computer (95% sub-light, 95% FTL), targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (100), standard crew quarters (1,500), grapple system (10,000 tons), recreation facilities (50), automatic hull breach sealing system, pressurized cabins (500 modules — crew cabins and rec facilities), automatic missile reloading system, long-range gravity communications, magnetic towing drives (10,000 tons), escape pods (40), FTL accelerators, gateway activation equipment, self-destruct system, and launching bay (7,500 tons).
Note: The launching bay can hold up to 7,500 tons of spacecraft at any given time. A typical deployment might include 100 Warshrike (20-ton) interceptors, 50 Cavalier (60-ton) interceptors, 20 Barbarian (100-ton) interceptors and five Flitter (100 ton) shuttles.
Additional Note: Keep in mind the 100 external cargo docks along the exterior of the vessel, as well. Each one of these can carry another vessel, be it a lowly Warshrike fighter or something as substantial as a Gladiator-class destroyer.
Cargo: 3,090 modules for cargo and extra storage. During operations, most of this will be used to haul extra ship parts, materials and equipment.
Cost: 490-500 million credits.

Spike-Class Defense Satellite

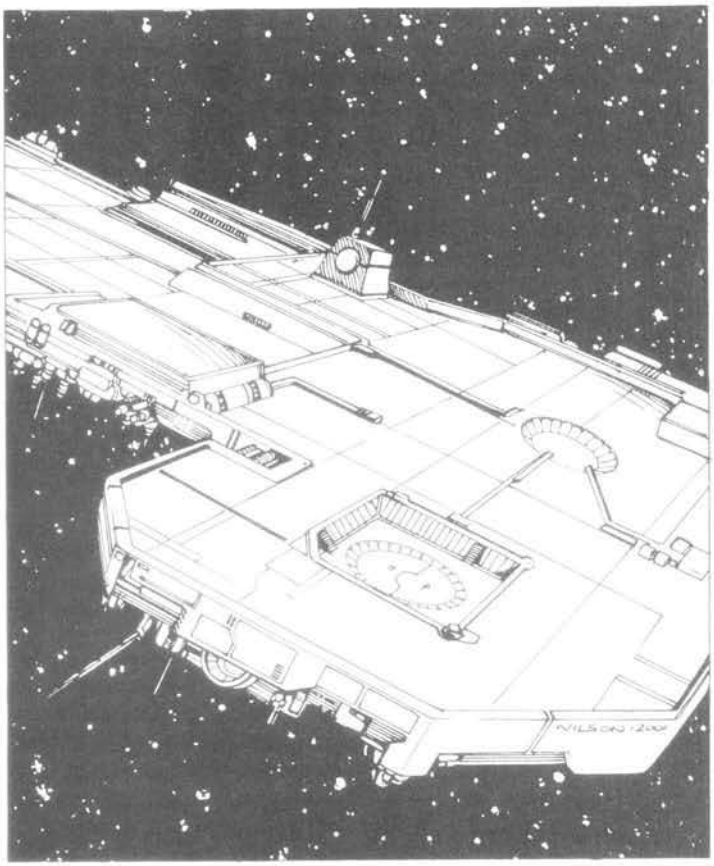
The Spike is a "quick and dirty" defense satellite meant to be produced *en masse* in anticipation of a large invasion force. Those who rely on this handy little fire platform usually build hundreds of them and clutter their planet's low orbit with them as a last line of defense against any would-be intruders. One on one, these satellites are not particularly combat-worthy. A dozen or more of them all fighting at once, however, provide a formidable defense. Proof again that sometimes, numbers can carry the weight of battle.

Tonnage: 10 tons.
Dimensions: 10 feet (3 m) in diameter, 10 tons.
Crew: None; automated.
Drive Type: None.
Total S.D.C.: 2,500
Weapons: Medium particle beam (1).
Armor: Heavy Armor (A.R.: 16, S.D.C.: 2,000).
Other Systems: Advanced sensor array, reflective coating, targeting radar and combat computer, additional modular capacity (5 modules).
Cargo: None.
Cost: 1.7-1.8 million credits.

Outland-Class Space Station

The Outland is a relatively small space station designed as a "first presence" installation for star systems either not yet fully explored or whose ownership is in dispute. Although the Outland is a hardy and well-built craft, it is meant to be relatively expendable. Thus, one will not find many of the services and facilities on an Outland that might be found on a larger station, such as a Metropolis. To live on an Outland feels very much like living in the Spartan confines of most starships, except the Outland has a few more creature comforts and is entirely self-sufficient.

Tonnage: 1,000 tons.
Dimensions: 1,000 feet (305 m) in diameter, 1000 tons.
Crew: 10
Drive Type: None.
Total S.D.C.: 200,000
Weapons: None.
Armor: None.
Other Systems: Advanced sensor array, geologic sensor array, satellite uplink computer, scientific sensor array, atmosphere recycling system, standard crew quarters (15), automatic hull breach sealing system, life boat with light speed (1), self-destruct system, launch bay (900 tons).



Cargo: 878 modules. Note that many stations will devote up to half of this space to open living areas to give a sense of roominess. That which has not been modified in this regard will almost certainly be filled with extra food, water, medical supplies, hardware, and other self-sufficiency items.
Cost: 32-40 million credits.

Metropolis-Class Space Station

The Metropolis is the classic city in space, a fortified orbital port that provides a fully-stocked way station between a planet's surface and the expanse of deep space. The Metropolis is a mammoth craft, and constructing one is an expensive endeavor not to be taken lightly. These are seen as major diplomatic and strategic resources, and governments, corporations and planetary populations only build them in areas where they are sure the station will be around for quite some time. In some cases (as it is with the Atorian Empire), building a Metropolis is a way of claiming a planetary system for oneself. If possession is nine-tenths of the law, then the presence of a Metropolis is the strongest case for ownership of a planet short of actually having colonized it.

Tonnage: 100,000 tons.
Dimensions: 100,000 feet (18.9 miles/30.2 km) in diameter.
Crew: 1,000.
Drive Type: None.
Total S.D.C.: 28,000,000, including armor.
Weapons: Great cannon (1), anti-ship laser batteries (4), and heavy laser beam (16).
Armor: Battleship armor (A.R. 17, S.D.C. 8,000,000).
Other Systems: Force field generators (25 pinpoint shields), reflective coating, advanced sensor array, satellite uplink computer, targeting radar and combat computer, atmosphere recycling system, artificial gravity, external cargo docks (1,000), standard crew quarters (500,000), luxury crew quarters (25,000), recreation facilities (10,000), automatic hull breach sealing system, long-range gravity communications, magnetic towing drives (4; 10,000 tons each), escape pods (31,250), self-destruct system, launching bays (7 bays of 10,000 tons each), extra modular capacity (177 modules).
Cargo: 100,000 modules.
Cost: 50-60 billion credits. Go with a payment plan.

Alien Education, Skills, & Knowledge

New Scholastic Skill Programs

There are many walks of life one may choose in a galactic setting that are not available to simple Earthlings. Most of these occupations have been made possible by advanced technology and space travel, others by the unique demands of the vast interstellar community. These new *skill packages* are included to reflect that. They are the "basic" courses of study and training many galactic citizens pursue, especially if they yearn for a life of adventure in outer space. Many of the basic skill programs described in the **Heroes Unlimited™, Second Edition (HU2)** rule book are still valid for galactic characters, and the education of many galactic citizens will consist solely of **HU2** basic skill programs.

There are 16 new skill programs presented in the following pages. Most reflect training for lawmen, criminals and adventurers in a galactic campaign. Navigating outer space, using energy weapons, piloting spaceships and similar high-tech and space oriented skills illustrate the *alien* character's galactic upbringing, familiarity with space and/or advanced science. However, these same skills and skill programs *may* be made available to "non-galactic" characters provided the player has a plausible reason for knowing them, like being part of a national Space Program or private industry involved in space exploration or superhumans who routinely travel into the depths of outer space, genius characters and so on.

Note: These skill programs typically count as TWO programs compared to those available on Earth. At the end of each description is a range of *additional skills* an individual will know if he or she has chosen this training "program" as his profession. Each program was designed with an O.C.C. (Occupational Character Class) in mind, particularly for alien characters who are *not* super beings and don't have any powers or training from one of the nine HU2 Power Categories. In other words, highly trained spacefarers and galactic adventurers who don't have super abilities.

Alien Creation & Skills

On page 95 of **HU2,** the education and skills for an Alien character are presented in a random table. A player may make a random roll using percentile dice or select whichever one strikes his or her fancy. Once the area of expertise is determined, the number of skills and which category from which to make skill selections is indicated. Players can still use this table and simply include the *new* skills (described by category elsewhere in this section) as is appropriate.

On the other hand, a player of an *alien* character may select one of the following Skill Programs, or roll on the expanded **Alien Education and Skill Table** that follows. **Note:** These new Skill Programs are also available to humans, however, programs that involve advanced science/technology, energy weapons, piloting spacecraft and other outer space skills (i.e. Zero Gravity

Combat, FTL Navigation, etc.) should be limited to characters who are either specifically trained for operations in space (i.e. an astronaut, or genius or hardware individual who engages in space exploration, etc.), or hero (of any Power Category) who routinely adventures in outer space.

Cyberjacker Skill Program

Computer Operation (+25%)
Computer Programming (+20%)
Cyberjacking (+20%)
Computer Repair (+15%) or Computer Hacking (+20%)
Research (+15%)
Cryptography (+15%)
Advanced Mathematics (+30%)
Streetwise or Radio: Scrambler (+10%)

"Cyberjacker" is a rather generic term applied to people who use their skills with computers to gain unauthorized access to other people's computer systems and data. Basically, Cyberjackers are the galactic equivalent of an Earth hacker, and the term applies to all such activities, whether the perpetrator uses advanced technology, bionic augmentation, superhuman abilities, mental powers or supernatural advantages to gain access to computer systems. While there are some recreational Cyberjackers out there, most are professionals who use their skills to make a living stealing, selling or using the data they "jack." In fact, Cyberjackers are kingpins when it comes to industrial espionage and are also often found with pirates, raiders and other criminal organizations. Of course, there are Cyberjackers who earn a legitimate paycheck doing research, creating countermeasures to criminal "jackers," breaking enemy codes, and performing retrieval tasks while working for banks, corporations, and governments. Nearly every corporation and government employs its own Cyberjackers for the purpose of securing and defending their databases from the actual Cyberjackers. These refined and professional Cyberjackers are commonly referred to as "Digital Security Specialists," and those of the Atorian Empire are some of the deadliest digital warriors one can encounter. There are also "vigilante" Cyberjackers who specialize in cracking the systems of what they consider unsavory individuals or organizations and lay their ills open for all to see.

In a sense, the Cyberjacker is yet another manifestation of the pirate, thief, and spy, only his medium is the abstract space of the cybernetic computer network. Indeed, galactic Cyberjackers can make an easy living pulling clandestine jobs here and there, but such a life tends to be filled with danger, requiring most database raiders to have secret identities and live on the run. Hitting the big money is hardly any better, since it means running up against professionally trained Cyberjackers with the best equipment behind them. This is definitely not an arena for the amateur.

Bionic and technical Cyberjackers would knock the socks off of Earth hackers, but in a galaxy full of Telemechanics and people who can turn into electricity, they often filter to the bottom of the barrel. Certainly enough of the right tech can keep an aspiring Cyberjacker on par, but that kind of hardware is expensive and few can afford it. Superhuman, psionic, and magical Cyberjackers are impressive and deadly but often lack the endurance of a technological hacker. The pros and cons of power always show up in one form or another. See the Cyberjacking rules elsewhere in this section.

Available only to spacefarers and advanced civilizations. Not available to Earthlings.

Intergalactic Bounty Hunter Skill Program

Computer Operation (+15%)
Streetwise (+15%) or Seduction (+20%)
Pick Locks (+15%) or Find Contraband (+15%)
Prowl (+10%)
Tracking (+25%)

Surveillance Systems (including Tailing; +20%)
Pilot Civilian Spacecraft: Small or Medium (+15%)
W.P. Energy Pistol or W.P. Energy Rifle
Hand to Hand: Expert
Zero Gravity Combat: Basic (may be Expert for the cost of one other skill above).

The Intergalactic Bounty Hunter "skill program" is specifically for those people who pursue bounty hunting as a *profession*. Heroes and adventurers may serve as bounty hunters and anybody (under the right circumstances) can capture a fugitive and collect a bounty, but true bounty hunters are skilled man-hunters. Likewise, a bounty hunter can perform jobs that might be suitable to any character trained in combat operations, such as working as a body guard, enforcer, spy, or assassin.

There are plenty of worlds and hideaways were galactic criminals can find refuge. Even many civilized worlds have no interstellar extradition laws or may lack the lawmen (or power, when it comes to super beings) to capture fugitives and send them back to a particular planet to stand trial for their crimes. Enter the *intergalactic bounty hunter*. Again, the analogy of the Earth's Old West applies, as these man-hunters make a living by tracking down, capturing and, sometimes, killing galaxy spanning desperadoes. The bounty hunting profession is rather loose and personal. One must be resourceful and able to fly by the seat of one's pants, making things up as he or she goes along. While some Intergalactic Bounty Hunters are noble, heroic and often function as "auxiliary lawmen," many are rogues who bend and even break the laws of one or more worlds to get their man. Some are completely self-serving, and hunt criminals only for financial reward, others see themselves as self-styled vigilantes and still others are as rotten as the interstellar scum they pursue. To make matters worse, the laws and rules of conduct for freelance bounty hunters can range from quite specific and rigid to none at all. The Atorian Empire, for example, requires bounty hunters to follow proper procedure and operate within the law, while the Thissera-Micean Cooperative (TMC) doesn't balk if the man-hunter bends the law to put a criminal behind bars. Other areas have little to no limitations or rules at all, so anything goes. Thus, unless a bounty hunter has a Principled or Scrupulous alignment, the character may engage in all types of intimidation, surveillance, strong-arm techniques, bribery, breaking and entry, robbery and even blackmail, kidnaping, and murder. As intergalactic wanderers, many completely disregard the laws, morals and customs of any world — seeing themselves as above the "local" law. (**Note:** The conditions set by the *Federation of Allied Races (FAR)* and *TMC*, along with full details on collecting bounties, is found in the Bounty Hunting section of the Crime chapter.)

On the other hand, many criminals flee to other worlds specifically to escape the laws and authorities of a particular nation, planet or confederacy of planets. Morever, no one has jurisdiction in the void that is "outer space," so these villains can literally get away with murder when wandering the vastness of space. Thus, bounty hunters as well as super-powered heroes, vigilantes, individuals taking the law into their own hands and the rare intergalactic lawman, are the only way to get justice. As a result, placing "bounties" on spacefaring criminals is a common practice.

Claiming a bounty can be difficult. Most rewards demand that the brigand is physically delivered "alive" to the sponsor of the reward (not always the authorities, which can complicate matters). Even when the bounty is "Dead or Alive," the bounty hunter must provide concrete *proof* and *evidence* that a crook is "dead," and may literally require the victim's "head."

If an Alien: In addition to this skill program, a professional Bounty Hunter selects three additional skills from Espionage or Military, three from Rogue or Communications, three from Pilot: Advanced or Pilot Related, two Wilderness, two W.P. (any) and five Secondary Skills. This represents the character's total skill range.

Earthlings without space training can be "terrestrial" Bounty Hunters and get this same Skill Program minus Zero Gravity Combat and Pilot Civilian Spacecraft: Small or Medium (replace them with conventional Piloting skills). The G.M. may want to change W.P. "Energy" weapons to more conventional Earth weapons, but Earthlings with Special or Hardware training or who are "super" heroes may take W.P. Energy Pistol or Rifle.

Information Broker Skill Program

Computer Operation (+25%)
Computer Hacking (+20%) or Cyberjacking (+15%)
Computer Programming (+15%) or Cryptography (+15%)
Computer Repair (+20%) or Basic Electronics (+20%)
Radio Scramblers (+20%) or Radio: Satellite (+15%)
Streetwise (+10%) or Electronic Warfare (+5%)
Surveillance Systems (+10%) or Advanced Math (+10%)
Concealment (+20%) or Impersonation (+15%)
Find Contraband and Illegal Weapons (+20%)
Intelligence (+20%) or Law (General; +20%)
Research (+20%)

If Earth is currently in the Information Age, then certainly the galaxy as a whole is far beyond that point. In space, information is a valuable commodity and often worth more than gold, jewels or military weaponry. Thus, it is an environment that nurtures *information brokers*, men and women who specialize in tracking down, acquiring, selling and disseminating information. The nature of the information will depend on the area one operates in, what the buyer is looking for, and market demand. Any successful Info Broker will constantly have knowledge that others do not. They make a point of being on the "inside track" and usually have a cadre of informants, snitches, spies and dupes working (freelance) for them. Whether the info being sold is stolen directly from a specific source or comes halfway across the galaxy through a dozen different hands, it ultimately ends up in the lap of the Information Broker. The acquisition of technical data (in-

dustrial espionage) and tapping the rumor mill are the two most common areas of information acquisition and distribution. Using computers and custom software, the broker spreads out nets of electronic mesh and reels in masses of data. The real trick is weeding through it all to sift out the truly valuable nuggets (like rumors of a merger, or hush, hush info about a military shipment, or act of indiscretion by a political leader, etc.). The speciality of most Information Brokers is finding the nuggets and tracking down the truly valuable truth and details (i.e. specific data, times and evidence). The next most important skill is knowing how to liquidate that info — who to approach and how to sell data without garnering attention or breaking the law (or at least getting caught doing it).

Lone wolf operators exist, but they are rare. The most successful I.B.s rely on some kind of support network made of electronics, computer programs and flesh and blood operatives, agents, snitches, stoolies and crooks to actively gather, sort and sell or trade data. This is something of a symbiotic relationship, for while many can get "sensitive" information, few know what to do with it, how to sell it, or to whom. That's where the broker comes in, usually buying info for a fraction of its real value (1-10%, because most sellers don't even realize what they have or how valuable it is) and often willing to trade it for a favor, or other info or service, rather than hard cash.

The Information Broker's special skills are usually computer and communications based. The best will have some special edge such as being superhuman, technologically advanced, psionic, magical, or "connected" to someone or some organization. Simple computer skills and average tech won't get a character far as a broker. They may be able to collect for an Information Broker, but the I.B. himself has to have fast, easy access to knowledge no one else has. Certain skill sets help out in this, such as personal knowledge of the streets, the military, the law, and some sciences, but in the big leagues, total recall, machine control, or a computer in the head are all vital auxiliary abilities.

The most famous, extensive, and powerful data collection and dispersement company is the **Felias Information Network (FIN)** which employs almost an entire race of operatives and at least three times their number in additional collectors, spies, Cyberjackers, I.B.s and countless free agents and "one timers" (someone who lucks into something valuable to sell). The databases of the FIN are so vast that almost no one outside the Atorian Empire can rival it and not many more can even imagine it. Using the most advanced TGE computers, it is rumored that the FIN still needs a complex the size of the United States to store all of the data they have collected. Of course, the location of that enormous vault of knowledge is the one secret the FIN will never sell. As a point of note, no Cyberjacker has ever been able to locate the FIN database, either. Not physically or through electronic means, let alone having taken a shot at cracking it.

If an Alien: In addition to this skill program, a professional I.B. selects three additional skills from Espionage, three from Rogue, three from Science or Communications, three from Pilot or Technical, two W.P. (any) or two Military skills, and six Secondary Skills. This represents the character's total skill range.

Earthlings with Special or Hardware training or who have "super abilities" for gathering information or hacking are most likely to consider a life as an I.B.

Mercenary (Space) Soldier Skill Program

Military Etiquette (+15%)
Tracking (+15%) or Armorer (Field; +15%)
Radio: Laser (+10%) or Read Sensory Equipment (+15%)
Pilot: Basic: One of choice (+15%)
Pilot Military Spacecraft (Small; +15%) or Navigation: Space (+10%)
Depressurization Training
Zero Gravity Combat: Basic
Hand to Hand: Expert or Martial Arts (Assassin if evil)
W.P. Energy Pistol or W.P. Automatic Pistol
W.P. Energy Rifle or W.P. Automatic Rifle

The mercenary space soldier is a professional fighter who hires out his skills for payment. Mercenaries find regular work in much of the galaxy where governments or corporations find it cheaper or more practical to hire a defense force from outside than recruit them from among their own ranks. Galactic mercenaries are frequently hired for special operations and to augment the current standing army of a nation-state, racial/cultural enclave, or corporation.

Mercenary troupes are usually not very large, most ranging in size from a squad of 6-10 to something close to a platoon or company of about 40-160. Some, like the famous *Crimson Blade Winds* of Ilta Quadrant, are standing armies unto themselves with members numbering into the thousands and access to military spacecraft, armored vehicles, assault aircraft, and numerous field weapons. An organization the size of Crimson Blade Winds (nearly 10,000 soldiers, according to reliable sources) can provide the services of an army to wealthy clients, but most clients are looking for smaller units and special squads. Mercenary player characters are likely to be members of such smaller units, but can also operate solo as advisors, independent operatives and adventurers/soldiers of fortune. Mercenary soldiers, especially older ones or those who operate alone, can sell their knowledge as readily as their weapons, teaching combat skills and military tactics to unskilled soldiers (most often guerillas).

Most mercenaries are self serving, but just as there are noble thieves and pirates, so too are there mercenaries willing to lend their strength and skills to help the weak and fight for justice and freedom. Equipment, room and board, and simple gratitude can be enough reward for these wandering warriors. Many mercenary bands are affiliated with guilds, agencies and Information Brokers so they can be found and hired easily.

Galactic Mercenaries. If this is the character's occupation, in addition to this skill program, select four additional skills from Espionage, four Military, three from Rogue or Physical, three from Pilot: Advanced, four from W.P. (any) and six Secondary Skills.

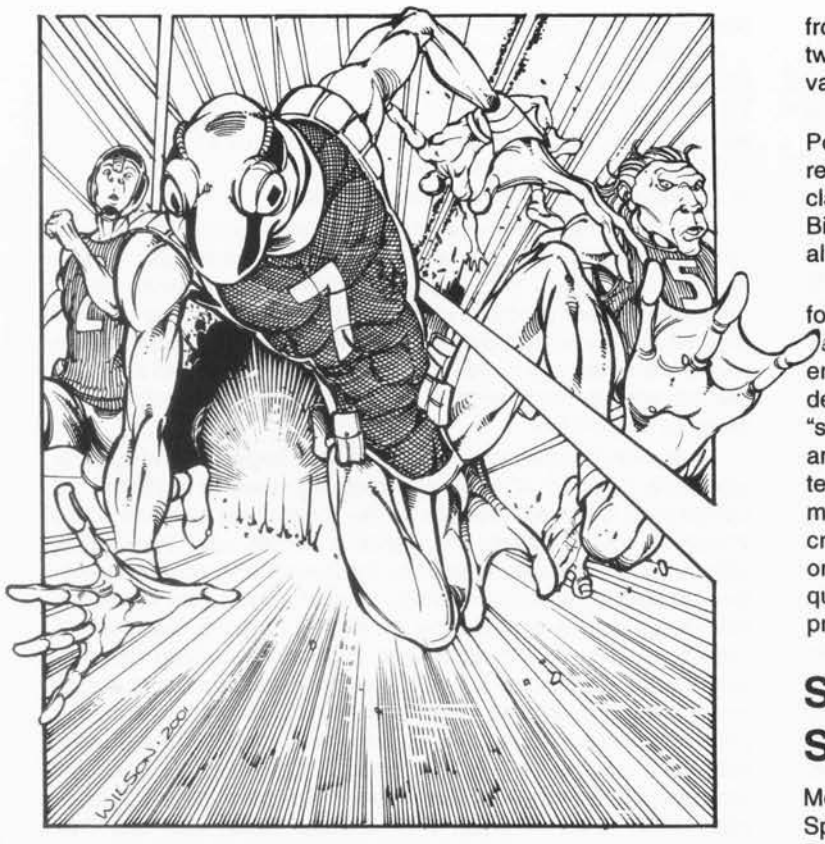
In the alternative, select the Physical or Special Training Power Category from HU2. Or may be a Super-Soldier (see Experiment Power Category) or Bionic or Robot Category.

Earthlings without space training can be "terrestrial" Mercenaries and get this same Skill Program minus obvious space combat skills. High-tech mercs and super hero types may have W.P. Energy Pistol and Energy Rifle.

Professional Combat Athlete Skill Program

Boxing
Wrestling
Gymnastics or Acrobatics (+5% for either)
Hand to Hand: Expert or Martial Arts
Recognize Weapon Quality (+20%)
Depressurization Training
Zero Gravity Combat: Elite
Pilot Jet Pack (+20%) or Pilot Hover Cycle (+15%)
W.P. Knife
W.P. Blunt

The professional combat athlete is a well trained and hearty person who has devoted his career to the pursuit of athletic excellence in the most dangerous sports the galaxy has to offer.



Many civilized people consider such games to be barbaric and primitive, yet these glitzy and glamourous, mainstream gladiatorial contests are hugely popular. Unlike the popular mock combat television programs found on Earth, many of those in the galactic community are the real thing. Technology may redesign weapons for stun, while armor and bionics prevent the loss of limbs, but the damage inflicted and blood spilled is real. In those arenas that disregard galactic standards for blood sports, there are no safety measures. The weaponry is battlefield grade, and combat is to the death.

The professional combat athletes consider themselves to be pure warriors specializing in close quarter and melee combat. Many are rabid, bloodthirsty monsters who chose the arena and blood sports as their medium for war, brutality and conquest. Others see themselves as self-styled heroes or champions who fight for fame and fortune. Others are combat junkies who live for danger and conflict. Still others, psychopaths one step shy of being mass murderers (after all, they are literally, licensed to kill). Whatever brings out these combat athletes' savage nature, they live to fight, maim and stop (if not kill) their opponents. As brutal and horrible as it can be to watch, there is also something undeniably alluring and majestic about these combatants.

Anyone wishing to play another kind of athlete (non-combat) should simply drop the more combat oriented skills and replace them with general physical skills. The actual income and resources of these athletes is totally up to the G.M., but should be on par with top entertainers and number into the millions annually. Not to mention expenses and access to spacecraft, first-class transportation, gifts and equipment. The higher the character's level of experience, the bigger his name and the more he makes.

Note that the vast majority of these combat athletes are melee and unarmed fighters. However, there are combat athletes who train in ranged weapons in order to participate in the various types of firefights and "war games" in the galaxy. Think professional paint ball only with real bullets and lasers!

Professional Occupation. If this is the character's occupation, in addition to this skill program, select four additional skills from Weapon Proficiencies (any), three from Physical or Rogue, two from Espionage or Military, three from Pilot: Basic or Advanced all at +10%), and six Secondary Skills.

In the alternative, select the Physical or Special Training Power Category from HU2. Or may have super abilities as the result of an Experiment or Mutation. Super beings are an entire class of combat athletes in and of themselves and may include Bionics, Robots, or Magic participants (monsters and strange aliens too).

On Earth. Combat Athletes of this type are not commonly found on Earth, because gladiatorial combat and fights to the death are illegal. At least in the mainstream. Illegal matches operating in the underground and often orchestrated by criminal underworld organizations, are growing in popularity. Many pit "super-freaks" against each other, particularly mutant animals and other mutant outcasts. However, while some of these contestants on these illegal fight circuits may be free independents, most will be "owned" (or otherwise manipulated by lowlifes and criminals) and are forced to fight (or suffer the consequences – or more likely than not, their families will suffer the consequences). Mutant animals (and aliens) are considered private property!

Spacecraft Mechanic Skill Program

Mechanical Engineer (+20%)
Spacecraft Mechanics (Select 4 types; +20%)
Basic Electronics (+15%) or Electrical Engineer (no bonus)
Advanced Mathematics (+25%)
Astrophysics (+15%)
Chemistry (+15%) or Hover Vehicle Mechanics (+15%)
Computer Operation (+20%)
Computer Repair (+20%)
Pilot: Civilian Spacecraft (Small and Medium; +5%) or Field Armorer (+15%)

More than anything, galactic travelers rely on spacecraft and Faster Than Light (FTL) transportation. Without advanced transportation technology, entities like the Atorian Empire would simply cease to exist, interstellar trade would vanish, and the exchange of cultures and technology would screech to a halt. The unsung heroes of the galaxy, then, are the "space monkeys" who specialize in servicing and repairing spacecraft. Without the hard work of such folk, traveling the stars would not be possible.

Many advanced spacecraft have automated service units installed onboard, which would seem to make spacecraft mechanics obsolete. However, such is not the case. Over the years, wise space travelers have learned that while automated mechanic modules are a great *help*, they are no substitute for the ingenuity, tenacity and experience of sentient beings. Moreover, automated systems can be destroyed or sabotaged, malfunction or break down (all machines do), and themselves require a repairman. When one is crossing the immense void between planets and stars, being able to fix any kind of mechanical problem on the ship can spell the difference between life and death. Therefore, despite whatever self-repair units might be on board, it is standard practice to have at least one live mechanic on board as well. For larger ships, sometimes an entire crew of space monkeys is kept on hand in case of emergencies.

With such a sure bet for employment, this trade has become governed by a multitude of guilds and unions. The strength of such organizations varies from system to system, but wherever there is a noteworthy amount of space travel, there is bound to be some kind of body that administrates all mechanical work in the area. As with other guilds and unions, those who work an area without joining are harassed and threatened (perhaps even harmed) until they leave the area, cease practicing their trade, or simply join the organization. For the most part, however, guilds and unions appeal to those mechanics who choose to work from a permanent location. Mechanics who routinely ship out can easily get away without joining any guild whatsoever.

Professional Occupation. If this is the character's occupation, in addition to this skill program, select four additional skills from Mechanical or Electronics (any), three from Technical or Science, two from Pilot: Basic or Communications all at +10%), and five Secondary Skills.

Earthlings can have this basic skill package but all bonuses are half and the character lacks any spaceship piloting skill. Likewise, there is likely to be a -20% to -40% skill penalty when working on advanced, alien vehicles and machines. However, it makes a great assistant to an alien mechanic, and those penalties are reduced by half if the character spends a few years working on such advanced machines and/or trained by an alien mechanic.

Spacecraft Pilot Skill Program

Laser Communications (+20%)
Computer Operation (+20%)
Navigation: Space (+20%)
Navigation: Faster Than Light (+20%)
Operate Sensory Systems (+20%)
Read Sensory Equipment (+20%)
Advanced Mathematics (+20%)
Pilot: Small Civilian Spacecraft (+25%)
Pilot: Large Civilian Spacecraft (25%)
Pilot: Civilian or Military Spacecraft of choice (+20%)

Space Pilots are the cowboys and yahoos of the galaxy. Most of them are not adrenaline junkies and daredevils per se, but they do take delight in the thrill of flight, space travel and exploration, and can be enthusiastic about sharing it. Pilots can have military or civilian backgrounds or be privately educated in traveling the space ways. If one can not afford an academy or college, serving as a crew member on a spacecraft can often be a way to eventually earn pilot's training as a civilian. Military training is almost always in small combat craft (fighters and small transports), but may include large vessels. While other characters can certainly pick up a spaceship piloting skill or two from private tutelage.

In general, spacecraft pilots have a fraternal outlook toward their fellow pilots. This is due to the extensive training required to pilot spacecraft. Unlike the hot-dog fighter pilot types who tend to have big egos and hot tempers, spacecraft pilots tend to be more cool, calm and collected with practiced patience and an acceptance of flight protocol and bureaucracy. The spacecraft pilot can be just as gung-ho as any fighter pilot, but they tend to have a responsible streak in regards to their crew and passengers or cargo. Thus, they will almost always weigh the risk against the danger before acting.

The staggering costs of acquiring and owning a spacecraft mean most pilots do not own the ships they command (unless they are of the Hardware, Robotics, or Secret Operative power categories – see the Spacecraft Construction Rules for details). It is more likely that they pilot the vehicle for an employer who owns the spacecraft or that they are part of a group which owns it. The group can be the other player characters or any number of organizations. The exact circumstances are left completely to the G.M. and player playing the pilot character. Should the craft belong to an organization, random determination of organizational ties is an interesting option for the G.M. Simply use the Status With Sponsoring Organization table on page 127 of **HU2**. Capturing or salvaging a spacecraft is also an option for player characters as a way to acquire their own ship (see the Spacecraft Construction Rules for more details).

Professional Occupation. If this is the character's occupation, in addition to this skill program, select four other Pilot: Advanced skills, three Pilot: Basic skills, two from Science or Communications (any), three from Technical or Domestic, all at 10%, and five Secondary Skills.

Earthlings can have this basic skill package ONLY if trained by aliens! The character may have been rescued or adopted by aliens. All spacecraft piloting bonuses are half those listed. Sorry, Earthlings just don't have the technology or experience traveling in space or flying advanced spaceships.

Space Fighter Pilot Skill Program

Laser Communications (+20%)
Computer Operation (+15%)
Navigation: Space (+15%)
Read Sensory Equipment (+20%)
Weapon Systems (+20%)
Pilot: Small Military Spacecraft/Fighter (+30%)
Military Hyperthrusters (+20%)
Wilderness Survival (+15%)
Depressurization Training
W.P. Energy Pistol

Unlike the Spacecraft Pilot who can fly just about anything, the Fighter Pilot is more specialized, preferring to live in the fast lane outmaneuvering missiles and dodging anti-spacecraft fire. The thrill of racing along in a small spaceship able to corner on the proverbial dime is only one of the traits that makes for a good Fighter Pilot. A total disregard for danger and risk helps, too. Fighter craft and combat craft are their prime vehicles of choice, but their skills cover atmospheric fighters as well as spacecraft. Even though trans-atmospheric fighters are rare, dual duty atmospheric and zero-gravity skills are quite common among these pilots. Such versatility not only ensures the demand for the pilots' skill, but is often the direct result of the military training often necessary to learn the combat skills so vital to these hot dogs. That

same military training also accounts for their survival skills in both space and terrestrial wildernesses. A downed pilot is helpless and can often rely only on himself.

Certainly not all Fighter Pilots have to be military or of former military background, but most (65%) are, for that *is* the easiest way to get such training. On the streets (so to speak), picking up these skills is likely to involve some kind of tutoring or mentorship — probably under a mercenary or former military pilot, or space police. A security organization like the TMC and the TGE are two avenues to becoming a Fighter Pilot. So is membership in a criminal organization such as smugglers, space pirates, or Raiding Clans.

Professional Occupation. If this is the character's occupation, in addition to this skill program, select three other Pilot: Advanced skills, three Pilot: Basic skills, three Military or Rogue skills, all at +10%, plus three W.P. skills (any) or Physical skills and six Secondary Skills.

Earthlings can have this basic skill package with spacecraft and space skills ONLY if trained by aliens, same as Spacecraft Pilot above. Or substitute spacecraft with conventional military aircraft (may include jet packs). Sorry, Earthlings just don't have the technology or experience traveling in space or flying advanced spaceships.

Space Pirate Skill Program

Find Contraband & Illegal Weapons (+20%)
Safecracking (+15%) or Forgery (+10%)
Detect Concealment (+20%) or Basic Electronics (+20%)
Intelligence (specialized in casing and assessing targets, +15%)
One Rogue Skill of choice (+20%)
Pilot Advanced: Military Spacecraft (small; +15%) or Jet Pack (+20%)
Zero Gravity Combat: Basic
Hand to Hand: Basic
W.P. Energy Pistol
W.P. Energy Rifle or Heavy Energy Weapons

Pirates are galactic outlaws who commit robberies in deep space. Usually, they disable and board vessels in order to strip them (and their crew) of any valuables. Sometimes, the spacecraft itself, its crew and their cargo are all considered booty. The vessel is sold or impressed into service as part of the pirate fleet, the cargo liquidated, and the crew are ransomed or sold as slaves (though some may be kept as slaves). They also engage in smuggling, buying and selling contraband, mugging, kidnaping and other types of extortion. Less commonly, pirates launch raids upon space stations, military outposts, and inhabited moons or colonies in a bold move to score tons of plunder. However, their main targets are other spacecraft, particularly passenger and cargo ships.

Attacking and robbing spacecraft is needed to maintain the pirate lifestyle. Unlike "raiders" who wantonly kill and attack in a military style raid, most pirates prefer ambush and surprise (sometimes infiltrating the target vessel as one or more of the passengers or crew), and engage in armed robbery and hijacking. Most prefer using intimidation and a "show" of force rather than automatically launch into battle. Likewise, they tend to attack individual ships and small convoys of 3-8 cargo vessels rather than a sweeping invasion or surgical strike. However, they are violent cutthroats who are not afraid to kill, especially if it means revenge or to save their own necks. Like the bank robbers and train bandits of the American Old West, pirates wander the space ways hitting their targets and move on (at least for a while) to greener pastures when things get too hot in one particular sector of space. This makes pirates nomadic, with numerous favorite haunts and hideouts scattered across the galaxy. Likewise, they rotate their areas of operations to not only avoid capture, but to ensure that they do not scare the more profitable targets away from their zones of operation. Too many armed robberies and hijackings will scare potential victims away. The

most successful brigands are not necessarily the smartest or the strongest, but the most practical.

Regardless of their tactics, cunning or ruthlessness, with all of the trade moving through the galaxy's space ways, there are more than enough opportunities for pirates to earn a living hijacking cargo and victimizing spaceships. A large enough cargo ship can hold thousands of tons of cargo, but pirates only need a small fraction of that to earn themselves a substantial profit, especially considering they did not have to pay for the cargo in the first place. It is also rare when a pirate band can take the time to get away with more than half of a huge cargo load. Stealing the personal effects of the passengers, especially on a full-sized luxury liner, can also turn a good profit, and if the victims are not seriously harmed, the pirates responsible are low priority for the authorities. Pirates are by and large, thieves and do not all fit the vile, murderous image given to them by the holo-video industry.

It should be noted that anyone can prepare themselves adequately to raid spacecraft in open space and profit from the plunder without taking this skill program. Spies, thieves, fighter pilots, mercenary soldiers, cyborgs, robots, adventurers, Cyberjackers, Wizards and super beings can all find a role for themselves among a pirate crew.

Professional Occupation. If this is the character's occupation, in addition to this skill program, select four Rogue skills (+10%), three Espionage or Military, and two Pilot: Basic skills or one Advanced, all at +5% (unless noted otherwise), plus three W.P. skills (any) or Physical skills, and six Secondary Skills.

Earthlings can become "space" pirates, but have to get into space somehow and be accepted by a pirate crew. A group of characters can become space pirates or raiders provided they have or acquire space travel capabilities. Earthlings do NOT get any Pilot Spacecraft skills (may substitute for a conventional vehicle) nor Zero Gravity Combat.

Special Space Infantry Soldier Skill Program

Military Etiquette (+20%)
Detect Ambush (+10%)
Climbing (+10%)
Depressurization Training
Pilot: Jet Pack (+20%) or Pilot Robot (typically exoskeleton/power armor)
Zero Gravity Combat: Elite
Hand to Hand: Martial Arts
W.P. Energy Rifle
W.P. Energy Pistol or W.P. Heavy Energy Weapons
W.P. Knife or W.P. Blunt

Special Space Infantry Soldiers (SSIS) typically serve a planet or interstellar government who has extensive space operations, patrols the space ways or maintains colonies on other planets. Trained in the traditional infantry skills of personal assault weapons, battle tactics, hand to hand combat, and tougher-than-nails attitude, the SSIS also receives zero gravity training and close quarters instruction. This combination of skills forms the soldier into an infantry and frontal assault warrior who can perform his duties on terrestrial battlefields, in weightless combat, or within the close quarters of a space vessel or station.

The SSIS usually operate independently of the regular army and special forces, although they may coordinate efforts with any branch of the military. SSIS units are not exclusive to the military, however. The *Tagoniglomerate* (TGE), *Thissera-Micean Cooperative* (TMC) and numerous other corporate and non-military organizations have similar types of operatives. SSIS units typically operate on a squad to platoon level, engaging in surgical strikes, rescue missions, deep insertion intelligence, reconnaissance and special operations. Most of these soldiers, regardless of employers, have the same duties: Security, defense and if necessary, reclamation of the employer's property and personnel. Some criminal organizations, primarily highly organized pirate enclaves, train SSIS type operatives for raiding, boarding, infiltration and prison breaks. Such dedicated groups strike hard and fast with military precision and lethality. In areas where piracy or raiders are rampant, the local authorities may enlist SSIS teams to counter the brigands, and bring them to justice.

Professional Occupation. If this is the character's occupation, in addition to the skill program, select four Military Skills (+15%), four Espionage or Rogue skills, and two Pilot: Basic skills or one Advanced, all at +10% unless noted otherwise, plus three W.P. skills (any), three Physical or Communications skills, and four Secondary Skills.

Earthlings: Not available.

Technical Scientist Skill Program

Computer Operation (+20%)
Basic Electronics (+15%) or Field Armorer (+10%)
Research (+20%)
Laser Communications (+20%) or Computer Programming (+20%)
Paramedic (+20%) or Xeno-Biology (+15%)
Read Sensory Equipment (+20%)
Mathematics: Basic & Advanced (+30%)
Navigation (+20%) or Electronic Warfare (+10%)
Two Science or Communication Skills of choice (+15% each)

The technical scientist is one of the geniuses who helps make the galaxy go around. Steeped in education and knowledge, they are the inventors, designers, and fine tuners of technology and explorers of the universe. Whether their specialty is computers, electronics, biology or whatever, these people have an insatiable curiosity and a love for knowledge.

Many scientists get bored with the laboratories or crave discovery and thus find themselves traveling the galaxy. Regardless

of what brings them out and about, the tech scientist can be an invaluable asset to a group. They provide technical know-how and repair abilities, as well as being fonts of knowledge in several diverse areas. Those who lack the taste for adventure often have little difficulty finding a position at any number of commercial, governmental or military laboratories and think tanks throughout the galaxy. Numerous criminal, pirate, and other outlaw organizations make use of these top minds (often paying them handsomely for their services). With a Technical Scientist on staff, a group can gain a great deal of specialized knowledge without having to go through a Cyberjacker or Information Broker. And unlike those last two services, hiring a scientist can be kept a secret. Although Cyberjackers and Information Brokers are supposed to keep their clients confidential, there is always the chance that they might tell, and they will always be tempted to exploit any information or discoveries that are made. Scientists are generally more proprietary and discreet.

Professional Occupation. In addition to the skill program, select four other Science skills (all +20%), two Communications or Medical skills, three Technical or Wilderness, and two Mechanical or Electrical skills, all at +15%, plus two W.P. or Physical skills and six Secondary Skills.

Earthlings can have this basic skill package but get no skill bonuses when working on advanced alien technology.

TGE Special Operative Skill Program

Intelligence (+20%)
Prowl (+15%)
Escape Artist (+20%) or Demolitions (+20%)
Tracking (+15%) or Disguise (+20%)
Surveillance Systems (+20%) or Interrogation (+15%)
Law (General; +15%)
Zero Gravity Combat: Basic
Pilot: Small Military Spacecraft (+15%)
W.P. One melee weapon of choice.
W.P. One energy weapon of choice.
Hand to Hand: Martial Arts (or Assassin if an evil alignment)

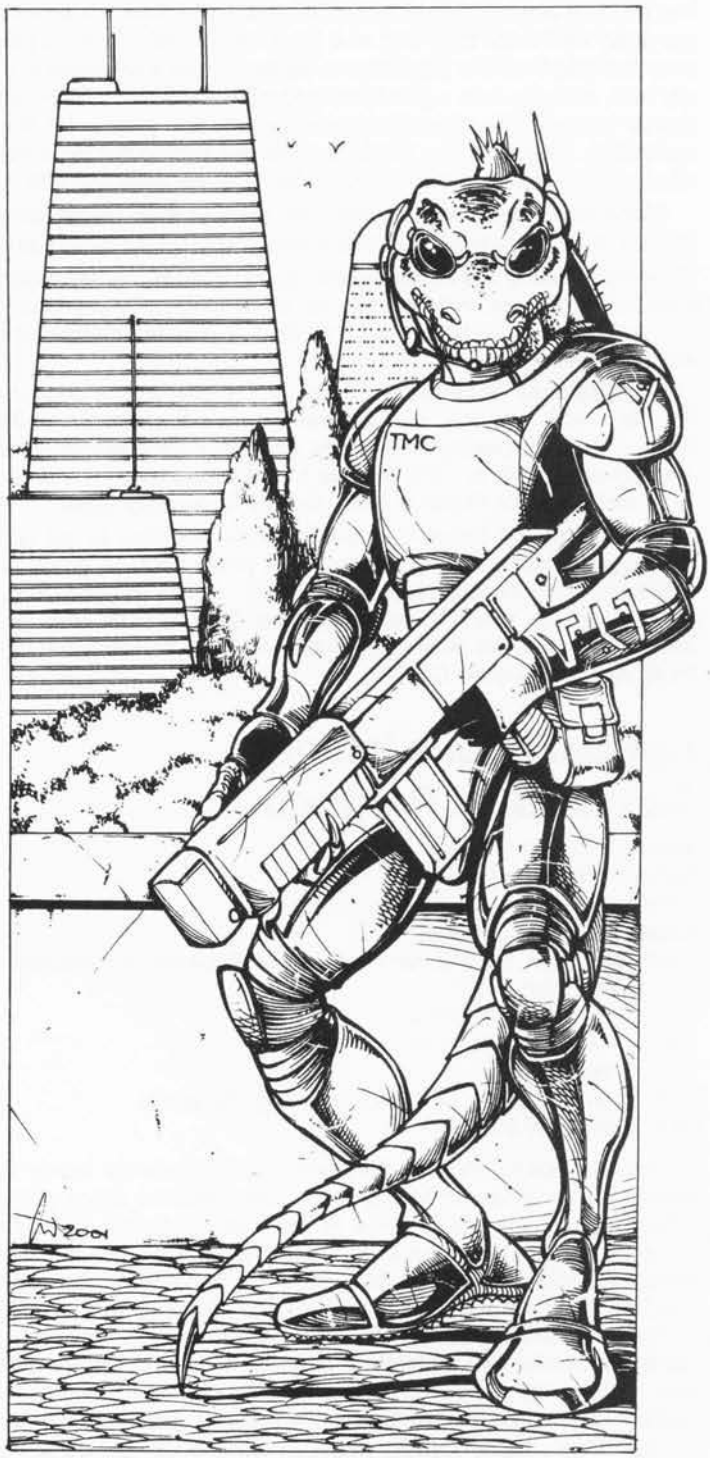
The Tagoniglomerate (TGE) special operative is a highly trained professional very similar to a covert government agent. They are very slick, refined, and resourceful. They see themselves as elitists and their high salaries allow them to dress sharp and be flamboyant. Style seems to come with the package, but it is the cover that allows the book to be misjudged, for the TGE special operative is a deadly and effective spy, investigator and man-hunter with access to some of the best equipment and schooling in the galaxy. These operatives are much more than standard security officers or grunts, and know how to finesse most situations and ferret out what they need.

The main forte of the special operative is spying and "acquiring" targets (i.e. a particular fugitive, crook or individual). They are trained to carry out espionage and infiltration operations, capture and interrogate, and counter terrorists, enemy spies and pirates. Whether undermining the enemy, sabotaging a competitor's latest top secret project or simply stealing the plans for it, the TGE special operative can always be counted on to get the job done quickly and cleanly. Stealth and subversion are the main weapons of these agents, but they can also be deadly fighters when the time comes to resort to violence. A special operative in combat is always as quick, clean, and efficient as he is with his other work.

Note: The skill package presented in this program can be used for any specialized government agent, spy or industrial espionage agent/mercenary used by some private corporations. Super abilities, psionic powers or mastery of magic are a plus and give the character the chance to earn a spot among the best of the best.

Professional Occupation. In addition to the skill program, select three Espionage skills (+15%), two Military or Rogue skills (+15%), three Communications or Technical skills (+10%), three Physical or Wilderness skills (+5%), two W.P. and six Secondary Skills.

Earthlings can have this skill package too, only it counts as two Earth programs and they don't get any spacecraft piloting skills.



TMC Officer Skill Program

Criminal Science (+20%, but does not include Forensic Medicine)
Law: General (+30%)
Find Contraband and Illegal Weapons (+15%)
Surveillance Systems (+20%) or Interrogation (+15%)

Intelligence (+15%)
Streetwise (+12%) or Anthropology (+20%)
Pilot: Jet Pack (+15%)
Pilot: Small Military Spacecraft (+20%)
Zero Gravity Combat: Elite
Hand to Hand: Expert
W.P. Energy Pistol
W.P. Energy Rifle

The galaxy is certainly filled with many less-than-savory characters whose general ill intentions or selfishness threaten the galactic citizens. Although numerous superheroes, vigilantes and mercenaries for hire make it their job to police the galaxy and keep the peace, there are hardly enough to help keep the peace *everywhere*. Enter the *Thissera-Micean Cooperative (TMC)*, policemen of the Milky Way galaxy. Noble individuals dedicated to enforcing the law and protecting the civilian population from such social misanthropes and criminal predators. The TMC is the largest professional policing organization in the galaxy.

The TMC Officer is a highly trained civilian soldier performing the duties of an interstellar policeman, using many of the protocols common to most police agencies combined with the strategies and tactics of military Special Forces. They are skilled in all kinds of combat and investigative techniques, and because their jurisdiction is primarily restricted to outer space, they also have the skills needed to deal with that demanding environment. Jet pack and zero gravity skills go hand in hand with weapon skills and enemy intelligence processing for these lawmen.

Note: See the section on the TMC elsewhere in this book for complete details on the organization and its many special divisions. Although labeled as the TMC officer, this skill program can be used for any galactic law enforcement characters, only reduce the bonuses given to the TMC by -5%.

Professional Occupation. In addition to the skill program, select two Espionage or Rogue skills (+10%), two Military or Physical (+5%), three Communications or Technical (+15%), three Piloting skills (+10%; Basic or Advanced) and two Physical or Wilderness skills (+5%), as well as five Secondary Skills.

Earthlings can have this skill package too, only it counts as two Earth programs and they don't get any spacecraft piloting skills and Zero Gravity Combat is "Basic" for them.

Weapons Technician Skill Program

Computer Operation (+20%)
Read Sensory Equipment (+20%)
Electronic Warfare (+15%)
Weapons Engineer (+20%)
Electrical Engineer (+15%)
Basic Mechanics (+15%) or Field Armorer (+10%)
Recognize Weapon Quality (+20%) or Computer Repair (+20%)
W.P. Energy Rifle or W.P. Heavy Energy Weapons
W.P.: One of choice (any) or Demolitions and Demolitions Disposal (+20%)

The weapons technician, like the spacecraft mechanic, has become a trade that's in high demand. They are crucial for military and police operations, interstellar travel, and exploration, as well as the defense of space routes, space stations and colonies in remote areas. Mercenaries, pirates, raiders and criminal operations also have a need for Weapons Technicians.

Weapons Techs are the professionals who keep a spaceship's guns firing. They clean, maintain, repair, and modify weapons and related combat and computer systems. Weapons Technicians generally do not act as gunners, but can do so in a pinch. However, they are more like specialized mechanics behind the scenes, rather than active soldiers/gunners. Their services demand a fairly steep price, and there are a good number of freelancers for hire willing to travel the galaxy if the price is right. If there is a down side, it's that danger and war is where the work is found, but, for those with a taste for travel, adventure and danger, that's part of the glamour. Besides, of all the military professions in the galaxy, this is one of the few where an individual stands a decent chance of growing old.

Professional Occupation. In addition to the skill program, select two Mechanical and two Electrical skills (+10%), two Military or Physical (+5%), four Communications or Technical (+10%), one Piloting skill (+10%; Basic or Advanced) and two Physical or W.P. skills, as well as five Secondary Skills.

Earthlings can have this skill package too, only it counts as two Earth programs and they are -40% when working on advanced alien technology (no penalty and half their normal bonus when "assisting" an alien expert).

Xeno-Biologist Skill Program

Xeno-Biology (+20%)
Xeno-Botany (+20%)
Anthropology: Alien (+15%)
Biology (own race; +25%)
Paramedic (+20%) or Medical Doctor (+5%)
Pathology (+10%)
Computer Operation (+20%)
Chemistry (+20%)
Chemistry: Analytical (+15%)
Basic and Advanced Mathematics (+25%)

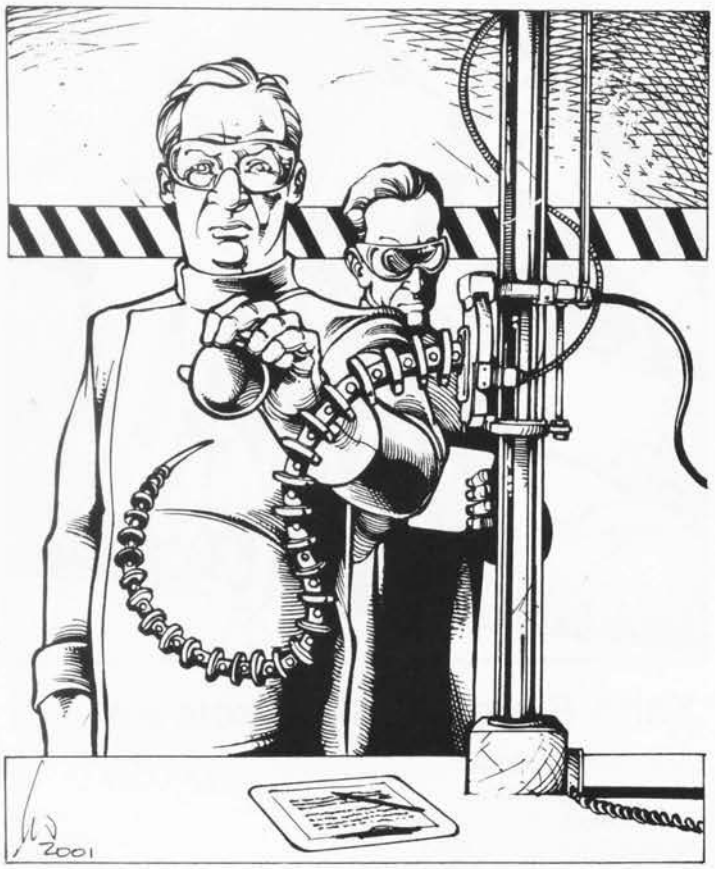
The Xeno-Biologist is a scientist who specializes in the alien physiology — i.e. how the bodies of different alien life forms work and how they can be healed. This includes a sweeping medical knowledge, pathology and chemistry. The character can usually assess injury or illness and use paramedic skills to offer some relief or to stabilize the condition if not heal the patient.With so many different physiologies, aliens are often hard-pressed to find

medical professionals able to address their needs. That is where Xeno-Biologists come in. Specially trained in the differences and similarities among alien physiologies, xeno-biologists are the very coveted few who can provide medical treatment to just about anybody. Wherever they go, their skills are in demand. As a result, many Xeno-Biologists get into this line of work just for the money. Those who score a job in a major interstellar population center or multi-racial space station, space port or colony can expect to earn big money; many retire or work part-time after only 10 years. Others are explorers who get paid considerably less to work at remote outposts or in the field studying new alien life forms or as missionaries who ply their trade in remote regions and wherever they are needed for next to nothing.

Due to the prerequisites of most medical skills, this is not a skill program one takes lightly. Those who study in this field often make it their primary field of training.

Professional Occupation. In addition to the skill program, select three other Science skills (+20%), three Technical or Communications skills (+15%), three Domestic or Wilderness (+10), and two Physical or W.P. skills, as well as five Secondary Skills.

Earthlings can NOT have this skill program or occupation. Sorry.



Xeno-Robotics Skill Program

Alien Technology Mechanics (+15%)
Robot Mechanics (+20%)
Robot Electronics (+20%)
Mechanical Engineer (+15%)
Computer Operation (+20%)
Computer Programming (+20%)
Computer Repair (+15%) or Field Armorer (+10%)
Basic & Advanced Math (+20%)

Note: The -40% penalty for robot construction and repair does *not* apply to Alien or galactic Xeno-Roboticists, since such technology is much more mundane to them.

Xeno-Roboticists are technicians whose niche is handling the incompatibilities between the various brands of technology developed across the galaxy. Suppose an adventurer procures an exoskeleton combat suit on one world, gets it damaged on another, buys spare parts on a third world, and tries getting it fixed on a fourth world. The most likely result is that all the parts and components are likely to be incompatible with each other — at least on the surface. Often there minor modifications and little things that can be tweaked to get it all to work, provided one knows all the little compatibility secrets. And that's what the Xeno-Roboticist knows, enabling him to work on, modify and combine numerous different systems and manufacturers, at least when it comes to robots, power armor and computers. The character can also try to work on non-robot machines, cybernetics and systems, but does so without benefit of his normal bonuses.

Xeno-Roboticists do not find work as easily as spacecraft mechanics or Xeno-Biologists, but they are in demand, and their skills often come in handy, especially to adventurers, mercenaries, explorers, criminals and crime-fighters.

Professional Occupation. In addition to the skill program, select two other Mechanical skills (+15%), two Science or Electrical skills (+5%), four Technical or Communications skills (+10%), two Domestic or Physical skills and two W.P. skills (any), as well as five Secondary Skills.

Earthlings can NOT have this skill program or occupation. Sorry.

Notes on Existing Skills

Communications: Laser: Nearly all spacecraft communications are *laser* based. Only the shortest of communication ranges use radio or satellite relays, thus this skill will be very common among communications personnel aboard a spacecraft.

Communications: Radio: Satellite: Satellites are commonly used by larger spacecraft as auxiliary systems. In general, this skill is only applicable near a planet where communication satellites are in place. In deep space, this skill becomes, for the most part, inapplicable. This skill is required to properly upload and download commands and information to and from the satellite. If someone in the crew does not have this skill, the satellite must be towed in and reprogrammed or its information downloaded manually (i.e., remove the satellite's memory card/chip and hardwire it to the ship's computers). Otherwise, signals can be properly sent and received to remote control and send/receive data.

Medicine & Healing: Throughout much of the galaxy, medical care is considerably more advanced and efficient than what is available on Earth. In game terms, this means that in a galactic campaign, recovery rates from injuries are increased and the chances of scarring or permanent damage are reduced. Add +10% to all coma recovery rolls (in addition to any power category and attribute bonuses), Hit Points and S.D.C. return under proper care at *twice* their usual rate, and if using the optional damage tables from pages 19-20 of *Heroes Unlimited™, Second Edition*, subtract -10% from any rolls made on the table (durations of penalties from these tables are also reduced by 25%). These are just for average, advanced facilities and health care, however. Especially good treatment might be several times better, and capable of bringing a gravely wounded or ill person back to full health in a matter of days, if not a few hours. Ultimately, the upper limit to which galactic medical technology can salvage the stricken is left to the G.M. On the other hand, crude, simple, lackluster or underworld facilities may only provide medical treatment equal to or worse than what one would find on Earth.

Pilot Related: Read (and "Operate") Sensory Equipment: The *Read Sensory Equipment* skill includes the operation of sensor equipment, optic systems, motion detectors, geologic sen-

sors, and computers, and includes advanced systems on spacecraft such as radio telescopes, radiation interpolating scanners, FTL communication systems, and a host of other sensor, communication and scanning systems aboard spacecraft and space stations.

Galactic Skills by Category

The following are skill additions suitable for a galactic campaign or similar high-tech setting (including *Phase World®* and *Skraypers™*). Many are not absolutely necessary for game play, and probably not available to Earthlings, superheroes or characters from an Earth-like tech-level. They apply only to advanced, space faring characters. At end of the list is a note on which skills can be taken as secondary skills.

Electrical
Cyberjacking Construction and Repair

Mechanical
Alien Technology Mechanics
* Hover Vehicle Mechanics
Personal Propulsion Mechanics
Spacecraft Mechanics (See skill for types)

Medical
Cybernetics M.D.

Military
Cyberjacking
Electronic Warfare

Physical
* Depressurization Training
+ Zero Gravity Combat: Basic
Zero Gravity Combat: Elite

Pilot, Basic
* Hover Car
* Hover Cycle
* Hover Truck
+ Personal Anti-Gravity Transportation

Pilot, Advanced
+ Civilian Spacecraft: Large
+ Civilian Spacecraft: Medium
+ Civilian Spacecraft: Small
* Hyperthrusters (Civlian)
Military: Hyperthrusters
Military Spacecraft: Large
Military Spacecraft: Medium
Military Spacecraft: Small
* Pilot Robot
+ Robot Combat

Pilot Related
Command Structure Etiquette
* Navigation: Space
Navigation: Faster Than Light

Rogue
Cyberjacking

Science
Anthropology: Alien
Xeno-Biology
Xeno-Botany

Technical
Cyberjacking
+ Languages
+ Lore: Alien

* May be taken as a Secondary skill by Earthlings in an Earth-based campaign.

+ May be taken as a Secondary skill by (aliens) space farers in galactic campaigns only.

Electrical

Cyberjacking Construction and Repair: This specialized skill concentrates on the repair, construction and modification of Cyberjacking hardware. This skill may also be used to handle minor bugs and glitches with Cyberjacking software. Anything more serious than that must be handled by the Computer Programming skill. Like the Robot Electronics skill, the Cyberjacking Construction and Repair skill is based on relatively normal, though high-tech, electronic and computer components that can be worked on with other electronic skills, but with a great deal of difficulty (-20% with Electrical Engineer or Computer Repair and -30% with Basic Electronics; other penalties might apply as detailed in the Hardware section of **HU2**). G.M.s should keep construction times in mind and allow for cost reductions from the listed prices (normally only 25% to 50% of cost) when a character uses this skill for construction or upgrades. **Prerequisites:** Electrical Engineer and Advanced Math. **Base Skill:** 30%+5% per level of experience.

Mechanical

Alien Technology Mechanics: This is a generic mechanical skill that would apply separately to any given alien type of propulsion or mechanical technology not already covered by another skill. The abilities of the skill would be the same as other specific mechanical skills (maintain, repair, rebuild, and modify that type of vehicle). Available skills can include, but certainly are not limited to: anti-gravity vehicles (excepting spacecraft), crystal energy mechanics, magic driven vehicles, bio-energy vehicles, and so on. As usual, each of these alien technologies would have a -40% penalty to be worked on without the appropriate skill. **Base Skill:** 20%+5% per level.

Hover Vehicle Mechanics: Similar to the Automotive Mechanics skill, but specifically involves the repair of hover vehicles of all types, including those that use jets of air, directed thrusters, or fans. This skill can be used to maintain, repair, rebuild, and modify these types of vehicles. Anything from a hover cycle to a multi-ton transport hover truck can be worked on. The skill includes body work and can be used to repair conventional combustion engine vehicles, but at a penalty of -30%. **Base Skill:** 25%+5% per level.

Personal Propulsion Mechanics: This skill covers the repair, maintenance and modification of jet packs and similar small propulsion units designed for flight, including the flight systems of power armors and human-sized robots. Personal anti-gravity devices and any other small flight systems can also be worked on, but with a penalty of -25%. Note that this is a specialized skill and any mechanical engineer or robot mechanic can work on these same systems, but they apply the normal -10% penalty for using an alternate skill (see the Hardware section of **HU2** for full details). **Base Skill:** 25%+5% per level.

Spacecraft Mechanics: The ability to maintain, repair, rebuild, and modify spacecraft. The drives, engines and propulsion systems of spacecraft operate on different principles from one another, and may have an impact on the overall design of a spacecraft. Thus, this skill covers two classes of drives each time it is selected. This means a character might only have Spacecraft Mechanics: Nuclear Drives and Anti-Matter, and while skilled in the overall needs of these drives, he does not know other systems. This character can certainly work on other drive types, but does so at -25%.

This skill does not cover upgrading computer or electronic systems (Electrical Engineer is needed for that) or adding/modifying weapon systems (requires Weapons Engineer or Armorer), but existing systems and weapons can be moved, removed, or remounted with this skill. Satellites and space stations also fall under the domain of this skill and can be worked on without penalty by any of the different versions of the skill, unless they are outfitted with drives, in which case the appropriate skill would be required and the usual penalties would apply to all others. Extensive work on larger craft will require a work crew or repair robots and facilities (at the G.M.'s discretion). **Base Skill:** 30%+5% per level.

Medical

Cybernetics M.D.: A deep understanding of cybernetics and bionics as they relate to the integration with flesh and blood bod-

ies. This Doctor can install, remove, repair and upgrade bionics systems. This skill is to bionics what the Robot Mechanics and Robot Electronics skills are to robotics. **Base Skill:** 60/50%+5% per level.

Prerequisites: If a character wants the Cybernetics M.D. skill, he must also select a Medical Program and qualify as an M.D. (Masters or Ph. D.) and know Biology, Pathology, Chemistry, Basic or Advanced Mathematics, and Literacy.

Note: Since so many galactic citizens have radically different physiologies from each other, medical practitioners may find it difficult to treat aliens that are dramatically different than they are. Any medical skill rolls upon alien patients will be at -40% unless the doctor also has the Xeno Biology skill, in which case the negative modifier is only -10%.

Military

Cyberjacking: Cyberjacking is the technology that allows direct interface between the human/alien mind and a computer system via bionic implants. Because Cyberjacking is a direct interface process, no programming or computer operation skills are provided by the Cyberjacking skill. It only allows the character to interact with computers directly through one's mind. Thus, a character could turn on a computer and plug into it, but he would not be able to use the computer. To do that, the Computer Operation and Computer Programming skills would be necessary. For more information on Cyberjacking, please refer to the Cyberjacking section later in this sourcebook. **Base Skill:** 25%+5% per level.

Electronic Warfare: Modern warfare is not an open battlefield with troops gunning away at each other. It is an electronic and tactical thing that often goes to the side with the best technology, and not just the best weapon technology. If one can not see the enemy before he drops a bomb, said individual can not try to avoid or counter the attack. It doesn't matter how many fancy weapons one has. Electronic warfare is the skilled use of common, military combat computers, targeting and sensor systems, cloaking devices, and passive sensor probes and knowledge of how they are used in combat to locate, target, or conceal vehicles or locations from active sensor scans, and so on. Includes the accurate use of ECMs (electronic countermeasures) and electronic cloaking systems. On the galactic battlefield, detection of one's enemy is often more difficult than destroying him, which makes this skill absolutely indispensable to many galactic soldiers. The skill percentage is listed with the percentage to break electronic countermeasures first and the percentage to properly operate them after. **Prerequisites:** Read Sensory Equipment and Basic Math (ideally Advanced Math too). **Bonuses:** Characters with this skill get one extra melee action per round when using sensors, scanners, targeting systems, optics and communications systems, but lose that bonus action when they engage in actual combat (i.e. firing weapons, taking aggressive action, etc.). However, when attacking and using computer targeting or multiple systems like those noted here on a spaceship, space station, robot or combat vehicle, he is +1 to strike and dodge. Must roll under his skill ability every minute or for each dramatically changing circumstance to get these bonuses (lasts for one minute). **Base Skill:** 30/25%+5% per level.

Physical

Depressurization Training: This skill represents extensive training in coping with and surviving depressurization in space and the use of spacesuits. It certainly does not allow one to live through extended exposure to the vacuum of space, but it does extend the time that the character can go without oxygen and teaches techniques to minimize damage from depressurization. Even a character with this skill will die unprotected in space, but they can last longer than most others while waiting to be saved or trying to save themselves. This skill only helps those races vulnerable to such pressure changes and is of no benefit to mineral aliens.

Provides the Following:

+1 to P.E.

+10 to S.D.C.

Can survive twice as long as normal (takes half damage) when exposed to the void.

Zero Gravity Combat: Basic: Rudimentary experience in weightless environments that allows for controlled movements and adequate compensations. Bonuses: Number of attacks per melee round are unchanged. +1 on initiative, +1 to strike, parry, disarm, and pull punch, +3 to dodge, and. +5 to normal speed.

Zero Gravity Combat: Elite: Advanced skills in weightless environments, including specific combat training in such. This skill allows for fully controlled movements and skilled compensations for drift and physical reactions. Bonuses: +1 attack per melee round, +1 on initiative, +2 to strike, parry, dodge, disarm, and pull punch, and +10 to normal speed. Note: The bonuses from either zero gravity combat skill apply ONLY when the character is in a *weightless state*,

Pilot, Basic

A Note on Unique Alien Vehicles: Alien characters can start with some pretty high-tech vehicles from their character generation charts, like a gyro-copter and anti-gravity jewelry. It can be safely assumed that the vehicle is rather common in the character's culture, much like our automobiles, and that the character will have some skill in operating it. This doesn't mean that they automatically get a skill for that vehicle, but like the piloting skill descriptions say, the average character (from that culture) will be able to pilot the vehicle as long as they do not try anything fancy like high speeds (3/4 maximum) and stunts (including dodging).

A Note on Hovercraft: Note the skill found in the Heroes Unlimited book is a general skill due to the rarity of hovercraft on Earth, also note that the hovercraft in a galactic campaign may use technologies other than cushioned air to support themselves. Just as there are vast differences between driving normal motorcycles and their automobile counterparts, so too are there differences in hover vehicles, and thus separate skills.

Hover Car: Identical to the description for the Automobile skill, but for hover cars. **Base Skill:** 60%+5% per level.

Hover Cycle: Identical to the description of the Motorcycle skill, but for hover cycles. **Base Skill:** 50%+5% per level.

Hover Truck: Large, oversized hover vehicles usually used for transport, though their all terrain capabilities make them ideal for exploration as mobile homes or laboratories. **Base Skill:** 40%+5% per level.

Personal Anti-Gravity Transportation: This skill represents practice in the operation and handling of personal anti-gravity transportation devices, such as anti-gravity rings, disks, medallions, platforms, personal rigs (jet pack style) or suits. Just as with other vehicles, aliens whose culture commonly uses these items will be able to operate them normally without this skill, but they will not be able to safely exceed three quarters of maximum speed nor perform any stunts or risky maneuvers without crashing. Doing anything fancy will require the character to know this skill and to successfully roll it. Aliens that do not come from a culture where this technology is not commonplace can not operate it without learning this skill. **Base Skill:** 40%+5% per level.

Pilot, Advanced

A Note on Alien Vehicles: Trying to fly an advanced vehicle (such as spacecraft) built for another racial type (human to mineral, insect to vegetation, etc.) is done at -20%, but minimal instruction by a skilled pilot (10 minutes) will cut the penalty to -15%. Eight to twelve hours of training and practice will reduce the penalty to -5%. However, truly alien craft (like those of some

multi-armed insects and others based on organic or crystal tech) will always be flown at -20% even after hours of training and -50% with no training. Some may not be flown at all by some characters, because they require certain abilities to pilot them, like telekinesis or stretching.

Civilian Spacecraft: Large: This skill allows a character to pilot any non-combat spacecraft larger than 250 tons. This typically includes cargo craft and bulk personal transports. This skill may be used to pilot large military spacecraft, but at -30%. The penalties for piloting alien craft as listed under the Fighter Craft skill also apply to this skill. **Base Skill:** 60%+2% per level.

Civilian Spacecraft: Medium: This skill covers all small to medium (less than 250 tons), non-combat craft used for transport of goods or passengers. It includes Cargo Craft and non-military shuttles (can be used to pilot military shuttles, but at -10%). The penalties for piloting alien craft as listed under the Fighter Craft skill also apply to this skill. **Base Skill:** 62%+3% per level.

Civilian Spacecraft: Small: This skill covers small spacecraft, ranging from maneuverable escape pods to shuttles and scouting ships to single-pilot craft. The general rule of thumb is that a small spacecraft is anything under 100 tons and/or can be piloted by a single person. **Base Skill:** 66% +3% per level.

Civilian Hyperthrusters: These are small, supersonic, trans-atmospheric aircraft (like an advanced version of the Concord aircraft) that use chemical jet engines and thrusters. Very maneuverable and can attain speeds up to Mach 8; most have Vertical Take-Off and Landing (VTOL) capabilities. +1 on initiative, +2 to dodge. Available as two-seaters, small transports (cockpit holds 1-3 people plus 4-8 passengers) and mini-jets (3 crew, 10-20 passengers). **Base Skill:** 64% +3% per level of experience.

Military Hyperthrusters: Combat versions of the civilian hyperthruster loaded with weapons and armor that rivals any Earth combat jet. They generally fill the same roles as the fighter aircraft of Earth, but their VTOL and hover capabilities make them much more versatile and maneuverable. Military hyperthrusters easily fill the role of both helicopter and jet in terrestrial galactic warfare. **Base Skill:** 60%+3% per level.

Military Spacecraft: Small: Skilled in piloting all types of small space fighters, and any spacecraft under 100 tons or requires a single pilot that is an armed spacecraft specifically designed for combat. This typically includes armed shuttle craft and space fighters. **Base Skill:** 56%+4% per level of experience.

Military Spacecraft: Medium: This skill allows one to pilot medium-class military vessels, including destroyers and assault craft, large military shuttles, and military transport or cargo craft. Piloting spacecraft of this size simply can not be done by one individual, unless he has a lot of reliable computers. In order to properly coordinate a crew, more than simple piloting ability is needed. This skill covers a broad range of knowledge, including maneuvering the craft, basic operation of advanced travel methods, command structure, direction the crew, and basic command abilities. Military pilots must be at least fifth level to receive a command position on a vessel of this size. **Prerequisites:** Space Navigation and Read Sensory Equipment (Weapon Systems is suggested). In addition, Command Structure Etiquette should be taken; otherwise, this skill will suffer a -10% penalty. **Base Skill:** 50%+4% per level.

Military Spacecraft: Large: This skill covers the difficult task of piloting the largest military spacecraft, including battleships, destroyers, giant cargo ships and space stations. The pilot of a vessel this large may handle the maneuvering of the vessel itself but has a crew that helps him and follows his orders. The crew includes one or more (typically a squad on large vessels) who specialize in different aspects of the spaceship, such as gunners, navigation, communications, etc. The skill covers a detailed knowledge of maneuvering the large craft, advanced travel methods and drives, extensive knowledge of command structure, and years of training to focus one's ability as a pilot and deck commander. Military pilots generally must be at least 7th level to receive a command position on a vessel of this size. **Prerequisites:** Space Navigation, Read Sensory Equipment and Weapon Systems. In addition, Command Structure Etiquette should be taken; otherwise, this skill will suffer a -10% penalty. **Base Skill:** 40%+4% per level.

Pilot Robot: In a galactic campaign, the availability of robot systems to player characters and adversaries will be markedly greater than on Earth where robots are limited to the *Robotics Power Category*. Consequently, some rule expansions and clarifications are perhaps necessary.

Pilot Robot covers all the necessary training required to pilot a robot, be it Type Three Exoskeletons and Powered Armors or the larger Type One Robot vehicles.

Included in the training are the following: Instrument reading (not the Read Sensory Equipment skill), basic maintenance, and rudimentary robot combat training. Those characters without this skill who attempt to pilot any kind of robot will have only one attack per melee round and are at -2 to strike, parry, and dodge, plus they *never* have initiative.

Characters who have this skill do *not* have a full understanding of the robot or how it works, only how to "drive" it, including fundamental combat training. They receive no bonuses in combat and their number of attacks will be equal to their own hand to hand, but they do not suffer any penalties either. This skill just lets one drive the robot.

Characters from the *Robotics Power Category* automatically have this skill with the type of robot(s) they construct during character creation. However, if the Robotics character chooses this skill as one of his other (additional) skill selections, he will be able to pilot *all types* of pilot controlled robots, including giant robots, vehicular models, Type Three human-sized exoskeletons, and Type Three giant exoskeletons. All other Power Categories have to select robot piloting skills for each specific kind of robot they wish to pilot (such as the TMC Heavy Combat Robot or TGE Heavy Power Armor). Each additional Pilot Robot skill enables them to choose another specific model type to pilot. Only the Robotics character gets the special package deals. **Note:** Androids and true robots do not need a skill to pilot themselves (of course), but they can take this skill to operate pilot driven robots if they have a humanoid body shape. Piloting rolls should be made for each stunt or trick maneuver that could result in a loss of control, whether the move is aerial or on the ground. **Base Skill:** 30%+5% per level.

Robot Combat: This skill usually goes hand in hand with Pilot Robot. This skill provides the character with training using specific class of robot and corresponds to all of the character's Pilot Robot skills. Thus, a skill in Robot Combat: Type Three Exoskeletons would provide a character with combat bonuses with any piloting skills he might have with all Type Three exoskeletons. They can also use their skill selections for additional combat training with other classes of robots, or they can purchase this skill for 350,000 credits/dollars. The skill can be purchased/selected up to three times to give the robotics character the ability to fight with any kind of robot.

Note: Robotics characters have this skill free with their Power Category, and can usually use all types of robots in combat. **Bonuses:** The character gets all of his melee attacks while piloting the robot, plus one additional attack per melee round and the following bonuses: +1 to initiative and +1 to strike and dodge. Note that the bonuses only apply when the pilot is inside the robot. Keep the total robot bonuses separate from those of the pilot when not in the robot.

Pilot Related

Command Structure Etiquette: The knowledge of how to use and maintain the command structure of a large spacecraft crew (12 or more crewmen). Useful in both military and civilian craft. Craft of this size can not be piloted by a single person and some kind of skill is needed to keep the crew functioning in a co-operative manner. This skill negates the -10% skill penalty captains otherwise face when trying to pilot large spacecraft without it. **Base Skill:** 25%+5% per level.

Navigation: Space: This skill is the ability to find one's way in the often confusing and disorienting vastness of space. When near planetary bodies, it is easier to orient oneself, but in the vast spaces between planets or the bigger areas between solar systems, there are literally no landmarks. The navigator must be able to read instruments and plot courses across the galaxy, but unlike hopping from city to city on a planet, the navigator must also take into account planetary movements, their gravity, and the motions of other bodies in space, like asteroid fields, charted comets, black holes, dust clouds, and so on. A further complication is trying to do all of the above while traveling faster than the speed of light or when popping from one area of the galaxy to another (locking onto a planet's gravity instead of a gravity well can be instantly fatal), but such advanced navigation is covered by another skill.

A skill roll is made for each hour of travel within a solar system and each day of travel outside of a solar system. Each failed roll will put the craft 1D4x10,000 miles off course in a solar system and 2D6x200,000 miles off course between them. Subsequent successful rolls will discover the previous mistakes, requiring they be corrected; however, three failed rolls in a row will mean the navigator is totally lost and the Game Master can whip up an adventure just to get the hapless crew home or back on track. Please note that this skill can only be used for spacecraft traveling at less than light speed. FTL navigation must be handled by somebody with the Navigation — Faster Than Light skill. **Base Skill:** 40%+5% per level.

Navigation: Faster Than Light (FTL): Similar to Navigation: Space, and actually building on the knowledge of that skill, this one covers the intricate computations needed for Faster Than Light and advanced space travel. *During FTL travel*, rolls are made every hour of travel time, with a failed roll putting the craft 2D4x1,000,000 miles off course. Additionally, if the roll is missed by more than 25% (i.e. skill percentage is 65% and the roll was a 90+%), the spacecraft's course has taken it into a debris field, gravity source, etc., and damage may result. In this case, roll on the failed stunt roll table for FTL maneuvering (see the Space Combat Rules of this book. A crash landing may result).

Trans-light rolls are also made hourly and failures result in a 1D4 light year deviation, plus if the roll is missed by more than 25%, something potentially deadly results. The pilot will then have to make a piloting roll at a -30% penalty. On a successful pilot roll, the G.M. should roll on the failed stunt table for FTL travel (a crash may result). Failure on the roll results in the craft hitting something for its mass (in tons) times 10 in damage (roll for crash landing on the FTL tables if the craft survives).

Failing a navigation roll when using certain kinds of *gravity-based travel* (such as hypergravitics or gateways), means the spacecraft locked onto the wrong gravity source or hits a gateway structure. Locking onto a planetary gravity source completely destroys the vessel, regardless of its size. The crew can eject if lifeboats are available, but there is only a small chance of crew survival; mistakes like this are rarely noticed in time. (Which, by the way, is why not everybody in the galaxy elects to use this method of travel.) Fortunately, this only happens when the navigation roll is missed by more than 20%. Hitting a gateway will inflict damage to both the spacecraft and the gateway. The resulting damage is also used as a percentile chance that the gateway will collapse into a dimensional syphon (see the *Advanced Travel Methods section* of this book for details). **Base Skill:** 25%+5% per level.

Rogue

Cyberjacking: Same as the Military skill.

Science

Anthropology: Alien: This skill is fundamentally the same as the traditional Earth science of Anthropology given in **Heroes Unlimited**, but it applies to the study of alien races. Each time this skill is taken, it imparts general knowledge about the behavior and sociology of a specific type of alien race (e.g., avian races, ape-like races, canine races, humans, etc.). If a character selects this skill four times, the G.M. can assume that the character has a wide base of knowledge that covers most known racial "types" and several specific civilizations for each general category. Note that the first selection of this skill applies to the character's racial type. **Base Skill:** 20%+5% per level.

Xeno-Biology: The science and study of alien biological systems and the functions of non-human organisms (note that humans can be considered alien and "non-human" to certain alien races). Each time this skill is taken, it imparts knowledge of a specific type of alien race (e.g., avian races, ape-like races, canines, vegetation, humanoids, etc.). If a character selects this skill four times, the G.M. can assume the individual has a wide base of knowledge that covers most known racial "types" as well as some specific species.

This skill can replace the Biology skill in a galactic campaign for most situations, but a doctor should still have Biology for use when treating members of his own species/race. If a character without Xeno-Biology attempts to catalogue, identify, or doctor an alien belonging to a radically different race (i.e. a human/mammal working on a reptilian, fish or mineral being), any medical or science rolls are made at the usual -40%. If the character also does not have Biology, the penalty jumps to -55%. However, if the character has the Xeno-Biology skill, the penalty is only -15%. Xeno-Biology includes some information on all sentient racial types as well as notorious monsters and alien animals, but the G.M. should apply appropriate additional (-10-20%) penalties to creatures that are completely alien or a previously unknown species. **Base Skill:** 30%+5% per level.

Xeno-Botany: This is the alien plant counterpart to the Xeno-Biology skill. A successful roll will determine an alien plant's type, whether it is probably poisonous (and to which species) as well as its special characteristics. Note that this skill becomes interchangeable with Xeno-Biology when plant aliens are encountered. **Base Skill:** 25%+5% per level.

Technical

Languages: There are literally millions of languages and dialects in the galaxy, but each of the quadrants has its own roughly universal form of trade language. Les Iban's trade tongue is called the Imperial Trade Tongue (ITT); Liloqua relies almost exclusively on the FAR's Pilian Tongue; Titrana uses two criminal codes, Dar' Etsch and Roo-tahm; and Ilta uses the TMC's Thimerian Code. All four quadrants also make use of Atorian Sign Speech which has no sounds and was developed before the closing of the borders. All aliens will have some skill in at least one of the trade languages (Yep, it's a free skill). **Base Skill:** 55%+5% per level.

Lore: Alien: A character with this skill will have a chance to have seen, read or heard about the appearance, habits, possible weaknesses and strengths, technological level, aggression and other summary-style information on a given race. Note that this skill is based as much on rumor, legend, and stories as it is upon cold, hard facts. For in-depth cultural knowledge on a particular race, the Anthropology: Alien skill must be used. **Base Skill:** 30%+5% per level.

Cyberjacking

Cyberjacking is the experience of actually moving/walking through a computer system with the use of a direct brain-to-hardware link via a data plug, headjack or special power. (Prices for all Cyberjacking equipment can be found in the Personal Equipment section of this book.) By interfacing one's consciousness directly with a computer, the Cyberjacker enters an electronic world of sorts, sometimes referred to either as *cyberspace* or the *data realm*. Once inside the electronic world, the Cyberjack will normally find the data in each system arranged in neat columns and rows, forming patterns and planes of glowing data *reminiscent* of hallways, rooms, floors, and ceilings. Only they do not always line up completely, leaving wide halls with no ceiling or offset planes that form multi-level floors or platforms.

Electronic space is vast and black, even in small systems. The glowing data structures are located in a localized area with a dark vastness beyond it. This "space," like the one surrounding our planet, normally has *no gravity*, and the Cyberjack can move in any direction as he makes his way through the data construct. Certain directories or security measures may block direct access in the virtual world as readily as they do so in the real world of physical interfacing.

Different physical systems, such as multiple hard disks or a computer and its peripherals, appear to be linked by dark tunnels lit by pulses of energy. The Cyberjack can simply walk down these tunnels or catch a ride on a passing bundle of energy to enter or access the other system (the same is true of networked computers). Needless to say, when the attached device is turned off, the "tunnel" connecting it to the computer simply does not exist. Even a Cyberjack can not manipulate a device with its power off unless he can provide his own source of energy via psionic, magical, or supernatural ability (see later information on exactly which specific abilities allow this).

When someone Cyberjacks, he has access to nearly any aspect of the computer with the speed of thought, giving a new dimension to hacking, as the character grabs data almost as fast as the computer can process it, which gives the creative, adaptive living mind a tremendous edge. Traditional security measures, such as passwords, encryption and embedded directories, rarely work against the formidable mind of the Cyberjack. For this reason, most powerful organizations that rely heavily on computers have their own Cyberjack security personnel and AI defenses watching and patrolling their systems. These active measures serve the same function as their real world counterparts by directly surveying the world of electronic data on a regular basis, deterring intrusion by their presence, and responding immediately when a problem does occur. An additional perk to "active security" is that the security personnel are commonly skilled computer technicians and can double as repair personnel if problems should occur. The AIs that are used for security will have little or no ties to the system proper, and run as autonomous programs. This prevents any damage to the system itself should the AI defenders be damaged, destroyed, or corrupted.

Active security aside, perhaps the strongest defense is a **Reality Enforcement System (RES)**. This system creates a graphic virtual environment that seals the computer's data constructs behind "solid" images of real world walls, doors, safes and passive security. These virtual walls and barriers can coincide with the data walls of an unenforced system, or they can be completely independent. Regardless of its basic layout, the RES makes it impossible for a Cyberjack (or any other operator) to access the system's data without conforming to the reality being enforced by the RES. This means that if a RES generated hallway has a door in it that leads to the personnel records, then anyone wanting to get to the personnel records has to go down that hall and through that door just as if they were doing it in the real world. Of course, certain *back doors* can exist, and other programs will allow a Cyberjack to get around the door, depending on if it has security on it. However, at its heart, the RES makes accessing the realms of electronic space as challenging (and real) as if it took place in the real world.

Just as any imaginable environment can be graphically represented in a video game, so too can the images of a RES look like anything; a medieval castle with Orc guards, a surreal landscape of alien forms, a super high-tech Atorian command center, Chi-Town, and on and on. The appearances are all up to the tastes of the owner and the talents of his programmers. The active defenses mentioned before are normally incorporated into the RES environment and given matching or at the least, complementary, graphical shells. (**Campaign Tip:** RES systems can be used creatively to do a sort of facsimile time travel campaign when used with a group composed entirely of Cyberjackers or mix elements from different genres (sf with fantasy, or horror, or superheroes, or dinosaurs, or monsters, etc., or a combination of 2-5.)

A few notes on RES. First, Cyberjacks move through the generated environment as if actually there, while *hackers* and *programers* move through the graphics seen on their screen.

Second, a RES is almost exclusively housed in its own chips and send commands to the system through the CPU chip. What this means is that the reality enforced by the RES can not be altered or accessed unless control of the CPU has already been established, but by that time, altering the RES environment may be a moot point — unless it was the reason for accessing the system in the first place. Third, the RES determines the *laws of physics* for the computer system it is connected to. This means that any environment which can be dreamed up and programmed can exist in a RES. The computer systems of highly imaginative or insane programmers, or those created by brain-fried Cyberjacks, can be disorienting and unsettling at the least. Others can be downright nightmarish, deranged and deadly. Not all do, but many RES also force visitors to conform to the environment by dressing them accordingly or, if the hacker or Cyberjack has been discovered, revealing them with highlights or special markings.

So, Cyberjacking is leaps and bounds beyond traditional hacking, but what's the catch? Well, regardless of whether a Cyberjack is hit by another "jacker," systems programmer/debugger, an AI program, or passive defenses, the result is the same: Cyberjack damage feeds back through the data plug directly into the brain of the living individual. Because of this, it is frighteningly easy to die in the real world from *cyber-combat* in cyberspace. Any character "killed" in cyber-combat immediately goes into a coma (unless they are truly fried, in which case the brain dies and the body soon follows).

In the case of coma, the character can recover as normal, but the effects of a "cyber-death" will do *permanent* damage, manifesting as memory loss and dullness of wits (permanently reduce I.Q. by one point for each cyber-death), as well as brain damage (lower all skill percentages by 2% for each cyber-death; also reduce M.E. by one point for every two cyber-deaths). Repeated deaths in cyberspace have *cumulative* effects as the character slowly lobotomizes himself. Sanitariums throughout the Megaverse are filled with cyber-drones who thought they were better than they actually were. Console cowboys too cocky to admit defeat, others who were addicted to the rush of the direct brain stimulation and Cyberjacked until they became shells of themselves. Others gambled on that last big payoff and paid the price of defeat by sacrificing their minds (sometimes actually dying for real). Regardless of the reasons, the result is the same; the many little deaths in the cyber realm only serve to cripple and

diminish the Cyberjack. Like an old program in a new system, the jacks continue to degrade until they have so many problems they can't function anymore, or they simply crash with one final, fatal error. In addition to the previous penalties, the Game Master may want to require a random insanity roll, or at least a phobia or obsession for each cyber-death, as overstimulation causes the brain to react in strange ways. Phobias are common, especially for cyber-deaths in a RES where a face can be put on the Cyberjack's killer as are obsessions, specifically the drive to beat or get back at the system or the (perceived) cyber-entity who caused one's defeat or death.

With all of this in mind, burnt out Cyberjackers can be some of the most unnerving and interesting characters a G.M. can have the player characters meet, with their quirky, often insane personalities and brain damage that can no longer be hidden. They can make for a fun player character too, if the player is a skilled role-player and does not use his quirks and insanities to disrupt the group or ruin the adventure.

Cyberjacking Rules

Game Masters can use any applicable penalties given in this section and some regular skill rolls with computer operation and computer programming to handle normal hacking situations, but to add some spice to settings where Cyberjackers are present, the expanded combat and hacking/Cyberjacking rules should be used. Looking over the rules and bonuses below, it should quickly be obvious that traditional hackers pale when compared to Cyberjackers unless outfitted with loads of virtual reality accessories. Only the very best of hackers can stand on their own against Cyberjackers and characters augmented by advanced technologies, psionics or super abilities. Then again, most Cyberjacks are also hackers and computer whiz-kids.

The most important thing about **hacking** is the ability to understand and modify computer code and programs. Computer Operation lets you operate a computer, its peripherals, and most common software. It does include, in some cases, a rudimentary understanding of programming, but such knowledge will only benefit the user when tweaking one's own system on a very basic level, and has no impact on hacking. *Computer Programming* is an in-depth understanding of how to make computers do things by writing code for it in the form of programs. This skill adds strength to hacking and is the core of it, but computer programming is very different from hacking. The skill can be substituted for hacking, but all hacking rolls in such a situation will be at -5%. Hacking is the practiced application of flexible programming with the intention of accessing computer systems other than one's own (hacking is not necessary for operations within one's own computer; computer security personnel hardly ever have any hacking skills). Computer Hacking is less formal and more "seat of the pants" than simple programming and requires a certain flair, thus it is categorized as a separate skill. What this means is that games without the Hacking skill should add it if these expanded rules are to be used. Computer Hacking is a *Rogue skill* (or Technical for those games without the Rogue category in its skill selections) that adds a one time bonus of +5% to the Cryptography, Surveillance Systems, and Locksmith skills (if they are among the character's known skills). It has a base percentage of 15% and increases by +5% per level of experience. Prerequisites include Literacy, Computer Operation, and Computer Programming.

Now, as mentioned before, **programming** is the heart of hacking. Any effect one wishes to pull off in the data realm takes the form of a program (unless you are actually inside cybernetic space which is detailed in the specific advanced methods of hacking below). All one can do is look, unless he actively attempts to make the system do something, even if it is as simple as switching directories. Entering commands is a simplistic form of coding, but it is nothing compared to the "real stuff" that makes the spectacular effects. Thus, if a hacker wants to prowl away from electronic security, a program would be needed to disappear or hide by telling the target system to ignore him. Thus, each skill, weapon, or piece of equipment used in cyberspace is actually a *program* telling the target system how to react to the hacker's or Cyberjack's presence (it is actually a bit more involved than that, but we are keeping it simple here).

In traditional hacking, this level of programming isn't necessary. Hacking rolls are made against the security level of the system being hacked with the proper penalties applied. However, when hacking a **RES system** where the normally simple laws of the data realm are complicated by artificial rules, more intensive interaction becomes necessary, and programs to duplicate skills, weapons, and other items usually unnecessary in the data world become necessary. If the character prepares specific programs beforehand, such as the prowl skill mentioned previously, a simple roll based on the effectiveness of the program is all that is necessary to perform the desired skill in cyberspace. The actual rating of the program, except for weapons, is equal to half the percentage of the Computer Programming skill. Thus, a hacker with 65% Computer Programming could easily write skill programs with a 32% proficiency in the cyber realm, be they surveillance system emulators or prowl equivalents. The percentage of these programs can be raised, but the roll to write them suffers a -5% penalty for each +10% added (max of 92%).

Writing programs on the spot can be done, but it is quite difficult. There is a -30% penalty to whip up instant programs and it takes 1D4 melee rounds! The time required to write other programs is left up to the Game Master, but 1D4 hours plus one hour for each 5% penalty is a good guideline (remember the character still has to work and live a normal life around this time). Special equipment like grapple guns or smoke bombs can also be programmed this way, but lacking a skill rating, most of them will only require a simple skill roll to duplicate.

As one who has played a computer game can imagine, nearly anything can be done with a program. In Cyberjacking and hacking, this means even spells, superpowers and psionic abilities can be mimicked with the right program. These "special effects" are more difficult than skills to duplicate, starting at one quarter of the programming skill with the same penalty to increase the percentage. Thus, the 65% skill in the previous example being used to duplicate a *Charismatic Aura spell* would result (on a successful roll) in the emulation of the spell with a 16% success rate. If the program fails its 01-16% skill check when used/activated, it fails to run properly and has no effect. However, if successful the target/intended victim might be entitled a normal magic saving throw because magic in the real world allows it. To keep things simple, use the normal magic or psionic rules for these types of effects even though they are not actually magical or psionic effects. The saving throws represent the unorthodox nature of the effects and the difficulty of implementing them, not to mention the *interaction* of those in the cyber realm, i.e. if the spell seems real, the character expects to get a saving throw. Note that actual spell use within the data realm uses its own rules (described later).

The simple rules for passive computer security are actually the basic rules for computer hacking, including penalties as presented in *Heroes Unlimited, Beyond the Supernatural*, and a few other Palladium supplements. Once again, hacking only requires a few skill rolls. Only when Cyberjacking, supernatural hacking, or RES come into play do the more complicated rules have to be used.

Computer systems are generally layered, with light security increasing to much heavier types as the heart of the system or sensitive data is approached. This setup and the penalties below are the basis of all computer systems. RES and active security

are added or layered on top of it. The penalties reflect the complexity and difficulty of each job. Note that all of the listed times are much less than those listed in *Heroes Unlimited™*, because the latter times are for breaking the entire system in one roll. The system given here represents the separate stages that form the single roll system of *Heroes Unlimited™*. Depending on the layers and complexity of the computer system set up by the Game Master, the individual times may or may not add up to the times given for the single roll system. In addition, depending on the information the character is going after, hacking a system like the Pentagon might not require actually penetrating the super-sophisticated military security if what one is looking for is located on one of the less secured areas of the electronic system.

-10% Simple security such as passwords and other general ID. Requires one melee action per attempt to pass.

-20% Moderate security such as unique or specialized requirements. Requires one melee round per attempt to pass.

-40% Sophisticated security such as minor encryption and code recognition. Requires one minute (4 melee rounds) per attempt.

-50% Super-sophisticated security such as encrypted passwords and codes or isolated system elements. Requires 5 minutes per attempt to pass.

-60% Superior military or government security. Requires 20 minutes per attempt to pass.

-10% Unknown or prototype code.

-5% Rolls inside a RES.

This system is used to move from one security zone to another (or back again). Failing a roll against passive security means that moving on is impossible, but it can also mean that tons of active security measures have been called to your location. Responses and roles of passive security will vary from system to system. If any kind of active security is encountered, then actual combat will occur as detailed in the next few paragraphs.

Cyberjack weapons are actually a combination of power surges and damaging programs. They do damage based on the creator's level in the computer programming skill. Those characters without computer programming can buy pre-programmed Cyber-weapons, but those weapons will not operate within the system of the person who did the programming. Cyber-weapons usually appear as a weapon relative to their damage (a knife or pistol for small damages and rune weapons and energy rifles, explosives or rail guns for larger damage ratings). Cyber-weapons do 1D6 damage per level of the programmer. For each D6 of damage it does, there is a -2% penalty to the Computer Programming roll to create it. For this reason, most such weapons are programmed to do 3D6 or 4D6 damage even if the programmer is of high enough level to make much larger, more powerful weapons.

Ranged cyber-weapons have a *payload* equal to the character's Computer Programming percentage divided by the number of dice it does for damage. For example, a programmer with a 78% programming skill could make a 1D6 damage pistol with 78 shots, a 6D6 rifle with 13 shots, a 1D6x10 rail gun with 8 shots, etc. Melee weapons do not have charges or ammo. Once the payload of a weapon has been expended, another loaded weapon must be used, or the character can attempt to reload the empty one by making a Computer Programming roll (takes two melee actions). A Cyberjacker can carry any number of weapons, unlike the limits of encumbrance in the real world. Those characters who can not program their own cyber-weapons can purchase them for around 1,000 credits/dollars per die of damage, meaning the rail gun in the example above would cost 10,000 credits/dollars. The damage and payload of the weapon does not go up with the character's level or percentage. To take advantage of level advancement increases, another, better weapon must be created, requiring a Computer Programming roll with appropriate modifiers.

Cyberjack Combat

Cyberjack combat works just like any combat in Palladium, with a melee round composed of several strikes, parries, or dodges. The only major difference is that it is mentally simulated combat, with no physical attributes or bonuses applicable. Real life hand to hand skills have no effect, and neither do bonuses from physical skills. Even characters that are actually inside the data realm by virtue of supernatural means will only have access to a small part of their physical bonuses (they do not use any of the rules below for determining number of attacks or other bonuses; consult the specific entries for their means of access for details).

Cyber-Bonuses. To determine the strike, parry and dodge bonuses in the data realm, instead of P.P., use the character's I.Q. rating, but slide down the chart to the P.P. bonuses to get the actual bonus number. An additional bonus to strike, parry, and dodge comes from dividing the character's *Computer Programming* or *Hacking* skill percentage by 24 (i.e. a skill percentage of 80% is a +3 bonus; round fractions down). In addition, all characters also gain an additional +1 to all of their rolls at levels 3, 8, 11 and 14 (Note that this is the actual level of their Hacking or Computer Programming skill, and may not equate to their actual experience level if they were taken at later levels as additional skills). Other bonuses may come from specific supernatural abilities or specialized equipment (see the descriptions that follow).

Cyber-Attacks Per Melee. The change from physical based combat to mental/electronic also means a change in the number of attacks. Hackers only have two attacks per melee round regardless of their normal physical attacks per melee round. Additional attacks are gained at levels 3, 8, 11 and 15. The lack of hand to hand skills (the only skill that can not be programmed) also means that unless some special ability imparts automatic parrying, each parry costs an attack/melee action. On top of all these penalties, if the character has Computer Programming but does not possess the Computer Hacking skill, all combat rolls are at a -2 penalty and they lose one attack per melee round unless they are within their own computer system.

Damage. Now the really rough part. All attacks do damage direct to the character's Hit Points if he is Cyberjacking or otherwise *directly connected* to the system! For some reason, this effect can not be stopped or cut off, but filters have been developed to minimize it. Cyberjacks affectionately refer to these filters as "armor." There is no S.D.C. in cyberspace unless the character has purchased filters. The only exception to these rules are AI's (not transferred intelligences, but actual computer intelligences) which can have their CPU chips hardened to provide S.D.C. against cybernetic damage, and those who are physically *inside* the computer. AIs can use filters in addition to their hardened CPUs.

Hackers and those not directly connected to the system do not take damage, but the cumulative damage inflicted by the active security is converted into a percentage, which is rolled at the end of each round to see if the hacker's system is damaged enough to crash. If the system crashes, it means that security forced the hacker's computer to corrupt itself, but not before broadcasting the hacker's location to the wrong people (the authorities, enforcers, etc.).

All cyber-combat is Hit Point combat. In the rare cases where M.D.C. creatures enter the computer world physically (via super ability or psionics), they receive no S.D.C., only their M.D.C. as Hit Points.

If a character is physically inside a computer, and they are knocked unconscious, they are immediately ejected from the system into the real world by way of the nearest outlet (including shorting out the computer system in some cases). This ejection

increases the length of time they are unconscious by 4D6 minutes. Characters physically inside a computer that are put into a coma through cyber-combat do not suffer cyber-death; instead, they experience the same process as if they had been knocked unconscious, and upon being dumped into the real world, they will suffer a -20% penalty to their recovery rolls for surviving the coma. This kind of hacker is powerful, but failure can often lead to death in the real world.

Unplugged. While we are talking about KOs and comas, here are a few tidbits on what happens when someone pulls the plug while a character is inside a system (whether physically or electronically). Hackers that use keyboards suffer no adverse effects when the system they are hacking is shut off. Cyberjackers and others linked to the electronic world, but not physically inside the data realm, that are cut off in mid-hack are stunned for 2+1D4 melee rounds when their link is abruptly severed. During this time, the character can do little because of disorientation, and any actions or combat performed are done so at -4, -10% for skills. Those supernatural hackers that physically enter the computer world suffer a bit more when their electronic reality is ripped away by power loss. They are ejected physically from the computer (as if knocked out, possibly putting them right in the middle of the enemy's home turf), stunned (just like Cyberjackers, but for twice the duration), and suffer 2D6 damage direct to Hit Points.

Cyberjacking & Superpowered Hacking

Now on to the bonuses and details for each specific super ability, psionic power, and magic ability, as well as some technological means of Cyberjacking. A number of these methods can be combined depending on the campaign setting, such as a Hardware: Electrical Genius character in **Aliens Unlimited™** getting a headjack. All of the listed bonuses are cumulative, and just about all of the abilities can be combined (within common sense and the limits of the game world). The most notable exceptions to this are the *headjack* and the super abilities of *Lightning Rider, Metamorphosis: Energy and Alter Physical Structure: Electricity.* Since the latter three abilities actually take the character physically into the computer system, a headjack to interface with the computer is of no use. Note that those hackers who physically enter the digital world take their clothes and some equipment with them (no more than 50 pounds worth), but only energy or melee weapons will function within the electronic realm.

Looking over the bonuses, one can easily see that *keyboard hackers* are at an obvious disadvantage in the stat department. These characters will just have to make up for their limitations with increased skill and creativity. Carrying a large variety of weaponry and gadgets or "skill" programs is also a good idea. And finally, perhaps the greatest advantage of the keyboard hacker: they do not have to worry about cyber-death.

Headjacks and the supernatural methods detailed below can be used to access any computer, including targeting computers for vehicle weapons and security computers that control the cameras and automated guns of a building. In these cases, the character uses the same bonuses (those that are applicable) as for hacking, such as the strike bonus when controlling weapons. Those bonuses are added to any other applicable weapon or surveillance bonuses (yes, the listed computer bonuses for each method of hacking can be added to the Surveillance Systems skill when operating automatic cameras in this manner). The computer bonuses listed below can also be applied to vehicle skills if the vehicle can be completely controlled by a computer, such as a spacecraft or futuristic hover car.

Headjack: The headjack is the simplest way for a hacker to gain a tremendous advantage in the cybernetic realm, but only if the game setting supports bionic technology. Using a headjack to augment an interface provides +2 to strike, +3 to parry, and +3 to dodge in addition to adding two extra attacks per melee round. It also provides the character with the ability of automatic parry in combat. A headjack effectively adds +10% to a character's computer hacking or Computer Programming skill, but only for the purpose of defeating *passive security.* Any damage taken in cyber-combat uses the rules given previously. People who use headjacks are referred to as Cyberjacks.

Hardware: Electrical: These super-characters are such natural computer operators that, despite their more traditional means of hacking, they gain a certain edge when data jockeying. Add a bonus of +1 to all of their combat rolls, and add one additional attack when they reach third level. Likewise, the Super Sleuth gains no additional bonuses beyond their very high starting skill in hacking and possible I.Q. bonuses. Unless any of these hackers are using a headjack, they do *not* suffer damage from cyber-combat; instead, it is applied to their system (see the combat rules).

Psionics: There are a number of psionic abilities which can enhance the effectiveness of a hacker, but always keep in mind that each psi-power requires I.S.P. to fuel it, and each also has a limited duration. Those two factors combined can make a simple hack an expensive venture for the psychic. All of the bonuses given for the psi-powers are cumulative if the psychic can afford to have them active at one time. All in all, the limited ranges of the psi-powers makes a *psiber* (one who uses psionic powers to Cyberjack) most effective at hacking computers he actually has physical access to, but they do give somewhat of an edge to long-range hacks, especially when compared to those without psionic assistance.

Telekinesis: Allows the hacker to perform actions without leaving his seat or taking his hands off of the keyboard, which can be very handy in switching disks or activating peripherals while engaged in combat or some other delicate endeavor. It is handy, but gives no significant edge, so bonuses are low: +1 to dodge and +2% to skill rating for defeating passive security. Automatic parry is also a benefit of this psi-power.

Sixth Sense: Has no effect on hacking unless the computer being hacked is within 90 feet (27.4 m) of the hacker. In the latter case, the power will function normally.

Speed Reading: An invaluable tool for someone who has to get in fast and leave even faster while being careful doing it. Speed Reading adds +1 to initiative, and +1 to parry and dodge along with a +10% to the computer skill against passive security.

Total Recall: Most effective on systems the character has penetrated or encountered before. This includes avoiding security on the way out of the system. It adds +5% to the computer skill while hacking, and when facing a system or opponent that has been encountered before, it gives +1 to strike and parry plus an additional +5% to the computer skill (for the latter bonuses, the ability must be activated).

Electrokinesis: Similar in its application to telekinesis, this ability is helpful in increasing the performance of one's own computer by freeing the hands for typing, yet still being able to perform other activities. However, when the computer being hacked is within the character's range (45 feet/13.8 m +5 feet/1.5 m per level), the electrical discharge and electrical resistance abilities can be focused into the system to aid in cybernetic combat. In this unique situation, the Electrokinesis discharge does 5D6 (but costs 4 I.S.P. instead of 2), and the character's resistance acts as medium cyber-armor (see below) for 3 melees per level of experience. Bonuses are otherwise minimal: +1 to parry and +1 to dodge, and automatic parry. When within range of the other computer, double the bonuses and add +5% to the computer skill against passive security.

Telemechanics: This is the most powerful hacking tool of the *Psiber*. It is limited by range, but even if the hacker can not get access to the target computer, this ability gives such mastery of his own system (by eliminating the delay of using a keyboard) that he can move easily and quickly through most defenses. If the Telemechanic Psiber can get within range of the target computer, or hooked in via modem (or similar connection), use the bonuses for the *Lightning Rider talent* given later; otherwise, the following bonuses and benefits are gained: +2 additional attacks/actions per melee round, +2 to strike, +3 to parry and dodge, automatic parry, and +15% to computer skills against passive security. Telemechanics allows for mental *connection and communication* with a computer, not control of it, so data must still be hacked (unless, of course, there is no security on it).

Magic

Magic and technology do not normally mix well, except for the specialized Techno-Wizard magic of **Rifts®**. However, there are a few other advanced societies that have developed magic alongside high technology and found ways of combining the two in a manner different than Techno-Wizardry. The use of spells to hack has the same drawbacks found in psionics: duration is limited, and the (P.P.E) cost of casting and maintaining the magical or "supernatural" augmentation is rather high.

Cybermancers are indeed rare, but those who can manage to combine the mystical and technological arts are impressive within cyberspace. While inside a computer (by using *Metamorphosis: Energy*), the Cybermancer can use his physical abilities with the limits explained below. This means that spells can be thrown normally, but G.M.s should use some common sense. For example, Fireball will work normally because computers and heat don't mix well (note that the fireball does not take up its normal area of affect, it manifests within the electronic and digital data realm that serves as the magician's *cyberspace reality*, and the effects are proportional. However, Extinguish Fire will not work on a digital fire. Though real in appearance, it is actually an electronic based thing, but on the other hand, *Energy Disruption* cast on the virtual fire will extinguish it. If the Game Master will be allowing a Cybermancer in his campaign, it might be a good idea to go through the spell list and make notes on what spells will work at all, and how the ones that do will actually function (The same goes for super abilities and talents).

Machine Empathy (New Spell): Range: 25 feet (7.6 m) +5 feet (1.5 m) per level. Duration: 10 minutes +1 minute per level. Saving Throw: None; only works on computers and intelligent machines. P.P.E.: 15. Level: Considered a fifth level spell.

This spell magically links the target with a nearby electronic machine, allowing him to communicate with it. If the machine is not self aware, but still capable of an array of tasks (like a computer), the spell recipient can interact with it, any internal programs and its software using some kind of input device (but at a much faster and more efficient rate) or touch. Self aware computers and artificial intelligences can be conversed with, but not given orders or controlled. The spell is very much like a form of organic to machine *telepathy* similar to Telemechanics in its results, but it does not impart the complete working knowledge that its psionic equivalent does. The spell recipient can quickly learn a lot about the machine through the link he shares with it, but this knowledge will only be about 30% (compared to the 88% of Telemechanics). **Bonuses** for hacking are: +2 additional attacks/actions per melee round, +2 to strike, +2 to parry and dodge, automatic parry, and +10% to computer skills against passive security.

Metamorphosis: Energy (New Spell; Ritual Only): Range: 50 feet (15.3 m). Duration: 30 minutes + 2 minutes per level. The spell's duration can be extended for a full period by the expenditure of another 125 P.P.E. Saving Throw: Only works on willing participants. P.P.E.: 125. Level: Considered an eleventh level spell.

This spell was specifically designed to allow someone to physically enter a computer. The spell is designed to emulate *Lightning Rider*, but it is not an exact copy. It is only available as a ritual, and the character it transforms is immediately transported into a computer (which must be nearby). The spell faithfully emulates the ability of Lightning Rider to take a character physically into the phone lines and cables of any computer network. However, it lacks the offensive capabilities of the Lightning Rider, and once transformed, the individual must enter and remain inside a computer or other data transfer device (like phone lines) until the duration of the spell ends. Leaving the data realm sooner ends the spell immediately. Use the bonuses listed for Lightning Rider when hacking with the Metamorphosis: Energy spell.

Energy Disruption: This spell can be used by a character that is inside a computer (see Metamorphosis: Energy) as a rather effective form of attack. When targeting an opponent (that fails its save), the spell disrupts it for the duration of its effect. The drawback and main reason this spell should be used carefully is that after the time has passed, the affected target immediately reappears to once more conduct its duties (like hunt down the hacker if he is still in the system). This spell can also be used to completely shut down a system, but the character must be inside the system to do such and suffers the normal effects of a system shutdown.

Robots and Artificial Intelligences: Robots with a modem connection can use that accessory as a headjack. The electronic nature of the robot's brain (even transferred intelligences use computer hardware to process thoughts into actions) makes them naturals in communicating with other computers. Like the Telemechanic and Mechano-Link hacker, robots have an amazing kinship with other computers, but unlike Mechano-Link and much like a computer taking commands from a human hacker, the robot must still fight through security. Regardless, a robot's

computer nature makes it a much more natural hacker than a human, with bonuses that include three additional attacks per melee, +2 to strike, +3 to parry, +3 to dodge, automatic parry, automatic dodge and +15% to computer skills against passive security (remember, maximum is always 98%).

AI and automated security can be set up by the Game Master separately, but for the short and sweet, assume that artificial intelligence security programs function within their own system as 8th level (or higher for advanced systems) Telemechanic Cyberjackers with 20 I.Q.s. The same AI would function in other systems (outside their own, a rare occurrence) as Hardware operatives of 6th level with 18 I.Q.s. Player character robots use their own level and I.Q. attributes to determine bonuses.

Note: For more information on various types of Cyberjacking, including examples of psionic, magical, supernatural, superhuman, bionic, and non-powered hackers from all of Palladium's technological game settings, please refer to Issue #2 of Palladium's quarterly sourcebook series, **The Rifter®**

Lightning Rider

A variety of *supernatural beings* have the power to become a creature of pure electrical energy, including many demons with electrical or lightning powers (the *Nightbane* from the **RPG** of the same name, included). Such beings can become a creature of electricity known as a "Lightning Rider" and physically enter a computer. Unless a great deal of P.P.E. is spent, the electrical charge is weak and does not inflict damage, however, while in electrical form, the Lightning Rider can travel through conductive materials at enormous speeds. When the power is activated, the physical being disappears in a flash of electricity and "leaps" onto the nearest conductive material (metal and exposed wires work best). If no such material is around, the Lightning Rider appears to become a small, pool of sparks, or a small crackling lightning ball that crawls around at a speed of 8.

With the invention of telephone and electrical wires, this power (available as a Nightbane "Talent") came into its own and enables Lightning Riders (and Nightbane) to travel from one corner of the world to the next in a matter of minutes through them. Some Lightning Riders become extremely proficient in navigating through telephone exchanges, cables and conduits. The easiest way, of course, is to call the place one wishes to travel to and then travel through the phone lines and jump out of the receiver! With the advent of computers and the Internet, this power has become even more influential. A character with Computer Operation can understand the information superhighway and hitch rides on modem calls. A character with Computer Programming can become the ultimate hacker!

Cost: 10 P.P.E. points to activate per minute (it takes one melee round of concentration to activate). The Nightbane can increase the voltage to inflict damage: 1D6 S.D.C. per 5 P.P.E., per each attack; 8 points of damage will fry most electronics like radios, portable computers, etc. Tempest-hardened systems will survive as much as 40 points before being disabled.

Bonuses for hacking are: +2 additional attacks/actions per melee round, +2 on initiative, +3 to strike and parry, +4 to dodge, automatic parry, and +15% to computer skills against passive security.

Super Abilities

There are two particularly notable super abilities that have a tremendous influence in RES, as well as a few others that help in hacking. Of all the superhuman means of hacking, *APS: Electricity and Mechano-Link* are the most powerful because they are not limited by range and can bring their full effects to bear on even the most distant of computers. Additionally, neither of them has a duration, nor must anything be spent to maintain them. Superpowered hackers are some of the most effective data thieves and saboteurs, ranking right alongside robots and Artificial Intelligences (AI).

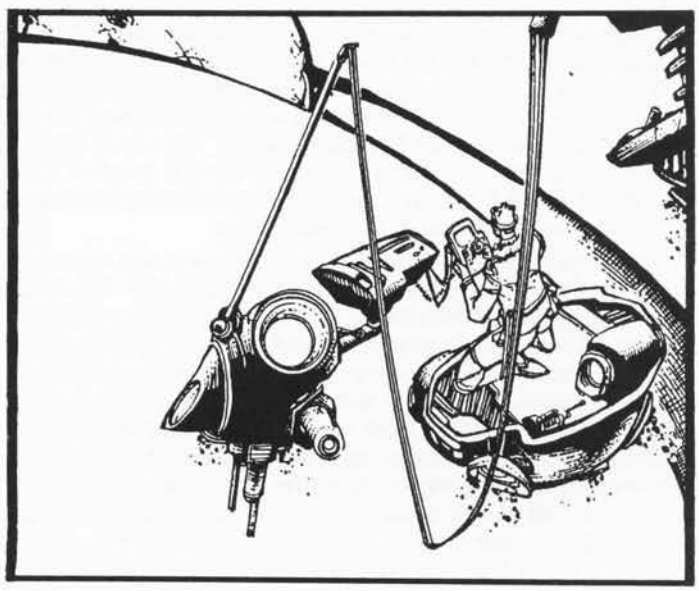
Alter Physical Structure: Electricity: This ability is very much like *Lightning Rider* with many of the same strengths and all of the same limitations, plus an additional one. This ability is not as focused or passive as the Lightning Rider. It is aggressive and hard hitting, something one can see by simply looking over the things it can do. In addition to the character using all of his physical abilities, all of his attacks in cyberspace add +10 to their damage. Because the character is actually within the computer, the electrical attacks listed under this ability can be used against active security, but it also means that (like Lightning Rider) no programs can be used, and the character must rely on his own skills. Again, it also means he can not use filters and must rely on his own S.D.C.

Mechano-Link: This is simply the ultimate hacking asset. Mechano-link allows those who possess it to completely ignore passive security and automated active security (such as search programs and simple attack AI like automated weapon programs). The only obstacle to this kind of hacker is high end, active security like other hackers, programmers and intelligent AS, but even when faced with such opponents, the Mechano-Link hacker has massive bonuses, including three additional attacks per melee round, +3 to strike, +4 to parry, and +4 to dodge. Additionally, they have both automatic parry and automatic dodge abilities.

If both Mechano-Link and Alter Physical Structure: Electricity are combined, the bonuses for this ability are added to the character's virtual abilities while inside a computer system. This is the most powerful hacking ability and when combined with one of the second most powerful abilities, the hacker is almost unstoppable (sheesh, just look at the seven attacks at first level for the average character with this combo).

Energy Resistance: This minor super ability protects any Cyberjacker using it in much the same manner as a filter. It provides no bonuses, but functions normally against cyber-combat damage, absorbing the first 20 points of damage in each melee round.

Extraordinary Physical Prowess, Extraordinary Speed and Multiple Limbs: Each of these super abilities increases the speed with which a hacker can type, and thus increases his performance slightly. They also aid a character when he is physically inside a computer, and thus the following bonuses are available. Each of the three abilities adds +1 to strike and +1 to dodge in cyber-combat. If two of the three are combined, the bonuses increase to +1 to strike, +1 to parry, and +2 to dodge. Anyone lucky enough to have all three gains an additional +2 to strike, +2 to parry, and +2 to dodge.



Space Survival

What would a guide for adventuring in the Milky Way galaxy be without some additional rules for adventuring in space? The following section will expand on some of the basic space rules given in **HU2**. Feel free to tweak them if necessary, and in the case of any discrepancies, defer to the rules given here. Basically, the Air and Space Combat Rules given on pages 86-90 of **HU2** are unchanged, except for some expansion on certain aspects of the Outer Space section on page 90.

Zero Atmosphere

The two most prominent aspects of outer space that need to be addressed when discussing both survival and combat are the *absence* of an atmosphere and gravity. Both of these characteristics are a danger to the typical space traveler, making outer space an environment that deserves all of its respect and a healthy dose of care when exposed to it. The vacuum of space is frigid, cold beyond even the chill of the frozen worlds in **HU2**. By the same token, unfiltered solar radiation can fry the unprotected character in a manner no thermal world could ever equal. Stay in the shade you say? Then it gets even colder. And once past the temperature extremes, there is the lack of pressure.

The bodies of every living thing, with a few exceptions noted later, have an internal pressure which their skins and muscles are used to containing, because the atmosphere pushes back and maintains a balance. Once exposed to outer space, there is no helpful pressure. In this situation, the gases in the blood separate and the body pushes out with its accustomed force only to find no counter-pushing. Although this will not cause one's body to dramatically explode (as has been popularized in numerous science fiction movies), it might rupture or split open at some point, causing serious injury and/or death. Even without this, space is inhospitable at best, especially to air-breathing organisms who might as well be underwater in terms of oxygen supply.

All in all, it is not a pretty picture. This is why so many precautions are taken by those who venture out into the harsh environment of space. Pressurized spacesuits with radiation and heat shielding are insulated against the extreme cold and protect the wearer from invisible rays of deadly radiation. The H.E.S.A., H.E.S.S., and Full EBA suits given on pages 190-191 of **Revised Aliens Unlimited™** are examples of such suits designed for space survival. Some races have developed psionic or magical counterparts to traditional "spacesuits" or use those mystical abilities to augment their suits. Spells that create magical force fields or body armor, Telekinesis, Breathe Without Air, Impervious to Cold, and similar magic, all come in handy in a space environment.

Coping with zero gravity is a simpler challenge solved by tether lines, maneuvering thrusters, jet packs, or magical or psionic means of flight.

Weapons & Range. The lack of an atmosphere in space means practically no diffusion or interference for energy beams or projectiles. This means that energy weapons have their ranges increased to ten times normal in the vacuum of space, while projectile weapons have their ranges doubled. In truth, projectiles have almost infinite ranges in space, but they are only practical to twice their normal range, after which drift and imperfections in the flight path begin to pull it off course. Projectile weapons can still hit a target beyond double normal range, but it is difficult (-6 out to quadruple range and -10 to seven times normal range. Beyond that it is a certain miss.). Energy weapons do not have to deal with such drift, instead losing damage to diffusion of their beams (3/4 damage out to five times normal range, ½ damage out to ten times normal range, no damage beyond that), but it is still hard to hit something that far away, so apply a -1 for each multiple in range (-1 for twice normal, -2 for triple range, -3 for quadruple, etc.). These rules apply mainly to hand-held weapons, not the larger spacecraft weaponry which relies on more powerful and precise weapons as well as more advanced aiming systems.

Spaceships & Airlocks. In order to protect the crew and passengers of a spacecraft from a loss of atmosphere, all spacecraft have airlocks. An airlock is a set of two doors, one on the outer hull of a spacecraft and the other set inside the vessel with a room of varying size between them. The room can be small enough to allow only one or two individuals in survival suits at a time or it can be large enough to hold one or two dozen individuals. Some even have spacesuit storage inside the airlock, and/or other supplies and equipment for space walks and other operations outside. The largest are made to accommodate small fighters and space shuttles.

The purpose of the airlock is to allow personnel to exit the (main) spacecraft without compromising the atmosphere of the rest of the ship. To this end, the inner door will *never* open while the outer door is open to space. The normal airlock procedure is for the personnel to leave the spaceship, enter the lock, then seal both the outer and inner doors. The atmosphere within the "lock" is pumped out and stored. Only then will the outer door opens for the personnel to exit the vehicle. And vice versa when coming inside from outdoors, with the air being pumped back in when the outer hatch has been sealed. The outer airlock door will normally close upon exiting, but the atmosphere is rarely pumped back in until the personnel return to the lock and seal both doors. Unless an airlock severely malfunctions, the only way for a spaceship to lose atmosphere is for the hull to be *breached* — i.e. a hole or crack made in it from which the precious air supply leaks out. Even so, most larger vessels are sectioned off into air tight compartments that can be sealed (not unlike those on a submarine).

Vacuum & Loss of Atmosphere

A spacecraft or spacesuit is a lot like a balloon on Earth: All of them have more pressure *inside* than the space outside. When a balloon is pierced, the pressurized air inside rushes out very quickly. In most cases, the thin skin ruptures and the balloon instantly explodes. This is what is known as *explosive decompression* and it can happen to a spacecraft or spacesuit. Fortunately, most vacuum suits and spacecraft are much better designed to resist piercing and popping than your average balloon. To get a better idea of how it normally works, put a piece of tape on the balloon and pierce it through the tape. The tape keeps the thin rubbery skin from tearing under the proportionately greater pressures inside and instead of popping instantly, the balloon will remain intact while the air whistles quickly through the small hole. When a spacecraft or suit is punctured, be it from combat or some mishap, the atmosphere inside will begin to leak out of the hole, just like the air from the reinforced balloon.

Any hole in a sealed environment in space will eventually allow all of the atmosphere within to escape, just as the pinprick will eventually deflate the reinforced balloon. For spacesuits, any small hole (up to twice the amount of damage required to cause a breach) as little as a pinprick, will vent the suit's atmosphere/air supply within 1D6+5 minutes unless repaired. Any medium-sized hole (between two and three times the amount of damage required to cause a breach) will drain the suit's atmosphere in 3D6+3 melee rounds. Any large hole (between three and four

times the amount of damage required to cause a breach) will drain the suit's air supply in 1D4 melee rounds! A gaping hole or long tear like that would be made if the spacesuit had an arm or leg blown off, venting all of the suit's atmosphere immediately.

Most spacesuits are self-sealing, so any hole up to *bullet-size* will self-seal within 1D4 melee rounds. In cultures where astronauts' lives are considered somewhat expendable, spacesuits are equipped with "chop-locks" at the shoulders, elbows, wrists, hips, knees and ankles, to prevent rapid atmosphere loss. Should a gaping hole appear on an appendage, the nearest chop-lock will automatically sever the appendage and seal the rest of the suit. A grim, but effective way to stay alive.

In spacecraft, atmosphere venting is a much more variable experience. Primitive spacecraft, such as certain Earth vessels or ships from other comparatively "low-tech" worlds may have a single atmospheric chamber within the vehicle. Any hull breach will affect the entire vehicle's atmosphere. More advanced vessels often are divided into numerous *atmospheric compartments.* In vehicles such as this, airlock-style doors seal off the compartments and passageways of the craft immediately in the event of a hull breach. Typically, just the areas adjacent to the breach are sealed off, allowing the rest of the ship to function as normal.

Any small hull breach (up to twice the minimum amount of damage required to cause a breach) will vent 100 tons worth of atmosphere within 1D6+12 minutes, whereas a 300 ton vessel will lose its air supply within 3D6+20 minutes. Any medium hull breach (between two and three times the amount of damage required to cause a breach) will vent 100 tons worth of atmosphere within 3D6+8 melee rounds. A large hull breach (between three and four times the minimum amount of damaged required to cause a breach) will vent 100 tons of atmosphere within 2D4 melee rounds. Any hull breach greater than a large breach will vent 100 tons worth of atmosphere in a single melee round.

Breach Rules and Repairs. The rules for getting holes in a spacesuit and repairing them are unchanged from page 90 of **HU2**, but there are a few clarifications. All damages listed and the rules for patching them are unchanged, except when the spacesuit has more than 125 S.D.C., in which case add 10 to the required numbers. Using this rule, for example, it would require an attack doing 32 points of damage to make an unpatchable hole in a full E.B.A. suit (S.D.C. 180-250). Keep in mind that the given numbers are for each attack that actually penetrates the A.R. and does that full amount of damage in a single blast/attack, not each attack that damages the suit's armor and not accumulative damage from multiple attacks (bursts and volleys count as a single attack). All survival suits come with patch kits that contain 6+1D4 patches. Each patch can seal a small hole. Two patches can seal a medium hole, four patches can seal a large hole. Holes larger than that generally can not be patched in time to do the wearer any good. Emergency atmosphere supplies can be added to survival suits, but once the atmosphere is gone, exposure will set in as the cold of space affects the astronaut.

The rules for spacecraft suffering a hull breach are changed from those given in **HU2.** First, one has to consider the vehicle's (or robot's) *Armor Rating (A.R.)* – any roll to strike below the A.R. bounces off, doing no damage (other than a scuff, scrape or burn mark). Any roll to strike *above* the A.R. damages the armor/hull, but that does not mean that it actually penetrates the armor. According to the rules, the armor must be totally depleted before there is a breach and any internal systems, like the pilot, can be damaged. However, **Heroes Unlimited** uses a system that gives an overall S.D.C. rating to vehicles and robots. So, what if the armor is depleted on only one little part of the robot/spacecraft? Simple, it starts to leak atmosphere. Thus, the only modification to the system presented in **Heroes Unlimited** is as follows: Any hit over the A.R. of a spacecraft or robot *that does enough damage* will cause it to leak atmosphere. For every 100 tons of a spaceship's mass, 50 S.D.C. damage is required to puncture the hull and cause an atmosphere leak. Additionally, multiple attacks can be directed at the same area in a deliberate attempt to blow a hole into a spacecraft. In such a case, the subsequent attacks will accumulate damage toward a leak, but each attack beyond the first must be a called shot taken with a -4 penalty to strike. This same system can be used for repeated targeting of holes sealed by an automatic hull breach sealing system.

To seal a breach, one must keep in mind that most spacecraft will have "patch kits" designed for their types of hulls. Second,

remember that the damage needed to puncture a craft is proportional, so that a 400 point hole in battleship armor can often be patched easily because it is the minimum damage needed to cause the craft's atmosphere to leak and the size of the actual hole will not be very large (golf ball to grapefruit size). A 400 point hole on a small shuttle, however, is quite another story and may be the size of a door to the size of a house. Holes made by the minimum damage can be patched in two melee rounds. Holes two to three times the required damage can be patched in eight melee rounds (two minutes), and larger holes (more than triple the minimum damage) can not usually be patched.

Spacecraft with *emergency hull breach sealing systems* do not have to worry about atmosphere loss until their third backup is penetrated. An automatic hull breach system can even seal a normally unpatchable hole, but if its third backup suffers a hole too large to patch, the area will have to be sealed off.

Once a spacecraft, robot/power armor or spacesuit begins to lose atmosphere, the occupant(s), naturally, will want to seal the breach and preserve atmosphere before it all vents out. Characters on board a spaceship can use that time to perform minor tasks in the room (like heading for the airlock, grabbing an extra spacesuit or oxygen bottles, or setting a weapon turret to automatic, etc.) before the doors automatically close and the compromised section is sealed off. Ultimately, one must get out and into a part of the ship that has not been breached. This is very much like the crew on an ocean ship or submarine running to an airtight compartment when the one they were in has been breached and water starts to run in. Only in this case, the air is running out (and gravity probably lost).

A character inside the breached section/room with access to a spacesuit and tools could also seal himself in and try to effect repairs without having to go outside the craft. Once the hole was fixed, the room can be re-pressurized and used normally. Breaches beyond repair can only be sealed off.

The only possible complication in such a scenario is if the sealed off area is vital to certain operations and does not have an automated backup system. This kind of situation is why characters should not trim costs by skipping on a navigation robot or automated combat computers. This is also why most military spacecraft require their crew to wear spacesuits when combat is anticipated, so that in the event of a hull breach, they only need to don a helmet rather than evacuate that compartment.

Suffocation & Depressurization Rules

So what happens when a spacecraft or spacesuit has a hole in it that can not be patched in time, or at all, and there is no place to go? Spacecraft occupants who can slip into a spacesuit will be fine as long as their air supply holds out. Spacecraft occupants without spacesuits or those wearing breached spacesuits, however, are in a spot of trouble. Keep in mind these rules have a *heroic bent* and are more lenient than reality would dictate.

Without a breathable atmosphere/air supply the character will suffocate. Once the atmosphere is gone, characters have four melee rounds (one minute) to do something, before they black out.

Forget holding one's breath, since the vacuum won't allow it. As soon as atmospheric pressure is gone, the air in one's lungs exhales with one great rush that can not be stopped. Each melee beyond the first four requires a *save vs lethal poisons* and each save is made at a cumulative -2 to save. If the first such save is successful, the character remains conscious, but loses all of his S.D.C. Each subsequent round that a save is made, reduce the character's Hit Points by 10%; when they reach zero, he is unconscious, regardless of saving throws.

If at any point, the attempt to save *fails*, the character blacks out, and Hit Points are reduced to zero. At the end of the round in which a character blacks out, he will die if not returned to an atmosphere and given prompt medical attention.

Note: The typical airlock takes *1D4 minutes* to cycle out air and open or one minute in a rush, but luckily they have emergency measures that allow the outer door to be opened while the inner door is sealed, thus dumping the atmosphere (if present) in the lock out into space, but allowing it to open in one melee action. Once the outer door closes (half a melee round/6 seconds), it automatically reseals and the inner door can be opened to flood the lock with air in another action or two (2-6 seconds). In addition, the more advanced and/or safety conscious spacecraft will have emergency air masks *in* the airlock so those returning in a hurry can breathe while the airlock doors open and close in their normal cycle of 1D4 minutes.

Cold. In addition to suffocation, a character with no atmosphere in their spacecraft or survival suits (or anyone sucked into space without protection) also suffers from exposure to the extreme cold of the void. The normal exposure rules for extreme temperatures in **HU2** have an eight hour period between application of penalties, but in the unforgiving environment of space, exposure penalties are applied *every melee round (15 seconds)* the character is in the frigid grip of the vacuum. Thus, each melee of exposure will see the character suffer from cumulative penalties of -2 to P.S. and P.P., -8 S.D.C. (then Hit Points), and a 30% reduction in speed.

Reduce the penalties for beings from *frozen worlds*, but still apply them each round. For aliens from *thermal or aquatic worlds* and those with their structure altered to water, double the penalties. Characters normally immune to cold still suffer from exposure, but only the initial penalties for the normal exposure rules would apply and they would only receive penalties every eight hours (if they had atmosphere to survive that long).

Radiation. Additional damage may be suffered by character in space if they are not fully shielded from the radiation. Radiation is not a worry if in the shadow of a planet or large object or if the character is in a spacecraft or spacesuit, even one with a hole in it. The only exception to the latter two will be in the case of two or more unpatchable holes in either the suit or the spaceship/room the character is in. Exposed character take *1D6 damage per melee round* (15 seconds) from radiation and have a 01-20% chance each round of contracting radiation poisoning. After all, outer space is saturated with stray radiation; without any atmosphere or spacesuit shielding to soak that up, astronauts are exposed to potentially lethal dosages in very short spans of time. **Note:** Super beings with the power of *Control Radiation* and *Absorb Energy* are not harmed by radiation. Those with *Energy Resistance, Bend Light* and *Energy Channeling* suffer 1D4 damage every minute (4 melees).

The "super" factor. Some aliens and super-powered characters can survive in space or are more tolerant (take a quarter of the normal damage) to the harsh conditions of the vacuum, either by virtue of physiology, or artificial or superhuman means. Those characters who can survive exposure to the vacuum of space (the lack of atmosphere, extreme cold, exposure to radiation) include those who are *Invulnerable, Intangible, can turn into energy or an inorganic substance* (ice, stone, energy, etc.), *robots, androids, full conversion cyborgs,* and *mineral aliens* and even most of them need air. Note that Alter Physical Structure: Fire will be instantly extinguished by the vacuum of space and can not be activated while lacking air to burn. Likewise, a character using APS: Water will freeze solid within 3 seconds in space.

The following **super abilities** need no or little physical protection, and only a supply of atmosphere/air to survive in space indefinitely: *Adapt to Environment, Alter Physical Structure (APS): Electricity, APS: Ice, APS: Metal, APS: Stone, APS: Smoke, APS: Plasma, Copy Physical Structure* (to one of the previous APS), *Create Force Field* (only provides atmosphere if created before air is gone, but can also be used to seal holes in ships and suits), *Force Aura* (same limits as Create Force Field), *Invulnerability, Intangibility, Teleport* (if used to get the character to safety instantly) and *Mega-Heroes.* These characters can survive as long as they have air to breathe, and survive 10 times longer than normal without air!

Those with the following powers will take one quarter the normal damage from the vacuum of space, and last three times as long without air: *Bio-Armor, Immortality, Karmic Power, Energy Absorption, Extraordinary P.E.* and *Healing Factor* as well as *Ancient Masters, partial conversion cyborgs, mystically bestowed, and insect aliens.*

Helpful **psionic abilities** include *Impervious to Cold* (negates cold exposure, but not radiation or general void exposure effects) and *Telekinetic Force Field* (will protect from suffocation if erected before atmosphere is gone, but not from cold or radiation exposure). *Bio-Regeneration* or *Summon Inner Strength* will help diminish damage by half and give the character an extra 2D4x10 seconds to survive suffocation!

Aliens from high radiation worlds (immune to radiation, but not cold or general exposure), those from no atmosphere home worlds (immune to suffocation, but not exposure), experiments that do not breathe (immune to suffocation, but not exposure), aliens from an abrasive atmosphere home world, and any character with a *Natural A.R. of 13* or higher will suffer half damage.

Helpful magic spells include *Armor of Ithan* (protects against general void exposure and half effects for cold exposure), *Breathe Without Air* (stops suffocation, but not exposure), *Impervious to Cold* (same as psionic ability), and *Metamorphosis: Mist* (protects against void exposure and suffocation, but not cold exposure).

Recovery. Those characters returned to an atmosphere before they black out, whether by their own resourcefulness or the efforts of rescuers, will recovery rapidly.

Anyone other than super beings, supernatural creatures, robots and androids exposed to the vacuum for more than a few seconds will show and feel the experience. For each melee round they were exposed, they suffer a -1 to all combat rolls for 1D4 hours and their P.E. will effectively be reduced to half for that same period. Thus someone in the void for four melees before being rescued will be -4 to all combat rolls and at half their P.E. for 4D4 hours. In addition to these penalties, they will suffer from whatever damage they endured in space and any other exposure penalties will linger for 8+1D4 hours. Thankfully, any lost S.D.C. returns at ten times the normal rate and Hit Points at twice the normal rate, but if the character lost all Hit Points and entered a coma/blacked out, he must be properly treated as such before he can recover further. All of the surviving coma rules apply and the recovery of Hit Points/S.D.C. are not accelerated in the latter case; additionally, any exposure penalties, both from the cold and for simply being in the void, will linger in this case for 1D4 weeks.

Zero Gravity

By Wayne Breaux Jr. & Kevin Siembieda

In the emptiness of space there is no gravity. That lack of gravity means little or no weight and a tremendous increase in the perceived strength of a character. This effect is paramount to understanding the handicaps of zero gravity. In such an environment, every character has the lifting capacity of Supernatural P.S., allowing them to carry weights equal to 300 times their P.S. and lift/push as much as 500 times their P.S. rating; however, *none* of the other traits of Supernatural P.S. are conferred, only lifting and pushing increases.

Those characters who already have Supernatural P.S. retain their increased damage and will find their lifting and carrying weights increased by *ten times.* However, these increases are only for situations where the character is anchored or braced properly, otherwise his or her mass is compared to that of the object, and moving thousands of pounds will not be possible, even for a supernaturally strong character who can normally lift the same weight! Why? Because in the weightless void of space the laws of physics still apply, most notably the fact that for every action there is an equal and opposite reaction, and without gravity to help give a common point of reference to the two objects, the character lacks the leverage and mass to move it.

When a character under normal gravity pushes against an object to lift it, his feet push back against the ground with a pressure equal to the weight being lifted. Gravity pulls down on both of them, giving a common point of force for the character to work against. If the same object were lifted in zero gravity, the *unan-*

chored character would find himself tumbling as he lifted it, since his feet would move in the opposite direction, drifting away from their previous position to counteract the motion of lifting. So technically, he could move it, but not accurately lift it, plus the act of doing so causes drifting and spinning. *An anchored character* on the other hand, can use a spacecraft, space junk or whatever to brace against to counteract that drift and move the object.

Likewise, when punches are thrown in combat, the character will have trouble stopping his momentum and will drift in the direction of the attack, just as his opponent will find it hard to resist moving in the direction of his dodges or is pushed from the force of the attack once he is hit. The momentum of the punch is transferred to his weightless form and does half damage but knocks him away and sets him floating. This is why weightless activities seem to happen in slow motion; it is difficult to take actions when there is nothing to *counter* the initiative and actions have to be carefully controlled in order to avoid uncontrolled reactions.

Characters will float helplessly within the void unless they have some kind of anchor or tether to pull themselves along or means of propulsion. Anchoring oneself to a stable surface or having some kind of propulsion to provide resistance (as well as maneuverability) will greatly reduce the difficulties of functioning and fighting in zero gravity, but they can not totally negate them. Only a handful of technological or superhuman assets will negate those difficulties by providing *artificial gravity* for characters active in space. Some of these rare assets include judicious use of the increase gravity aspect of the major super ability of *Gravity Manipulation* or similar abilities from the alter and control vacuum powers, the minor super ability of *Flight: Wingless* (Flight: Winged and Flight: Glide will not function in the void of space for there is no resistance with no atmosphere), the *Personal Gravity Field spell*, practically applied *telekinesis* (uses one attack per melee to concentrate on this application), and the very expensive *personal gravity systems* (see the TGE Product Catalog). All of these will negate any penalties for zero gravity and allow a character to use combat bonuses and fully apply their P.S. (the increased lifting weights still apply). Also note that spacecraft with artificial gravity will have their full gravity *inside* the vessel and half gravity on the hull, unless they are armored with medium or heavier armor. Medium spacecraft armor and anything heavier will block any effects from a gravity generator from seeping through the hull. Those characters spacewalking on such military-class armor will need tether lines or magnetic boots to help anchor them unless they are using jet packs or other means of propulsion.

Combat in Zero Gravity

The lack of gravity in space can be disorienting and make moving difficult, especially in any kind of combat situation. Things seem to move in slow motion and punches can send the attacker drifting away even as his victim spins in another direction. To simulate some of this, we apply penalties to the actions of characters in zero gravity.

Free floating characters not anchored to a stable surface and with no means of propulsion have the following penalties (this includes characters on a stable surface, but not anchored or braced):

- Reduce attacks per melee round by half (each attack/action takes up twice as many actions as normal). Physical damage inflicted is half that of normal.
- -4 to initiative, strike, parry, dodge, pull punch and disarm (but +6 to roll with impact).
- Reduce the speed attribute to a paltry two points!
- **Character that are braced or anchored, tied in place, tethered, or using spells** like Carpet of Adhesion have reduced penalties, but dodging is still difficult due to the need to overcome the very anchors that make their actions easier.
- -2 attacks per melee round. Physical damage inflicted is half that of normal.
- -3 to initiative, +2 to strike, parry and pull punch,-4 to dodge and disarm.
- Reduce the speed attribute by 70%.

Characters with flight or anti-gravity. Robots, exo-skeletons, or bionics with maneuvering systems or those with *flight capabilities*, including jet pack, mechanical device, superhuman, magical or psionic flight, as well as those with powers that negate/counter weightlessness, suffer *no penalties* in zero gravity.

"Basic" Zero Gravity Combat skill provides the character with bonuses rather than penalties!

- Number of attacks per melee round are unchanged.
- +1 on initiative, +1 to strike, parry, disarm, and pull punch, and +2 to dodge.
- +5 to normal speed.
- Punches, kicks and physical attacks do normal damage (do not reduce by half).

"Elite" Zero Gravity Combat skill gives the character the following bonuses. The bonuses from zero gravity combat training apply only when the character is in a *weightless state*, not just when he is in space. Thus, a character with a super ability or other means of negating the penalties of zero gravity does NOT gain the Zero-G Combat bonuses unless those abilities fail him and he is subject to weightlessness. Likewise, the character suffers no penalties when made weightless by the *Gravity Manipulation* super ability.

- +1 attack per melee round
- +1 on initiative, +2 to strike, parry, dodge, disarm, and pull punch.
- +10 to normal speed.
- Punches, kicks and physical attacks do normal damage (do not reduce by half).

Throwing punches, kicks and other attacks in Zero Gravity

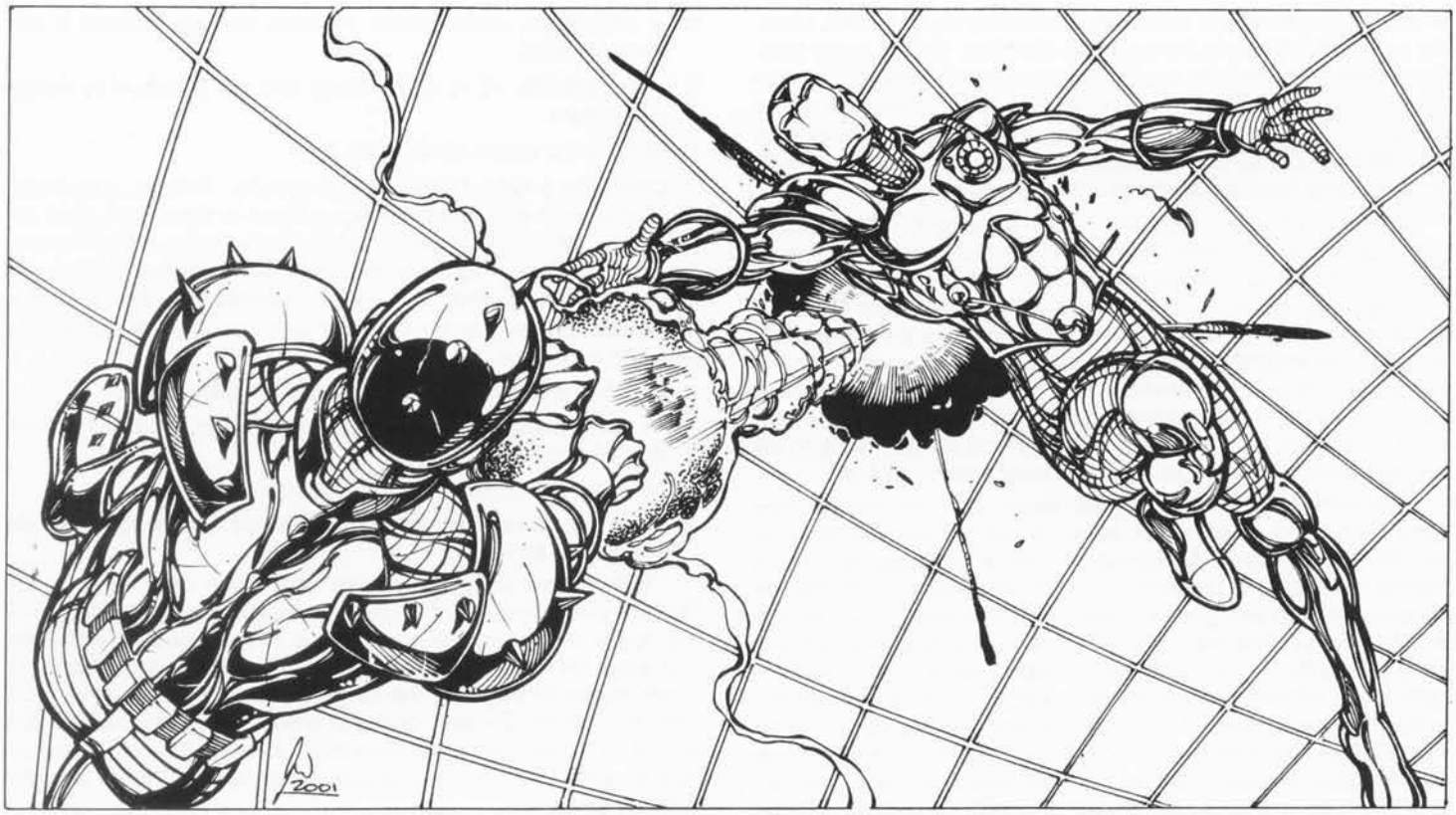
The following incidents and reactions only apply to those without Basic or Elite Zero Gravity Combat training and who are not anchored down or otherwise immune to the effects of no gravity. Those trained for Zero-G combat automatically shift their bodies and adjust their attack moves to avoid the pitfalls that follow. Zero-G trained combatants and those with flight capabilities (or gravity nullifying powers) can stand toe to toe with each other and slug it out like normal. **Note:** The following penalties and reactions also apply to combat with melee weapons (swords, clubs, etc.).

Throwing a punch and missing will cause the character to lunge in the direction of the punch and float *past* his opponent, giving "the dodge" move greater significance in Zero-G.

Making a kick that misses will cause the character to spin *away* from his opponent. Putting 2D6 yards/meters between him and his opponent every melee round until he can stop the spinning and right himself. However, this can only be done if the character has some sort of propulsion (air gun, maneuvering jets, etc.), or if he has the *Acrobatics or Gymnastics* skill. These two skills enable the character to stop the spinning and himself right immediately, but use up one melee action/attack. And don't forget, these fighters are probably already fighting with penalties.

Connecting with a thrown punch or kick. First, the punch (kick, head butt, body slam, etc.) does *half damage*! Cut any P.S. damage bonuses from P.S. attribute or skills in half too.

Second, the victim struck floats backwards away from the hitter, and the hitter floats backwards away from his opponent. This puts 3D6 yards/meters between the attacker and his opponent



every time they hit, kick or collide with each other. They will continue to float apart until one or both can stop their backward floating, right themselves and move in for an attack. However, this can only be done if the character has some sort of propulsion (air gun, maneuvering jets, etc.), or if he has the *Acrobatics or Gymnastics skill.* These two skills enable the character to stop floating or spinning away, right himself immediately (uses up one melee attack/action) and lunge forward (using up another melee attack/action) for the next strike. Don't forget, these fighters are probably already fighting with penalties.

Parried attacks. A successful parry means a minor collision which causes the two combatants to drift in the opposite direction of each other (probably switching positions) much like connecting with a punch, only the distance they float is only 1D6 yards/meters per melee round. The usual method of righting oneself and returning to attack applies.

Grappling and holding one's opponent is a good way to avoid drifting away before the combat is concluded (heck, in many cases, before it's barely begun). In fact, space pirates, raiders, mercenaries and soldiers will often try to hold on to their opponent with one hand and pummel away with the free hand. Wrapping one's feet and legs or entanglement with a cord has the same result. Strangely enough, this coupling has a few advantages. 1) The two battlers do NOT float apart. 2) Neither can use a parry or dodge (they just hold and hit each other). 3) It is hard to miss each other (only a strike roll of 4 or lower misses). And 4) Wrestling moves such as pin and crushing attacks (bear hugs) as well a head butts can be used.

However, while the two combatants are held together, the force and motion of their actions will cause them to float or spin away from where the confrontation started. Linked as they are, they probably don't even feel the motion and can continue to fight unabated. The problem is that they will be floating away from their original starting point — and most likely, away from their spacecraft and comrades at a rate of 2D6 yards/meters per melee round. At the end of the fight, the winner (and the beaten or slain body of his opponent) may find himself lost in space.

Breaking a grappling hold. It is often the case that two Zero-G battlers both desire to hold on to their opponent, in which case the fight goes on until one beats the other into submission or the spacesuit, environmental battle armor, or exoskeleton/power armor is "breached." A breached suit will send that character scurrying to safety or to plug the hole. Or it will kill him in a few minutes. Of course, he may try to kill the antagonist responsible first.

If one of the fighters wants to break lose from a hand hold or from being entangled by his opponent's feet or legs, he twists and pushes to break free. This combat move is done just like a roll to strike vs a parry (or in this case, a move to hold on). Roll to strike (in this case break free). The opponent rolls to parry (in this case to retain his hold). High roll wins. Ties go to the guy holding on. A successful break free strike means he pulls away but the two opponents are only a punch or lunge apart – unless the character has the *Acrobatics* or *Gymnastics* skill (or either of the Zero Gravity Combat skills), in which case he can somersault 1D6 yards/meters away. The move to break free from a hold counts as one melee attack and the action of holding on also counts as a melee attack.

Breach Attack! Obviously the quickest way to incapacitate, if not kill, one's opponent in outer space is to breach his environmental suit. As noted earlier, this mean, rolling above the Armor Rating of the suit or protection (force field, etc.) and inflicting a large amount of damage in one lethal attack. A typical spacesuit will require around 30-35 S.D.C., body armor and power armor 50-60 S.D.C. (sometimes more). This is difficult to do with one's fists if an ordinary human (or human equivalent), especially considering those unskilled in Zero-G combat inflict half their normal punch and P.S. damage, but may be possible with a weapon, and very possible if one is trained in Zero Gravity Combat or has superpowers!

To use a melee weapon or one's fist or feet (kick), the attacker must announce he is making a *power punch* and roll to strike as usual. If the strike roll beats any attempt to parry or dodge, and if the roll bests the A.R., then the attack hits as a power punch, inflicting DOUBLE DAMAGE! If the damage is enough concentrated force to *breach* the suit, a small tear or hole or crack appears and air rushes out as described earlier in the section about Space Survival. Note that the *power punch attack* counts as *two* melee actions/attacks.

Projectile Weapons that utilize any kind of kinetic energy, such as firearms, rocket launchers, mini-missiles, rail guns, etc., send the attacker drifting backward at a speed equal to the number of dice the weapon does for damage in yards/meters. So if the weapon does 4D6 damage, the shooter is knocked back 4D6 yards/meters every melee round. As usual, the power of flight (natural or artificial), a tether or brace to hold one in place is needed to negate this effect. Acrobatics, Gymnastics and either Zero Gravity Combat skill can stop the backward movement at the cost of one melee action/attack and only after being knocked back 1D4 yards/meters. Unless firmly anchored to a spacecraft or other mass, projectile weapons are not effective as hand-held weapons in space.

Energy weapons and Energy Expulsion super abilities (and magic spells) have no appreciable kickback, and do not send their users flying when used in zero gravity. They also often inflict sufficient damage to "breach" spacesuits and light to medium body armor. Heavy energy weapons and powerful energy wielding creatures may possess enough firepower to breach power armor and the hulls of light to medium spaceships. Energy blasts can not be used like a power punch. Whatever damage they inflict is all they do per blast. Moreover, to "breach" using an energy weapon, the attacker must make an aimed, "Called Shot" and hit, otherwise it is assumed the S.D.C. of the main body absorbed the damage. The same is true of projectile weapons.

Advanced Space Combat

The advanced nature of electronic warfare plays an important role in any space combat. To that end, this section introduces a number of new, but entirely optional rules for passive sensors, active sensors, and other electronic hardware for use in a galactic campaign. These rules are meant to add to the act of "prowling" in a spaceship — sneaking up on and evading one's enemy. If such rules become burdensome or displeasing, feel free to not use them, or to use them only for dramatic purposes. Enjoy.

Passive Sensors

Passive sensors monitor energies given off by other things, including heat from engines, radiation from stars, gravity from planets, and noise from machines, the crew, docking, etc. By interpreting this information into imagery, passive sensors provide a reasonably accurate means of scanning an area for potential hostiles in such a way that makes the scanning vessel very difficult to detect. Namely, the "passive" scanners do not themselves emit any detectable energy or signal. As a result, military craft, pirates, smugglers, and any other craft that wish to avoid detection will operate on passive sensors as much as possible.

Passive sensors are basically the advanced sensor systems that virtually all spacecraft rely on in one form or another to make their way around the galaxy. The major difference in such systems between differing spacecraft is the amount and level of sensors and to what use they are applied. A cargo ship will certainly use passive sensors to help it maneuver and during routine flights to alert it to certain dangers, but such a spacecraft will tend to rely more heavily on active sensors. Military and pirate spaceships on the other hand, will have an extensive passive sensor network designed to allow the vessel to operate with little chance of being detected while still being able to locate and identify possible enemy targets.

The average passive sensor network will combine thermal, magnetic, radiation, light, and other sensors into a system that can detect and classify planets, spacecraft, and other solid objects. These systems often do not specifically detect solid objects, but instead pick up the void these objects make by interrupting the flow of energies the individual sensor would normally pick up. For example, on passive sensors a planet might come up as a "hole" in space within a larger field of radiation or magnetic energy. In general, it is almost impossible to miss something as big as a planet or a moon when using passive sensors. Detecting smaller items, such as certain rogue asteroids, comets, or spacecraft, however, is a bit more tricky.

To accurately detect something small and/or highly mobile using passive sensors, the operator must make a successful Read Sensory Equipment roll. A failed roll means the operator will have overlooked any suspicious readings or indications of a possible threat. In most cases, the operator will simply think that the scan did not turn up anything.

A successful roll will reveal the size, shape, movement, and other details of solid objects within the scanning area by interpreting how they react, interact, and block energy readings. For example, a successful passive scan would reveal a large metallic object with similar profiles to a battleship moving at 40% of factor speed at a range of 125,000 miles (200,000 km) and heading in a specific direction. If the battleship's profile in this example were already within the scanning vessel's combat computer, it is likely be positively identified. A skilled scanner operator should also be able to make an educated "guess" at what it represents (in this case a battleship). *Active sensors* might actually be able to pinpoint exactly what kind of battleship (friend or foe) and whether or not its weapon systems were charging up (for an attack on them?). However, active sensor probes would reveal their presence, location and identity to the battleship. Other than the generally limited ranges of passive sensors, their only major drawbacks are the lack of fine detail they can provide and the fact that they are easier to block or hide from than active sensors.

Game Rules for Passive Sensors: Passive sensors are included in the advanced sensor package for all spacecraft. Advanced passive systems will come with military sensors, have extended ranges and better object profile databases than the basic passive systems. Passive sensors are best handled with the Read Sensory Equipment skill. If a character does not have this skill but can operate computers, he can recognize big blips and obvious readings, but can not hazard a guess about what they mean or notice more difficult or hidden targets, nor see or interpret subtle (yet telltale) readings and data. The G.M. may want to impose skill penalties ranging from -5%-25% for noticing and interpreting obscure or subtle sensor readings and when an opponent is using countermeasures, cloaking systems or actively trying to hide his presence (i.e. hiding in an energy stream or gas cloud to throw off readings, etc.). Apply penalties based on logic and common sense.

If a spacecraft is operating on passive sensors, all weapons operate only with the bonuses of the gunner. Laser targeting systems and radar are "active" sensors and will tip off one's enemy to their location. However, once combat is begun, active systems are usually engaged to give the vessel and its weapon systems their full combat bonuses. The spacecraft itself gains no bonuses in combat except those gained possibly from propulsion type and spacecraft class.

When a spacecraft is attempting to *move undetected*, it may do so by navigating by passive sensors (and even vision) alone. When done correctly, this enables the vessel to essentially use the **Prowl** skill and sneak by enemy ships, satellites or observation posts. When navigating by passive sensors alone, the skill ratio of the captain's pilot skill becomes the spacecraft's skill ratio for prowling. Bonuses to this ratio can come from spacecraft modifications such as stealth coatings and propulsion systems that are difficult to scan for, such as laser sails. Even under good conditions, however, this kind of stealth is difficult and sneaking right up alongside an enemy spacecraft is almost impossible. Getting away on the other hand, is very possible.

When the prowling vessel is at the edges of its opponent's sensor range, the percentage to go undetected (or "prowl") is normal (equal to the captain's piloting skill ratio). At distances up

to one half sensor range, a penalty of -25% is applied to the passive vessel's chances to prowl. Getting within 'visual' range applies an additional penalty of -25% (for a total penalty of -50%) to the passive vessel's chances to prowl. Visual range includes line of sight as well as certain immediate sensors and the fact that a spacecraft that close is about as hard to miss on scanners as a planet. This close range is about 100 miles (160 km) or so, but spacecraft can cover such distances quickly, and few crews will be able to respond to such an immediate presence in time.

If a prowling vessel attempts to move unnoticed and fails, the spacecraft it is trying to avoid has a normal chance (successful Read Sensory Equipment roll) to detect it. If the prowling spaceship successfully moves *undetected*, then it will remain invisible to the opposing vessel unless 1) the prowling spacecraft opens fire, 2) the prowling ship switches to active sensors, 3) the prowling vessel moves closer to the detecting craft, or 4) it suddenly engages a light speed propulsion system. As mentioned before, there are three basic ranges at which a prowling vessel may be detected: at the edge of the detecting vessel's sensory range, at half the detecting vessel's sensory range, and within visual contact (usually within 100 miles./160 km) of the detecting vessel. Whenever a prowling vessel crosses one of these thresholds, it must roll again to keep prowling, otherwise it will become open to detection.

For example, the pirate vessel *Razorfish* is navigating by passive sensors alone in an attempt to sneak up on the cargo vessel *Sundog*. As the *Razorfish* enters the outer edge of the *Sundog*'s sensory range, the pirate captain rolls to have his ship sneak closer to the *Sundog* without being noticed. The pirate captain's Pilot "Small" Military Spacecraft skill ratio is 60%, and he rolls a 55%, so he sneaks in undetected. Until the *Razorfish* reaches the halfway point of the *Sundog*'s sensory range, the ship remains hidden. When the *Razorfish* crosses over the halfway point of the *Sundog*'s sensory range, the pirate captain rolls again to stay hidden, this time at -25%. The pirate captain rolls a 33%, just under the 35% he needed to roll. Thus, the *Razorfish* remains hidden and sneaks even closer to its unsuspecting prey. At this point, the pirate vessel could probably open up with its weapons and hit the *Sundog* by surprise, but the pirate captain wants to get even closer, apparently convinced that his good luck will hold out forever. Despite the protests of his crew, the captain pushes the *Razorfish* into visual range of the *Sundog*. The pirate captain rolls again to remain hidden, this time at -50% because he is so close to his opponent. The captain needs to roll under a 10%, but botches it with a skill roll of 44%. Now the *Razorfish* is essentially out in the open, the pirate crew is nervous, and the pirate captain is beginning to wonder if he should have launched a missile volley back when they were still hidden. Meanwhile, the *Sundog*'s diligent scanning officer takes a look at the ships's sensors and sweeps the area for possible trouble. The officer's Read Sensory Equipment skill ratio is 88%, and he rolls a 29% — success! The officer spots the *Razorfish* brazenly sitting only 90 miles (144 km) away, recognizes it as a likely pirate ship and without hesitation, alerts the crew, who immediately lock onto the *Razorfish* and open fire. As the pirates watch multiple volleys of missiles bearing down on them, they all realize that their career as interstellar criminals is about to come to an explosive end.

Active Sensors

Active sensors are more accurate and powerful than passive ones, but they must emit some kind of energy or otherwise *actively search* for the information they provide. As a result, active sensors are fairly easy to detect, and not advisable for spacecraft trying to maintain a low profile. To better understand the difference between active and passive sensors, try comparing light-amplifying nightvision goggles to a searchlight. The goggles may not provide as much visual detail, but their use is undetectable. A searchlight may render a great deal of visual detail, but its use is obvious not only to the enemy target, but anyone else within range to see it. Moreover, the visible searchlight can be traced back to its source, making the user vulnerable to attack or countermeasures. Such is the difference between active and passive sensors, a tradeoff between scanning clarity and detectability.

Some of the common active sensors include targeting radar, infrared and ultraviolet optics, targeting and range-finding lasers, sonar and a number of unique sonic or unidentified energy systems in use across the galaxy. Active sensors do the same things as passive systems, but much more aggressively. Where passive sensors might reveal the presence of a battleship, active sensors will also show identifying marks, visible weapons and armor, accompanying fighter craft close by, external damage, crew movement, energy spikes common to the activation of weapons or other systems, and so on. At the same time, said battleship would probably know that it had just been scanned, and would take action to locate the one doing the scanning and to take the appropriate action, which is likely to include investigating or attacking the one probing it. That is why many battleships rely on passive scanning until they are ready to open fire or make their presences known in an act of intimidation or show of force. Once they are probed or believe themselves to be in danger of attack, they will actively scan the area and their target(s) before commencing an attack. Knowing they have been "scanned" also gives the battleship the option to initiate evasive action or special cloaking, call for reinforcements, dispatch reconnaissance scouts, attempt communications with the probing vessel, or engage countermeasures in anticipation of an attack, rather than open retaliation with weapons blazing.

Most civilian and commercial spacecraft have no need to hide and will thus run active scans all the time. Likewise, many military vessels will also run active until they have orders to the contrary or they enter an area that holds some risk or where they don't belong (like behind enemy lines). As soon as any kind of battle or confrontation occurs, however, nearly any vessel will go active and crank up their sensors to watch for any early warning of attack or increased aggression.

Game Rules for Active Sensors: These sensors are more direct in their activities and readings and thus much more similar to other sensor systems presented in **Heroes Unlimited™**. Active sensors that provide bonuses, such as laser targeting, combat computers and radar, will generally function normally without requiring rolls to operate. Scanning objects with active sensors for information does require a Read Sensory Equipment skill roll, including radar and sonar rolls to get information on targeted craft. Such systems will lock onto targets, but getting full details on what it is exactly (beyond general classifications) will be up to the operator.

Active sensors can detect the charging of a weapon system, though not usually in time to dodge (weapons that only fire once or twice per melee round are exceptions and a spacecraft will be +1 to dodge them, if a successful Read Sensory Equipment roll detects the weapon charging). They can also detect when a spaceship is accelerating to light speed and those with the right systems can detect the signatures of life forms close to the hull, but the latter can only be done when within 10 miles (16 km) or less. Active sensors can also detect the launching of lifeboats, shuttles, fighters, satellites, power armor and missiles, as well as the presence of force field generators, and defensive coatings. They can even estimate the number, range, speed and trajectory of missiles in an approaching volley. Note that the self-guidance systems of missiles are also a form of active sensor so the ship doing the scanning can tell if the missiles have a lock on them. Medium- and long-range missiles may have computer guidance enabling them to change their course and dodge attacks made on them, fooling sensor scans.

A spacecraft operating its active sensors can not attempt to prowl and will be automatically detected by anybody running active or passive sensor scans themselves. At the G.M.'s discretion, certain circumstances *may* allow a ship running active sensors to remain undetected or able to shut down active scans in time to avoid detection or to hide. Such cases might include ships within large energy fields or interstellar dust clouds, vessels employing some kind of electronic countermeasure (ECM), or ships that run radically advanced active sensor technology with longer ranges.

Electronic Countermeasures

Electronic countermeasures (ECMs) are a combination of systems that help to defend a spacecraft from enemy sensors and electronic targeting devices, such as missiles and passive sensors. ECMs use decoy signals, electronic masking, and other advanced camouflage techniques to fool or overwhelm sensors, thus negating bonuses or reducing sensor accuracy. As a result, ECMs are often targeted against specific vessels, leaving other less dangerous opponents outside their general effects. Such a tactic is usually used on the enemy vessel with the best military computers and broadcast satellites, which is not always the largest or most powerful vessel. How many targets the ECMs can actively be used against is determined by the size of the system. The basic ECM system listed in the spacecraft construction rules is enough to protect a spaceship from most passive scans and the active scans or attacks of a single opponent. Each additional ECM system that is purchased allows the ship to protect itself from one additional enemy vessel (module cost increases along with the price for additional systems).

ECMs are a rudimentary form of electronic cloaking devices. They certainly won't make a spacecraft invisible to the naked eye, but in many circumstances they can make them invisible to electronic eyes or disguised by changing their energy signature to look like something nonthreatening to scanners. Some races have better ECMs than others, and the Struthios, Atorians, and Arerri are each rumored to have actual cloaking systems that make a spacecraft all but invisible to visual scans as well as sensors. In addition, magical and psionic races are rumored to have their own version of such systems. If such technology exists (currently the existence of such technology remains unconfirmed), it is extraordinarily rare (and prohibitively expensive).

ECMs are not foolproof and if not carefully applied, tend to greatly degrade in effectiveness. A battleship in the middle of a battle under attack by missiles, fighters, and other space fighters will not have the time to adequately employ its ECMs against every opponent, let alone every attack. Even if it did, the battleship is so large and its weapon arrays so obvious, that it would be pointless to try to "mask" any of its operations. A pitched battle is a pitched battle. On the other hand, the same battleship on the edge of another battleship's sensor range will be able to apply its ECMs effectively and to go unnoticed until it attacks or gets closer, or sneaks out of range and moves on without incident.

Game Rules for ECMs: Proper use of electronic countermeasures requires both the *Read Sensory Equipment* skill and the *Electronic Warfare* skill. Without the Electronic Warfare skill, the ECMs can be used with Read Sensory Equipment, but at -20%. When using ECMs to hide a craft, a successful skill roll will add +15% to the captains's "Prowl" roll (as described in the Passive Sensors section) to avoid detection. It will also subtract -10% from the Read Sensory Equipment roll of any craft trying to detect the hiding ship. However, if the ECMs roll fails, any scanning craft add +5% to their rolls to notice the cloaked craft because something the ECM operator did draws their attention. Some little quirk in one scan or another is wrong and may help the sensory operator notice something is amiss. ECMs also apply a -10% penalty to any active sensor scans against a craft using them.

A successful skill use of ECM technology in combat negates the active sensor bonuses of a target craft for a single melee round. An attempt can be made each round, but it takes all of the ECM technician's actions to maintain the protection, whether his attempt succeeds or not. Active sensor systems include radar, targeting computers, missile self guidance systems, and sonar. Laser targeting is unaffected, as are certain other bonuses like level bonuses gained with W.P. for gunners who have line of sight. Craft larger than 500 tons gain a +2 to dodge on the rounds that ECM rolls are successful.

New Super Abilities & Magic

By Wayne Breaux Jr. & Kevin Siembieda

Flight: Space – A Minor Ability

Flight: Space, is truly a strange, "space age" super ability. If not for the environmental limitations of working at full power only in outer space, this would be a Major Super Ability. Like *Flight: Wingless, this power enables the hero to fly at impressive speeds in the vacuum of space and in low gravity environments. The higher the gravity, the slower* the character can fly.

In a high gravity environment *no flight* is possible. **Earth gravity** allows the character to glide in a manner identical to the *Flight: Glide* minor super ability (page 232, HU2), but he enjoys none of the bonuses that come with that ability. **In low gravity** the hero can race through the air at speeds equal to *Flight: Wingless* (200 mph/320 km), but speed does NOT increase with experience and the character enjoys none of the bonuses other than +4 to dodge when hovering and +6 to dodge when flying at 90 mph (144 km) or faster.

In outer space, the character is *resistant* to cold and radiation. He or she can survive in space with only a light radiation suit or spacesuit (with or without a helmet), can breathe without air for one hour per level of experience, is invulnerable to small bits of flying debris (has to avoid large chunks and spaceships or suffer injury), and can reach impressive speeds.

The speed starts at Mach Two (1520 mph/2432 km), and increases by Mach Two per level of experience, so a fifth level super being can fly through space at speeds of up to Mach 10 (7600 mph/12,160 km). Of course, the character can fly at slower speeds as he or she desires. It is only the limited environmental application (space) that makes this ability a minor power. Why great speed (and imperviousness to the conditions of space) is only possible in outer space is unknown.

Bonuses: The following bonuses only apply when in *outer space.*

+1 attack per melee round (due to speed and flight capabilities).

+1 on initiative, +1 to strike, parry and disarm, +6 to dodge.

+1 to roll with impact, punch or fall.

+2D6+6 S.D.C.

Amplified, keen vision – can see for up to five miles (8 km) in space.

Half damage from cold and radiation (twice as hard to get radiation sickness: 01-15% chance instead of 30%; none if he uses a simple insulated space or radiation suit).

Fights as if he has *Zero Gravity Combat: Basic* and does not suffer the usual penalties for fighting and moving in weightlessness. **Note:** Use the bonuses listed here. Do not add in bonuses from the Zero-G Combat skill.

Space Native — Minor Super Ability

This ability borders on being a Major Super Power, enabling the character to survive and function in the vacuum of space as if it were his normal, natural environment. It also enables the character to survive ocean depths (unlimited) or atop frozen mountains with minimal air and frigid temperatures. The character is impervious to cold, depressurization, and radiation, breathes without air, can actually speak in a vacuum, and is invulnerable to small bits of flying debris (has to avoid large chunks and spaceships or suffer injury).

Bonuses: The following bonuses only apply when in *outer space.*

+1 attack per melee round.

+2 on initiative, +1 to strike, parry, disarm and pull punch, +3 to dodge.

+4D6+12 S.D.C.

Can survive in space completely unprotected for *three days (72 hours)* per level of experience without ill effect. Speculation is that the character's body somehow absorbs solar energy and radiation in place of food and water. After this period has elapsed, the Space Native can survive an additional *two days per P.E. point*, but slowly weakens and suffers from dehydration and starvation the same as anyone else deprived of food and water.

Cold based magic does half damage; impervious to all other types of cold attacks (may be immobilized by being encased in ice, but suffers no damage from it). Gravity Manipulation attacks are half as effective (reduce damage, duration and other effects by half) and is impervious to radiation attacks.

Fights as if he or she has *Zero Gravity Combat: Elite* and does not suffer any penalties for fighting and moving in weightlessness. **Note:** Use the bonuses listed here. Do not add in bonuses from the Zero-G Combat skill. This power may also be taken as a Major one with double the S.D.C.

New Major Super Abilities

Alter Physical Structure: Void

The character can shift his physical structure to a solid, inky blackness with what looks like "star-flecks" throughout. He keeps his physical shape and is solid enough to interact with the material world, but seems somehow insubstantial and inhuman — a walking piece of the void.

Like the Space Native, when in Void form, the character breathes without air and is impervious to cold, radiation, depressurization, zero gravity and the hazards of space. In fact, he can survive indefinitely in space, like a fish in water.

Natural A.R. 10 and +1D4x10+20 S.D.C. when in Void form.

Lasers do half damage. All other forms of energy and attacks do full damage.

This altered form defies gravity and is virtually weightless in space. The character does not float nor can he fly when on a planet, but can fly at speeds of up to 100 mph (160 km) in outer space.

Trans-atmospheric capabilities: Even though the character does not normally float or fly in an atmosphere, he can land on a planet without burning up in the atmosphere. This is done by allowing himself to quickly drift downward in a straight line and land on the ground.

Can speak in the vacuum of space and does not need any artificial means of survival or propulsion.

Fights as if he has the *Zero Gravity Combat: Elite* skill and does not suffer any penalties for fighting and moving in weightlessness. **Note:** Use the bonuses listed here. Do not add in bonuses from the Zero-G Combat skill. +1 attack per melee round (due to speed and flight capabilities). +2 on initiative, +1 to strike, parry and disarm, and +4 to dodge. +1 to roll with impact, punch or fall.

Special Abilities applicable only when in "Void" Form:

One with the darkness. Only the glittering star flecks within his body will give away his position. Still, the character is difficult to see at night or in darkness. Other than the tiny stars visible within the body of his void form, the character's shape seems to merge with the night, making attackers -1 to strike and parry when fighting him. Additionally, his movements are fairly silent, giving him a natural Prowl ability of 40% in the daylight and 75% at night or in space.

In space, the character is indistinguishable from the rest of the "void," unless he wills himself to be seen or is moving rapidly. If staying still or moving at a speed of 12 or less, he is completely invisible (attackers are -4 to strike, parry and dodge him).

The chill of the void. The character's body is as cold as outer space. Anyone touching him without the proper protection (gloves, insulation, full armor, etc.) takes 1D6 points of damage every time they touch him or he touches them (add to normal punch damage). Only characters that are themselves made of ice or completely immune to cold do not suffer this cold damage, and even characters resistant to cold or from an ice world still take half damage. As noted previously, while in Void form, the super being is impervious to cold, including magical cold and even liquid nitrogen.

Depressurize. The character can use a ranged attack that hits victims with a flash of depressurization similar to that of an exposed body in space. Victims who are resistant to or immune to the effects of depressurization are not affected by this power, but all others suffer the following: -8 to strike, parry, and dodge and -25% to skills for *1D4 melee rounds.* Even if the victim makes a successful save (16 or higher), the penalties are only

reduced by half. The attack is instantaneous and momentarily stuns and disorients the victim. Range: 100 feet (30.5 m; appears as a bolt of black energy) or by touch. Note: This touch can also be used to *cure* the bends.

Remove Air/Suffocation Attack. When in Void form, the character can force the oxygen from a localized area causing those caught in the area of effect to choke, pass out and/or suffocate! Range: 15 foot (4.6 m) diameter globe around the character or in a specific room or area. Anyone entering the stationary area of effect immediately suffers from the lack of air. They can move out and escape the effects, but may not realize they can do so. If locked in an airless room, they have no place to go unless they can break down the door or escape by some other means. Damage: The typical individual has about two minutes before they pass out and about 3-4 minutes before they suffocate and die! Note: Those with an independent air supply or inside a spacesuit or power armor are NOT affected by this power. This ability can not be used on the inside of an environmental suit. A victim can hold his breath for approximately 5 seconds per P.E. attribute point, provided he has some idea the attack is coming (i.e., a hero or villain that has fought a void character before and seen or experienced this ability). The victim(s) is -2 to strike, parry, and dodge until he passes out (see the depressurization and suffocation rules elsewhere for details). Note that *heroes* will NOT kill someone this way and should cancel its effects as soon as the target passes out, if not sooner. Victims who pass out but get air before suffocating are usually unconscious for 1D6 minutes.

Void Bolt: A short blast of intensely cold energy that can even damage solid items like metals and stone (it makes the bond between their particles brittle and weakens their overall structure somewhat). So cold it actually burns when it hits. Damage: 4D6 per blast. Range: 500 feet (152.5 m) +30 feet (9 m) per level of experience. Rate of Fire: Each blast counts as one melee attack. Bonuses: +3 to strike.

Nightvision and Sunvision: The character can see in total darkness, even magical darkness, darkness created with super abilities, or the utter blackness of a black hole! Likewise, the character can not be blinded by intensely bright light and can look into the heart of a star. Normal range of sight for both.

Control Elemental Force: Void

While not strictly an "elemental force," this power enables the super being to manipulate the conditions of outer space. This means the character only has influence over outer space when actually in space. He or she is relatively powerless in an atmosphere.

The character has the following powers at all times and in all environments:

Can see all spectrums of light.

Resistant to heat and fire (typically half damage; magic fire does full damage).

Resistant to laser attacks (they do half damage).

Impervious to radiation poisoning and impervious to cold and pressure.

Flawless Sense of Direction and Distance in Space: This ability works to a range of one light year per level of experience. The character can look at a planet and using this power will be able to tell how far away it is and how long it will take to get there using different forms of conveyance; +10% bonus to all navigation skills.

Control over Space. Unless stated otherwise, the following can only be done when in space!

Protection from space: The character can negate all of the harmful conditions of space (i.e. negate the cold, stop harmful radiation, create a pocket of air, etc.) around himself and/or inside a crippled spaceship or a 15 foot (4.6 m) diameter bubble around others. This can be maintained in as long as the character consciously desires to keep it in place.

Star Blast: A powerful bolt of searing energy. This is one of the few powers that can be used in space or any environment. However, range and damage are half anywhere other than in outer space (spaceship, space station, on a planet, etc.). Range: 1000 feet (305 m) +100 feet (30.5 m) per level of experience. Damage: 1D6x10 in space (5D6 elsewhere). Rate of Fire: Each blast counts as one melee attack.

Bolt of Cold: A blast of black energy that is so cold it actually burns when it hits. Range: 500 feet (152 m). Damage: 3D6 +1D6 per level of experience per blast. Rate of Fire: Each blast counts as one melee attack. Bonuses: +2 to strike. Can only be used in space.

Radiation Heat Blast: This ability can be used in space or any environment. Range: 100 feet (30.5 m) +20 feet (6 m) per level of experience. Damage: 3D6 from one hand or eye, or 6D6 damage by a simultaneous attack from both hands or eyes. Rate of Fire: Whether one or two simultaneous blasts, it counts as one melee attack/action.

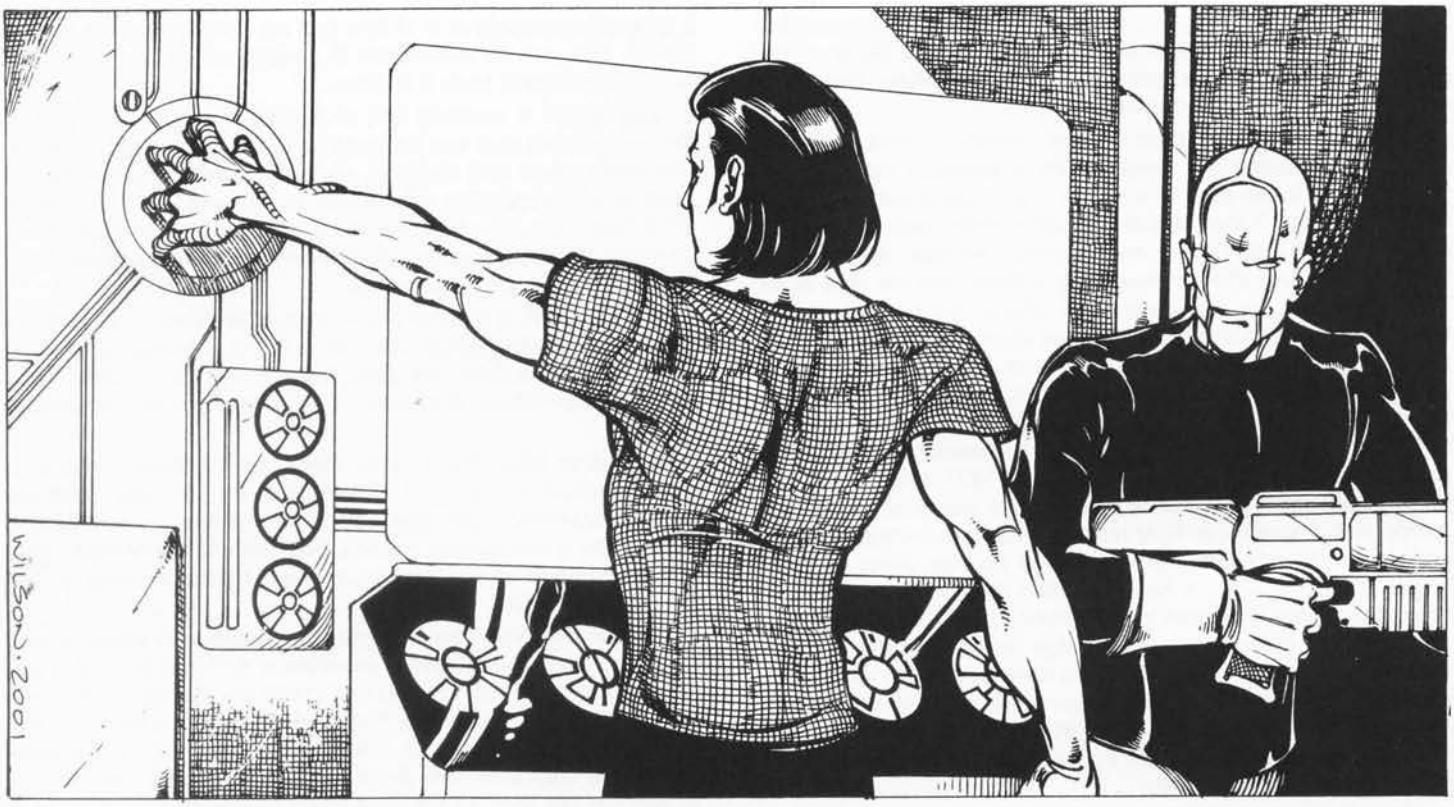
Meteor Shower. The character can create one small, soccer ball-sized meteor per level of experience and hurl them at a single target. Range: Up to 6000 feet (1828 m). Damage: Each one does 5D6 points of damage. Rate of Fire: One at a time or a volley of two or more count as one melee attack. Note: In the alternative, the character can direct an existing meteor weighing up to one ton per level of his experience to avoid hitting him, or to change its course, pick up speed and be directed to hit a specific target. In this case, range is doubled and the meteor does 2D4x10 damage per ton!

Gravity Well and Gateway Activation: The character can use gravity wells, black holes and Gateways (without the necessary codes or equipment) to jump from one location to another. The character must see the gravity well or Gateway he wishes to activate, either through a viewport, magnetic wall, or from outside a spacecraft. The activation requires a melee round of concentration, but any size well can be opened/activated. Once the well is open, the character and/or a spacecraft can fly through to another part of the galaxy. The opening lasts only a few seconds and closes 1D4 seconds after he enters the portal. This ability can also be used to ease the trip through a dimensional siphon or black hole, reducing the damage by half; however, such rigorous testing of this power requires the character's total concentration; no melee attacks or actions can be taken while inside a siphon or black hole.

Machine Merge

Unlike the Mechano-Link power which mentally links a character to the knowledge and/or persona of a machine, *Machine Merge* enables the super being to transform parts of his body into techno-biologic tendrils that can attach themselves to a non-sentient machine, including computers, weapons, and vehicles. While merged in this way, the character and machine become one, giving him unprecedented skill and control over the device. Unlike Mechano-Link, no knowledge or information is passed on. Instead, the link boosts the character's existing skill with the machine. If the super being has a *skill* in the use and operation of that machine his abilities are increased five levels higher than he actually is. **Note:** For the majority of skills, this translates into a +25% bonus that lasts the entire time the character is linked/merged with the machine. If the character has no skill or training in the machine, he uses it at a 5th level proficiency.

For example, a 3rd level character who merges with a vehicle type he is skilled in driving, *pilots* it as if he were eighth level. On the other hand, the character can pilot a vehicle he has never



seen before at 5th level proficiency due to his merging with it! Merging with a radar or motion tracking system will boost the 3rd level super being's *Read Sensory Instruments* skill to 8th level (or 5th level if he has no formal training with it). Merging with a targeting system or weapon with a targeting computer enables the super being to combine his natural P.P. and combat skill bonuses to strike with those of the weapon! Even if the character has no W.P. with that weapon, if it's electronic, he now uses it as if he has a 5th level W.P.

This power is especially formidable if the character has the *Cyberjacking skill* and merges with a computer. First, the character uses the Cyberjacking skill at five levels higher than normal (a 3rd level character Cyberjacks as if he were 8th level). Second, the character has impressive power in the virtual world of the computer. Cyberjacking Bonuses: +2 additional attacks/actions per melee round, +2 to strike and parry, +4 to dodge, +20% to computer skills against passive security and suffers no penalties against coma and death should he die in the virtual world.

Limitations:

1. When merged with even one machine, the character is distracted. Any skill other than those involving the machine(s) with which he is merged are performed at -15%, and he is -1 on initiative for every device he is connected to (i.e. for two devices he is -2 on initiative, three devices -3, and so on).

2. Can only merge with one machine at level one and one additional at levels 3, 5, 7, 9, 11, 13 and 15.

3. Can only merge with machines that have some sort of electronics, including most Earth automobiles, computers, electronics, sensor systems, optic systems, energy weapons and household appliances. Knives, clubs and other melee weapons as well as most revolvers, pistols and conventional rifles are simple devices that do not have electronics and can NOT be merged to the individual. Vibro-Blades, energy weapons, and other high-tech gear that have electronics or computer chips inside them can be merged with and used with greater skill and ease as described above.

Other Notable Machine Merge Abilities

Concealed merging and constant access. The character can merge with small electronic devices by absorbing them partially into his own body! This means any hand-held device such as a radio, communicator, language translator, pocket computer, energy weapons and similar can be absorbed and accessed by the character. This can be strange or downright gross as one third to half of the item will stick out of the body. While it can be concealed by clothing, a hat, etc., it looks odd and even frightening when revealed. Merging with a galactic palm computer (say in the chest) enables him to access whatever is on the computer as needed, providing calculating capabilities and information. Merging with a cell phone or radio effectively gives the character "built-in" communications enabling him to receive and make calls without having to physically dial – it is all done with a thought and the incoming messages go unheard by others directly to his head (the character still has to speak aloud to respond). **Note:** Although easily concealed by clothes, if the merged device is accidentally or deliberately damaged, the living character is also injured (after all, they are one). So if a computer sticking out of the character's chest takes 10 points of damage, the character connected to it takes damage too, only it's half that damage, in this case five points (first to S.D.C., then to Hit Points). If the machine is destroyed, the character takes the damage as just described, but is also momentarily disoriented from its loss: Reduce speed by 20%, skill performance is -20%, reduce attacks per melee by one, and all combat bonuses are -2 for 1D4+1 melee rounds.

Extend Tendrils: The character's fingers can extend like tendrils to reach out and link with machines. Range is one foot (0.3 m) per level of experience. These tendrils should be thought of as cables or conduit for the purpose of connection and can not be used as weapons or to entangle an opponent.

Usurping Control: A character with the power to *Machine Merge* automatically becomes the overriding force over a machine when there is no artificial intelligence. Thus, he can steal control of any manned vehicle or device, unlock/open electronic locks, turn alarms or radios or lights on and off and other electronic devices not connected to a computer, make them stay on or off while he is connected to it, send transmissions, and so on, with absolute dominance.

When merged with a computer the character is inside it, but functions more like a virus or outside force or hacker pitted against the computer operator, artificial intelligence or internal defenses (see Cyberjacking).

Power armor, EBA suits and armor, and robot vehicles are such that the pilot is effectively "linked" to it. Thus, the best a character with Machine Merge can do is grapple with such an opponent and merge with the armor in an attempt to confuse and impair it. This means while merged he can shut off the targeting computer, radar, optics, and similar functions, one at a time, each counting as one melee attack/action. This forces the pilot/wearer to turn them back on via mental or verbal command. This is done as quickly and easily as the Machine Merge can shut them down, but it still uses up a melee action/attack and is distracting. **Note:** Weapons and life support systems can not be turned off or placed under the super being's control because they are both key systems under the direct control of the pilot or AI, but all secondary systems are vulnerable, including flying speed. Robots and androids with Artificial Intelligence (AI), and Transferred Intelligence are impervious to Machine Merge.

Super-Regeneration

One might think of this as the cosmic version of Healing Factor. Quite simply, it provides the character with supernatural healing abilities and health. This character never gets sick, rarely tires, always has energy, and recovers from injuries at amazing rates. Many supernatural creatures will have some level of regeneration, but it is rare to find this kind of healing among mortals, thus its classification as a Major Super ability.

Bonuses & Abilities:

- Impervious to disease. Poisons and drugs last only one tenth their usual duration (typically 15-60 seconds), and have one third their normal effect/penalties or damage. Heals damage at the rate of 2D6 points per melee round or 1D4x10+4 per minute.
- Never scars, no matter how grievous the wounds. Only wounds from magic *may* leave some minor scarring.
- Injury to internal organs heals completely in a matter of minutes. A lost organ will completely regenerate within an hour.
- Massive injury to the heart or brain is painful but not lethal, even if 90% is lost! It will regrow within a matter of 1D6x10 minutes. However, such severe trauma will make the character weak for 1D6+1 hours: Reduce speed, attacks per melee round, combat bonuses and skill performance by half for the duration of the recovery time. Moreover, the healing of additional S.D.C. and Hit Point damage during this period is at half as the body struggles with the strain of the phenomenal amount of healing it must do. **Note:** Such grievous injury to the brain will cause the character to forget the exact cause of death and the most traumatic moment. ("I remember seeing the missile volley coming at me and then ... I guess they hit me? The next thing I remember is being pulled out of the rubble by a rescue team.") If it seems appropriate, the G.M. may make it so the character does not remember the 6-24 hours before his or her near death experience.
- Regrows lost limbs. A finger, toe, hand or foot will regrow within 24 hours. An entire arm or leg, within 48 hours. More than one limb 3D6+72 hours. Half or more of the body, 2D6+10 days. During this period, the character suffers from the penalties noted above under "massive injury" as well as the obvious penalties from the injury. **Note:** Decapitation, complete destruction of the brain and being blown to bits or atomized spells death – Super Regeneration is impossible.

Superluminal Flight (FTL)

The incredible power to fly at the speed of light! However, unlike the other flight powers, Superluminal Flight is not a versatile thing capable of maneuverability and finesse. The human body is not meant to move at such speeds, not even superhuman ones, thus the use of this ability is straightforward: speed of the greatest magnitude. Each level of experience enables the character to reach *one factor*, starting with the speed of light, factor 1, at first level. Turning at such speeds takes millions of miles and could never be done on the proverbial dime, let alone within an atmosphere, so the character can only travel from point to point or follow a spacecraft traveling at around the same speed. In short, despite the super being's small size, he uses the same maneuvering rules as a spacecraft. His one advantage, however, is acceleration and stopping power, for this ability accelerates to top speed in a matter of three seconds and the character can stop just as quickly.

Abilities & Bonuses:

+3 to dodge when flying at FTL and +3 to roll with impact, punch or fall.

Can fly at speeds greater than the speed of light: one factor for each level of experience. Level one = factor one, level two = factor two, and so on.

Limited vulnerability to outer space: The most basic, flimsy spacesuit or a simple air mask and oxygen tank/air supply is sufficient to keep the character alive while in space. Of course, for this character, he is basically flying Faster Than Light or virtually stopped. When traveling at FTL speed, the character's metabolism slows to a crawl (using up only five minutes of air for every 24 hours of flying). Thus, he can travel for hours, days, weeks, and even months without any ill effect from hunger or aging. It is only after he stops flying at FTL that the character's normal metabolism kicks back in and he will require the usual nutrition, water and air to maintain his body.

The character can also survive three times longer in outer space without any protection, and suffers half the usual penalties and damage from exposure to space.

While flying at the speed of light the character is protected from the dangers of space (virtually breathes without air, impervious to cold, radiation, depressurization, etc.) and collisions with small bits of flying debris cause them to atomize (the character is unharmed). However, he is not protected from collisions with anything his own size or larger. To collide with a large object/spacecraft will create a collision comparable to an interceptor or meteor (see the rules and damage table elsewhere). Meanwhile, the super being will suffer the following: 4D6x10 points of damage to the character's S.D.C. and Hit Points (may be a fatal crash), plus roll percentile dice to determine other injury (see the *Serious Damage Table* on page 19 of HU2 for complete penalties): **01-20%** Knocked out and unconscious for 1D4 hours (*may* suffer temporary amnesia or concussion at the G.M.'s discretion), **21-40%** Fractured arm, **41-60%** Fractured leg, **61-80%** Broken Ribs or Pelvis, **81-00%** Torn arm or leg muscle (G.M.'s choice).

This super being has a keen sense of direction, can plot a course by looking at maps and charts (equal to a navigation skill at 60%), and can find any planet or space coordinate he has ever visited. Likewise, the character can sense when he is approaching his destination.

Limitations:

No slower form of Flight: The character can not fly slower than FTL Factor One — except when slowing down to land or taking off (reaches factor one in three seconds). This means he can not fly to places within close proximity, which for this super being is anything closer than 100,000 miles (160,000 km). On Earth, this means he could fly to the moon in a heartbeat (a few

seconds) but can not fly from New York to China, or to the store down the street. He can not hover, glide or do any other type of flying unless he possesses another flying super ability or artificial means (jet pack, etc.).

No Pinpoint Landings: A character with Superluminal Flight can decelerate quickly enough to land on a planet without impacting like a meteor and does not burn up in the atmosphere coming or going. However, he will have trouble landing at a specific location/space port/city and has only a 01-30% chance of landing at the exact location desired. At levels 1-5 the character will land 1D4x1000 miles (1600-6400 km) away, at levels 6-10 he will miss it by 1D6x100 miles (160-960 km), and at level 11 and higher will land within 1D6x10 miles (16-96 km).

No Affinity to Space: Unlike other "space" oriented powers, this character does not share any special affinity with outer space, so Navigation, Zero Gravity Combat and other space related *skills* should be selected to make him or her a capable space traveler.

Space Magic Spells

Area Gravity Field

Range: The spell caster and a 30 foot (9 m) radius around him.
Duration: 2 minutes per level of the spell caster.
Saving Throw: None.
P.P.E.: Twenty-Five.
Level: Considered a 7th level spell.

This spell creates an area of Earth equivalent gravity across an area 30 feet (9 m) in diameter around the spell caster. This area will not move with the mage once it comes into effect, but those inside may move about within it as normal. Leaving the area exposes the character to any effects of varying gravity that exist outside the field. The spell can be used to give a small spacecraft limited gravity or to hold a group inside a ruptured hull. The spell provides the benefits of gravity to anyone inside it.

Atmosphere Bubble

Range: Self or target up to 60 feet (18.3 m) away.
Duration: 3 minutes per level.
Saving Throw: Standard, though a voluntary subject can fail automatically and allow the spell to take effect.
P.P.E.: Twenty.
Level: Considered a 7th level spell.

This spell creates a bubble of breathable atmosphere around the spell caster or another individual. The created atmosphere can be of any composition but that composition must be known to the spell caster. It is assumed the wizard knows the composition of air for his native world and at least a half dozen other, common atmospheres. However, if he is touching the recipient of the atmosphere, he can magically create the exact composition for that being without any formal knowledge. It is only when casting an "air bubble" at a distance that he must know the composition. **Note:** The bubble is 6 feet (1.8 m) in diameter and can be shared by up to five characters. The spell can be used offensively to suffocate beings that can not breathe a particular atmosphere, but such use entitles the victim to save against magic; succeeding negates the spell effects and the bubble vanishes.

Personal Gravity Field

Range: Self
Duration: One minute per level of experience.
Saving Throw: None.
P.P.E.: Six
Level: Considered a 3rd level spell.

This spell simply provides the mage with his normal home world gravity regardless of whether his feet are planted on a planet or a spaceship. This gravity field also serves to anchor him to the outside of a spaceship or object and fight (while grounded) without zero gravity penalties. If he should jump off the hull, he is set adrift in space as if weightless and then suffers zero gravity penalties.

Protection from Radiation

Range: Self or others by touch.
Duration: 5 minutes per level of the spell caster.
Saving Throw: None, unless the recipient wants to die.
P.P.E.: Five.
Level: Considered a 3rd level spell.

This spell completely protects the character or others (can cast the spell on two people by touching them simultaneously) from harmful radiation.

Protection from Space

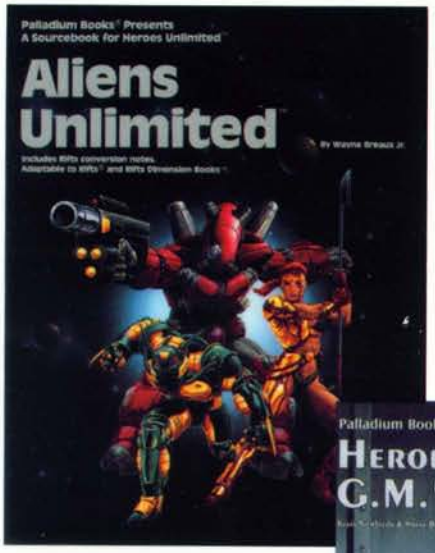
Range: Self, other by touch or target up to 100 feet (30.5 m) away.
Duration: 5 minutes per level of the spell caster.
Saving Throw: None; this spell can not be used as an offensive spell on an unwilling victim.
P.P.E.: Forty.
Level: Considered a 9th level spell.

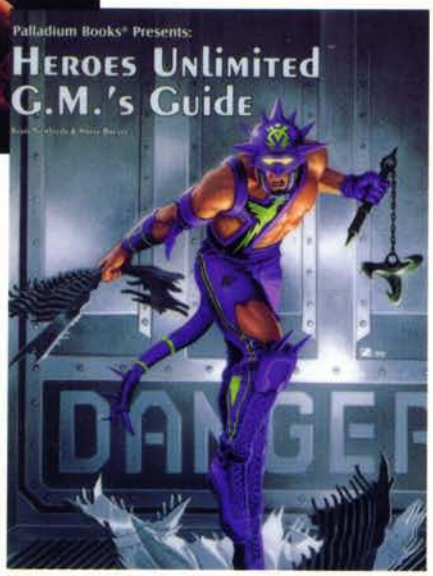
This spell enables the character to breathe without air and makes him impervious to the hazards of space (cold, radiation, etc.). He is not a Space Native and does not have any special combat or powers of movement, but is protected without a spacesuit.

Sticky Feet

Range: 20 feet (6.1 m) +10 feet (3 m) per level of experience.
Duration: 3 minutes per level of experience.
Saving Throw: None; anyone entering the area of effect is subject to the spell effects.
P.P.E.: Four
Level: Considered a second level spell.

Although similar to the higher level *Carpet of Adhesion* spell, this simple spell creates a long, sticky carpet, but instead of powerfully impeding or trapping the victims, it simply slows down opponents or provides a sticky surface on the outside of a spacecraft that allows workers to walk on the hull without needing a tether. Characters and vehicles with a Supernatural P.S. or speed greater than 100 mph (160 km) are not affected at all. All others will see their speed reduced by 25%. Works great for anchoring people and objects to the hull of a ship in space, but under the pull of gravity, the stickiness is not strong enough to hold a character or object weighing more than 40 pounds (18 kg) to the side of a building.





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