

ALBEDO

PLATINUM CATALYST

Anthropomorphic Science-Fiction Role-Play

OMNIBUS EDITION



"Either war is obsolete, or men are."

— Buckminster Fuller (1895-1983)

ALBEDO: PLATINUM CATALYST

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Sanguine Productions in association with Thoughts and Images present:

"Albedo: Platinum Catalyst"

Created by: Steve Gallacci

Written by: Pieter van Hiel

Game Design by: Jason Holmgren with Michael Arbogast

Additional Material by: Jason Holmgren, Pat Kelley, Adam Lindberg, Fred Stanton, James Stoneburner, Diana Wray

Illustrated by: Steve Gallacci with Jason Holmgren, Jordan Peacock, Conrad Wong

Art Direction by: Jason Holmgren with Fred Stanton, Pieter van Hiel

Directed by: Jason Holmgren

Executively Produced by: Ted Wadsworth

Edited by: Fred Stanton with Adam Lindberg, Pat Kelley, Pieter van Hiel, Diana Wray

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DEDICATION
ALBEDOHAZUN

For Elizabeth Joyce van Hiel. Dream of the Stars!

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INTRODUCTION

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Albedo is a universe without a past. All sentient life sprang into conscious existence over the course of a few days, more than 250 years ago, complete with social infrastructure and advanced technology. The races of the *Albedo* universe were brought into being with inquisitive and analytical minds, as well as a powerful tool for research in the form of the Net. They have had a rational and scientific society from the start, and as such, they have no religion, no legends, no mysticism. They have nothing transcendent of themselves.

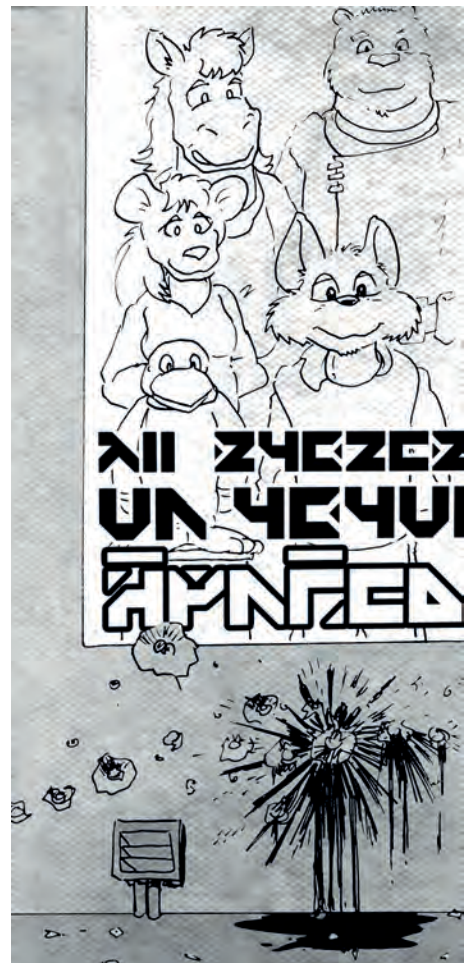
They cannot learn from the example of history, because everything they are doing is new. There are no guides to personal behavior, and no higher cause beyond the good of the community and species. Without any precedent they each must ask and answer for themselves the essential question, "What kind of people are we?"

For nearly 200 years, the structure left in place by the Creators served as an adequate social framework in which that question could be asked and answered. It was flexible enough to accommodate experimentation and the establishment of a number of very different socio-political models, and provide a structure in which each person could spend a lifetime in the pursuit of greater good or personal advancement. Interstellar communities, including the Interstellar Confederation, encompass billions of inhabitants living in peace and order. The system has endured civil debate and technological evolution for two centuries, and even weathered interstellar war and been the stronger for it. And yet, in a time of unprecedented peace and prosperity, cracks are beginning to appear.

Widespread civil strife and new corporate greed have caused many to question the value of service to government and society. Ambition and the quest for personal power are replacing civic pride and the spirit of communal service. In particular, the systems which for so long served to preserve the civic rights and freedoms of citizens in the Confederation have been twisted to serve the aims of ambitious individuals. Even the Net,

the medium through which all information passes and the instrument of public record, has been altered so that history – public memory – has become mutable. In the face of this growing social crisis, old conflicts are being reawakened, and the Universe arms itself for war. In the past, victory was won through unprecedented levels of interstellar cooperation. Now, serious schisms threaten to tear apart governments at every level.

Players in the *Albedo* RPG take on the role of officers in the Extraplanetary Defense Force (EDF), the one organization in known space that has the wherewithal and desire to hold everything together. Players will act to preserve order and the rule of law... and face a cancer that eats at the heart of their own chain of command. Their answers will influence the fate of worlds.



CYCLOPEDIA

ЗЫНПЧЕЛЭ

The Day the Universe Changed

More than 200 years ago, a question asked by an observant young feline boy on the planet Arras Charka triggered the dawning of history as we know it. As the planet descended into winter, the child worried that everything would freeze.

"Will it keep getting colder, papa?"

His father assured him that it would not... and then wondered how he knew this was so. What led him to this surety? He suddenly recalled previous years, and previous winters turning into springs. Why had he not remembered them before? The memory of passing seasons in turn sparked a recollection of a time when his son *did not exist*, of conception and birth.

Life until that point had been a haze of work and home routine that never extended more than a week into the past. The boy's simple question opened the door to an entirely new world, a world where all events had a cause and everything that existed had

been created. The question unlocked a new awareness of the past, and suggested that the future was mutable and uncertain.

This awareness spread throughout the cities and farms of Arras Charka, as though everyone were waking at once from a long and dreamless sleep. The recognition of the past and anticipation of the future inspired thousands of new questions. People realized that the mechanisms of culture and civilization were already in place – the farms and factories, cities, roads, and even social institutions that were needed to function as a society were there, and no one could recall a time when they did not exist. They became aware of the Net, a computerized personality that provided access to the aggregate total of all information. The Net was unable (or unwilling) to answer questions about its own origin, or account for the origin of the sentient races, but it provided a valuable library of technical information, and acted as a communications conduit that speeded the spread of self-awareness.

It was clear from the first that the culture that existed on the planet did not represent a natural state of affairs. Who built the machines? Why were there so many different species? Could their entire society, with all its attendant structures and technology, have arisen spontaneously from nothing? The idea seemed absurd. For a time, the question of origin dominated all public and private discourse. The debate answered nothing – and the denizens of Arras Charka collectively agreed to make the matter one of ongoing research by their scholars.

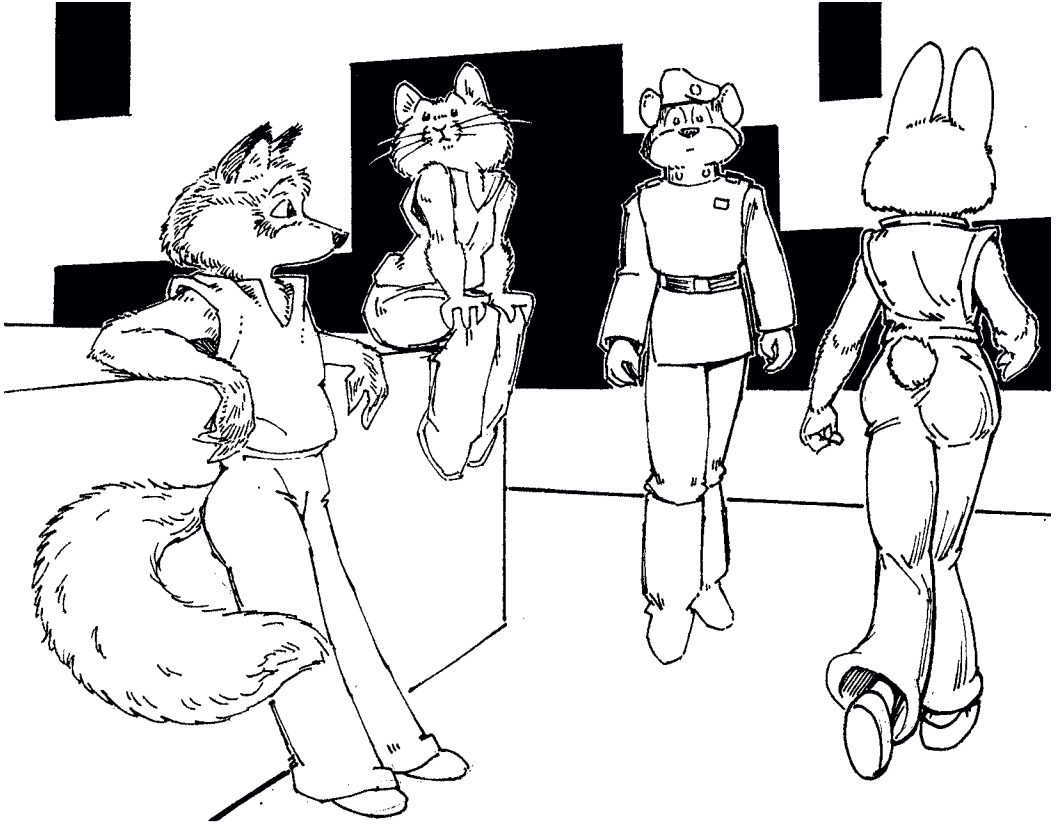
The Dream of the Stars

In the decades following the great awakening, these researchers came to the inescapable conclusion that the people of Arras Charka had an extra-solar origin. Their genetic structures were nothing like that of apparently native micro-organisms and plants that existed on the planet. Efficient cold-fusion technology and propulsion systems had been in existence since the

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A Timeline of History, Part 1

- 52 "Great Awakening" – popular belief in the Creators
- 45 First unmanned probes to Arras Charka system.
- 39 First manned interplanetary exploration
- 27 Permanent orbiting space colonies are constructed around Arras Charka. Research into interstellar flight begins in earnest.
- 20 First resource and research colonies founded throughout Arras Charka system. Over next two decades, permanent colonies built throughout the system.
- 17 Jump Drive invented. First probes built, and extensive experimentation takes place. Waves of interstellar probes return information about surrounding systems. First manned flights to neighboring stars take place.
- Zero First voyage of the UH4, the first fully operational manned exploration ship. Start of the standard dating system.



beginning, making expeditions to other worlds in the same system relatively easy. These did not uncover life of any kind. If the answer existed, it lay among the stars. Research into a form of faster-than-light travel began in earnest.

There were other more practical reasons to develop this technology. Arras Charka was heavily populated from the beginning, and as the population continued to grow, some resources were becoming scarce. Disagreements were arising over the nature of governance. Arras Charka had been apparently designed as a socialist government, with a multitude of government branches that reached into almost every part of life and commerce.

About this time, scientists exploring the archives of the Net discovered that the secret of interstellar travel had been on record all along. However, the information was recorded in a number of places, and no effort had yet been made to link the disparate elements together into unified method of interstellar travel known as *the jump drive*. This drive allowed a vessel to jump instantaneously from one system to an-

other. It was as though the secret of Jump drives had been deliberately hidden in plain sight, waiting for a time when society was organized enough to find and link the elements together. Within two years, automated field tests were conducted. Soon after, the first manned jump was undertaken successfully.

The Jump process was very reliable, but risks did present themselves. A poorly set Jump can result in the outright destruction of the ship and crew, or expose them to powerful ionizing radiation. Early Jump drives were also found to cause genetic damage over multiple Jumps – modern drives may do this as well, but effective rules governing Jumps have been developed to limit damage.

Once Jump drives had been established as a safe means of transport, hundreds of interstellar probes were constructed and dispatched to nearby systems. These robotic probes brought back clear and exciting evidence of potentially-habitable worlds in several neighboring systems. The news prompted the creation of manned exploration missions, with the goal of

scouting out sites for new colonies and locating evidence of the Creators. The first exploration ship was known simply as the UH4 – the current system of dating used in the ConFed is based on the date the UH4 was launched, 195 years ago.

On the second voyage of the UH4, in year 4, the crew discovered a potential colony world in the Chalendar system, 30 light years from Arras Prime. Orbital surveys showed Chalendar V to be an excellent prospect for colonization. The planet was home to a number of plant species, but the native biology was compatible with that of the future colonists, and native plants were well-established enough to not be overrun by transplanted crops or animals.

Chalendar V, now renamed Aerandar, was identified as the future site of the first extra-solar colony. The government of Arras Charka took the colonization project very seriously, and took great care in the construction of a colony vessel and selection of volunteers for off-world emigration. It was 16 years before a manned vessel returned to Aerandar.

In the intervening years, crews were sent out in all directions, and spent months surveying hundreds of systems and thou-

sands of worlds. Great care was taken to avoid contaminating the alien biospheres, and in this first round of exploration, no explorers set foot on the worlds they surveyed. Later teams used powerful bio-analyzers that could examine entire gene sequences and determine if there were any risks to potential habitation. No evidence of the Creators was found, and no creatures more advanced than a few species of invertebrates, fish, and plants – life with no genetic similarities to the people of Arras Charka. Still, the explorers had found rich, lush worlds, immediately ready for colonization. If the Aerandar settlement was successful, the government intended to proceed with colonization plans for an additional 14 worlds.

Early in the year 20, the first manned landing on Aerandar took place. Work crews spent months building permanent structures to house the first colonists, and provide them with all the essentials of a vital community. When the colonists arrived, they would find finished towns waiting for them, complete with power stations, farms, commercial zones, and a spaceport. Along with the work crews came environmental study teams, scientists and specialists who spent the better part of a decade examining the long-term effects of Aerandar's environment on its inhabitants.

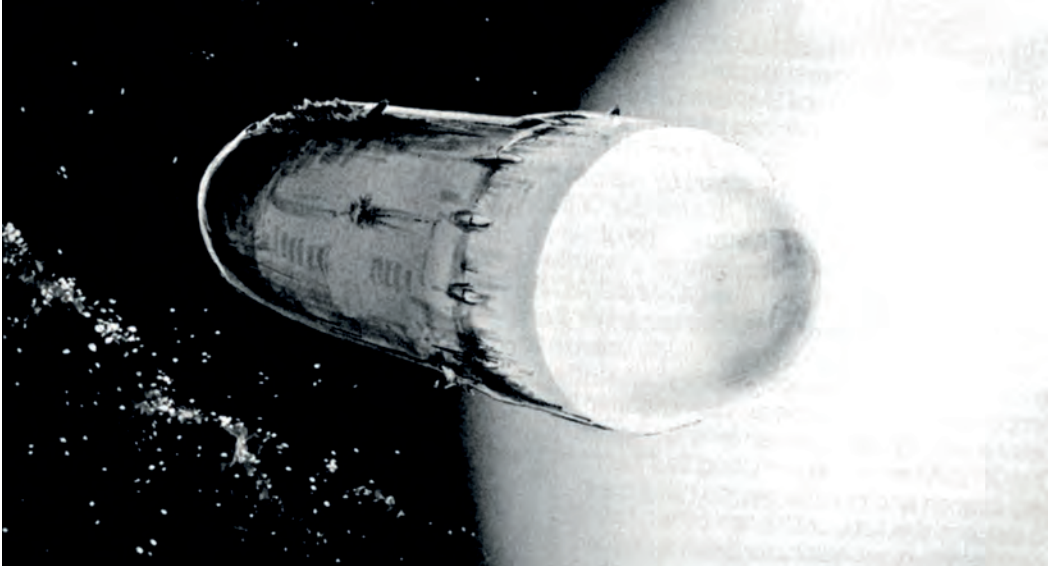
Finally, after years of careful preparation, 12,000 colonist volunteers were dispatched to Aerandar and founded nine settlement sites in the year 28. They brought with them all the expertise, tools and materials needed for production, as well as gene-management tools to ensure a healthy range of genetic diversity for future colonists. The Aerandar colony was to be self-sufficient from the start.

The Aerandarian colonists adopted the socialist-democracy style of governance in place on Arras Charka, but remained very much under the direction of the central authority on the home world for the first several years. However, the time-delay involved in sending messages back and forth to Arras Charka meant that many decisions were dealt with locally. As the colonists were all well-trained and dedicated professionals, legislative and practical

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A Timeline of History, Part 2

- | | |
|---------|---|
| 4 | On its second voyage, the UH4 identifies Chalendar V (renamed Aerandar) as an ideal site for colonization. |
| 20 | First manned landing on Aerandar. Permanent colony facilities are constructed by temporary work crews that later vacate the planet. |
| 28 | Twelve thousand colonists arrive on Aerandar. |
| 28-58 | First wave of colonization. Core Worlds are settled. First armed forces are created. |
| 50 | Aerandar declares independence from Arras Charka. Other colonies follow. |
| 95-110 | Second wave of colonization. Hundreds of new colonies are settled. |
| 102 | Foundation of the Independent Lapine Republic (ILR). |
| 130-170 | Third wave of colonization. While colonization continues to this day, it is no longer conducted at such expense. |



questions were debated with an air of clinical introspection and detached analysis. Decisions were made that suited the long-term needs of the greatest number of inhabitants, rather than vocal minorities. Civil debates took place continuously, and rather than causing division, contributed to an ongoing sense of consensus and larger community.

Aerandar was quickly judged an unqualified success, and the government opened the door to enormous new colonization program. Over the next thirty years, 14 new colonies were founded by thousands of carefully chosen volunteers. In the year 50, Aerandar declared its independence from Arras Charka, an amicable separation which had been planned from day one. As each colony became firmly established, it opened its spaceports to new immigrants and trade. Arras Charka and its 15 colonies became a kind of loose stellar confederation, unified by their socio-political outlooks and common history. These worlds are known today as the *Core Worlds*.

Another unifying factor was the presence of the Net. Wherever the colonists went, they brought the Net with them. It seemed to be inherent in the production of any piece of computerized or communication hardware, and capable of spreading itself through the space lanes via message torpedoes and shipboard computers. The Net seemed to be an unavoidable part of space travel.

The colonization efforts did not curtail ongoing exploration, and it quickly became clear that a significant proportion of systems within range of Arras Charka were home to life-bearing worlds. Indeed, the proportion of terrestrial worlds was much higher than seemed reasonable, suggesting that the Creators had been very deliberate in their placement. Yet, no matter how far the scout ships ranged, they could find no sign of the Creators, and found no life forms with a genetic link to the sentient races.

The Second Wave

As the budding interstellar society matured, new theoretical systems of politics and commerce were developed. Arras Charka had been apparently designed as a socialist government, with a multitude of government branches that reached into almost every part of life and commerce. While the government was enlightened and liberal, many chafed at this level of interference and wished to found new societies, based on capitalistic markets or new systems of government. Charismatic thinkers attracted groups of like-minded followers, and clamored for change.

The obvious solution was to allow the foundation of new colonies. The original settlements had generated a wealth of information on the successful establishment of off-world communities, information that was freely available on the Net. The government on Arras Charka volunteered to co-

sponsor those colonies that agreed in advance to trade ties, and whose intended philosophy of government was not dramatically at odds with that of the Core Worlds. A number of business interests and philosophical groups took them up on this.

On a darker note, significant racial division also began to appear at this time. While some of the original colonies had been founded by single species, this was done purely on the basis of biological practicality. By this point in history individuals of every species had developed a sense of racial pride. Usually this was limited to a kind of species "patriotism" that expressed pride for the achievements of one's own species without denigrating that of others, similar perhaps to "hometown pride." Unfortunately, some went much further than this. One notable rabbit leader went so far as to suggest that the rabbit race was naturally superior to others, and were entitled by birth to the choice of resources. This heady philosophy attracted a number of followers, who undertook colonization plans of their own.

The second wave of colonization began in earnest about 90 years ago. The new outward expansion was characterized not only by the incredibly diverse nature of the colonists, but also by the single hope that was common to them all. Each group hoped to found a paradise, worlds where they would be free to achieve all their dreams - whether that personal paradise was one of racial purity, capitalist exploitation, communal introspection, or simply one of absolute liberty from any form of government.

It was at this time that the rabbit colonies of Hiahhoch and Baliannian were founded, at what was then the edge of settled space. From the start, the inhabitants adopted a powerfully racist attitude towards their neighbors. However, they seemed uninterested in exporting their particular philosophy to other worlds, and as such their attitude was tolerated. The founders declared the colonies an independent republic, and negotiated trade deals with nearby systems and the Core Worlds.

For a period of 30 years, special-interest groups, businesses, and even family groups

began a pell-mell expansion into space. Old colony ships from the first wave were pressed into service, along with nearly every FTL capable ship available, no matter how small. More than 50 colonies were founded in this second wave, ranging from tiny freeholds that served as home to a few dozen people, to million-strong colonies that quickly matched the smaller Core Worlds in productivity. These worlds are known collectively as the *Inner Worlds*.

Planetary governments on the Inner Worlds vary wildly, ranging from corporation owned systems like Enchawah to hereditary monarchies like Kawateena. Inner World governments are often much more hands off than the Core Worlds. Capitalist interests are very strong on most of them, and several successfully combine capitalism and socialism.

The Inner Worlds have developed very strong social identities in the years since their foundation, and this patriotism has led to widespread resentment of Core World "meddling," and infrequent trade wars between neighboring systems.

The Third Wave

A wave of tertiary colonization started about 50 years ago as the Inner World colonies matured and began to create colonies themselves. These colonies are collectively known as the *Outer Worlds*, and most are several months of travel away from the Core Worlds. Hundreds of Outer World colonies exist, and colonization efforts continue into the present day. The older Outer Worlds are fairly well-settled, and many are on the verge of sponsoring colonies of their own. These well-settled worlds are almost entirely self-sufficient. The inhabitants, who are often first generation, tend to be much more independent and self-reliant than the citizens of the Inner and Core Worlds. Planetary governments exist largely to maintain basic infrastructure, and the residents may even resent the existence of police forces. This is of course a generalization - some Outer Worlds are closely patterned after the paternal socialist states of the Core Worlds.

Newer Outer Worlds tend to be resource colonies, such as mining operations, or

research stations. They are sparsely populated, rarely home to more than a few hundred inhabitants. Some small colonies may not have any permanent residents at all. Perhaps the most remote and isolated colonies are the asteroid mining platforms on the rim of known space. These mostly automated space stations may have crews as small as three – the only living creatures for several light years.

All resource colonies rely on support from a corporate, scientific, or government sponsor to remain in operation. However, smaller colonies may only require supply on annual basis, meaning that the inhabitants may be very behind on current events, as well as extremely lonely.



War in Space

Violence of some sort has been a part of society almost since the Awakening. Verbal arguments took place within hours, and some boiled over into brief physical confrontations. Still, among the first and second generation, violent acts the exception. Serious crimes such as murder were events that attracted planet-wide attention, and were limited to unthinking "crimes of passion," or acts committed by those few citizens with untreated mental disorders.

From the first day, an infrastructure for a basic policing and civil security service was in place, and this model was copied for the first colonies. In the beginning these forces were more akin to a highly organized "neighborhood watch" than an armed security force. They attempted to defuse

tense situations through diplomacy, or contain conflicts and pick up the pieces afterwards. They had no weapons at all at first, though it was not long before the need for some form of restraining and subdual devices become obvious. Advanced simulations on the Net were able to generate computer models of multi-species handcuffs and non-lethal weapons that could reliably incapacitate a target.

For the most part, these early police forces dealt with individual criminals and lunatics. Large scale operations were almost unknown. Rarely, a riot involving a few dozen citizens would break out, or a family dispute would spiral out of control and end in confrontation. The early police services were largely able to handle these disputes, or at least keep them contained until they burned out on their own.

As the colonies grew, clashes between different communities took place over resources or land claims. Remote colonies found themselves preyed upon by bandits, some of whom were driven to raiding when their own colonies failed. Perhaps the most notorious example is the "Karantok Tigers," a group of would-be miners who arrived at their new world to find the company that had employed them had financially collapsed. They were left with nothing, and no means of return.

The tigers, and a number of other would-be miners, were understandably upset at this mistreatment. Their discontent simmered the more they discussed the matter. They'd been fooled, conned by an impersonal, faceless entity. Most had never fended for themselves before, used to the support of their socialist home worlds. If this was what the universe outside the Core Worlds was like, well, they would have to adapt to survive. If the law of the universe was "rob or be robbed," then they knew which side of the equation they wanted to be on.

The miners hiked to the nearest community and demanded food and shelter. When they were refused, they became angry, and used intimidation and violence to gain what they needed. They stole food and transport, and moved on to the next community, with the vague intention of seeking vengeance

against the employers who'd abandoned them. The violence and intimidation continued in the next settlement, and again the tigers moved on.

By this time, word of the situation had spread to the main population centers on Chenta, and civil security forces intercepted the group. A prolonged and bloody siege of the community ended with dozens of casualties on both sides. The news spread like wildfire throughout space, and rumors of atrocities were given credence by the fledgling news media services. These rumors were untrue, but served to foster an atmosphere of paranoia in many small colonies, and led to the development of deadlier weapons. The apparent example set by the miners also led to the foundation of a number of genuine raider groups.

Volunteer militias were formed to defend against incursions along the lines of the Karantok Tigers – the first military units ever formed in known space. As they saw service against raiders, theories of strategy and tactics were developed, as well as weapons technology. The races of the *Albedo* universe learned the art of ground war quickly and soon began to develop the skills needed to project their military might into orbit and to other worlds. In this way, colonies could pursue raiders to any hiding place, and provide defense for new colonies. These extraplanetary military operations were quite small by current standards – rarely more than a few platoons of troops or a squadron of small patrol ships – but they

laid a conceptual foundation for what was to come.

About thirty years ago, the ruling clans of the *Independent Lapine Republic* found themselves facing a crisis. The ongoing waves of colonization had enveloped them, and confined their holdings to a small bubble of space containing a handful of systems, few of which were suitable for extensive colonization. The demands of their consumer populations were swiftly outstripping production, and public dissatisfaction with the corrupt democracy threatened to unseat the powerful clans of founding families that controlled the planetary congress.

The ruling clans looked at the rich colonies that surrounded them, and saw they were almost undefended – they were too large for bandits to raid, and their governments saw little need for militias. The clans, working closely with militia leaders and industry, formulated a plan of action. They would create the first space-going army, and use it to take the neighboring Inner Worlds by force. The plan needed no justification beyond the obvious superiority and greater need of the rabbit race. The lesser species would simply have to learn to give the ILR what it deserved by right of race, or be swept away.

For the next decade, the ILR undertook to arm and train an enormous army of conquest. The ancient colonial ships that still drifted in orbit were reconfigured to serve as FTL troop transports, and enormous new vessels incorporating space-borne factories and extensive weapon systems were constructed. Word of this massive arms build-up did reach the Core Worlds, where it caused surprisingly little concern aside from a few official objections. The ILR explanation was that of internal security, an adequate explanation for most. Some systems immediately neighboring the ILR made small efforts to increase their space security forces, but no large scale defenses were prepared.

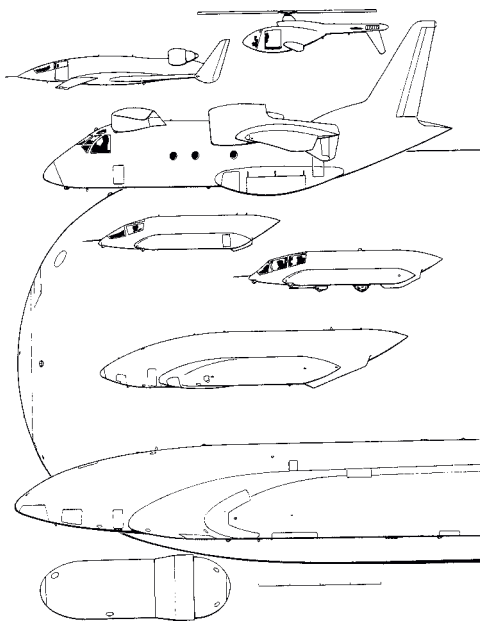
No one anticipated the savagery and swiftness of the ILR attacks that were launched thirty-one years ago. Five Inner Worlds were attacked almost simultaneously. ILR ships jumped into each system

COMMAND REVIEW • АРМАНД НЕГЕУР

A Timeline of History, Part 3

164	The Independent Lapine Republic (ILR) begins aggressive expansion, often employing military force.
165	Foundation of the Interstellar Confederation (ConFed) on Arras Charka.
167	ConFed military formalized as the Extraplanetary Defense Force (EDF). Armed conflict with the ILR begins immediately.
175	ILR sues for peace. Period of watchful peace and containment begins.
180-194	Growing dissatisfaction in the Confederation's policies. Rise of Enchawah Group.
195	ILR begins second aggressive campaign, as detailed in <i>Albedo #1</i> .

and fired dozens of rapidly accelerating torpedoes, precisely targeted at key facilities such as militia barracks and spaceports. Two colonies simply surrendered after this initial attack. When the invading ships reached orbit and unleashed the ILR ground forces, the others swiftly fell. The invaders immediately began digging in and preparing powerful new defenses against counter-attacks. Word of the invasion – and conquests – filtered slowly through the other colonies, and with the news came panic. It was months before the news reached the Core Worlds, and in that time more colonies had fallen.



ConFed goes to war

The colonies were simply unequipped to deal with space-borne assaults of this scale. Local governments scrambled to develop aerospace defenses, but these rarely proved effective. As each colony fell, the ILR came one step closer to the Core Worlds. An emergency congress of Core World governments was held on Arras Charka, with the goal of developing effective weapons and coordinating a unified defense. With unprecedented speed, this congress agreed to the formation of political and military union, the Interstellar Confederation (ConFed). Industries were rapidly retooled to produce arms, and the small space-going security fleets fielded by each Core World were folded into a single navy.

The fledgling ConFed military was soon put into action in a series of scouting raids against what were thought to be the most lightly defended of the occupied colonies. These raids proved fairly successful, but the first real confrontation of the war in the Tun Och Enchek system was a disaster for the ConFed. The attack was intended to liberate the colony and establish a mustering base closer to ILR space. Ground-based missiles destroyed every ConFed ship in the taskforce as they decelerated into the system. This disaster prompted the development of artificially intelligent Autonomous Combat Vehicles (ACVs), cheap robot drones that could move to intercept missiles and enemy craft, destroying them on impact. They could also be used to test system defenses and scout planets without risking a manned vessel.

ConFed also formalized the ad hoc military alliance they'd formed in the first days of the war, coordinating surface defense and aerospace forces under the umbrella of a new body, the Extraplanetary Defense Force (EDF). The EDF provided the ConFed with a quick way to respond to threats without sacrificing the defense of individual colonies or spending precious time sorting out command issues when forces from multiple worlds were involved.

Slowly, and at great cost, ConFed learned how to fight a war in space.

The ILR were also learning and adapting, and did so faster than the ConFed. However, they quickly reached the limit of their expansion. While they enjoyed unprecedented levels of production and prosperity, the conquered colonies required large garrisons to keep under control. Their initial edge – numerical superiority – was blunted by this requirement. Resistance groups and saboteurs appeared almost overnight, and seemed to require more and more manpower to keep under control. The Republic built work camps and special prison colonies for those who fought their occupation – or simply executed dissenters. Particularly upsetting to the Republic was the lack of cooperation on the part of rabbits living in the conquered worlds. Most did not seem to realize that the republic was fighting on behalf of their race, and some went so far as

to actively resist. These rebels faced especially harsh punishments when caught.

After six years of inconclusive engagements and bloody failed invasions, the tide of war finally began to turn in favor of ConFed. The combined production capability of the Core Worlds easily surpassed that of the ILR, and as new, powerful warships went into service, the Republican forces began to crumble... but victory would not be bought cheaply.

Atrocities at War's End

As time went on, it became clear to even the most hawkish ILR general that the EDF advance was unstoppable, backed as it was by the staggering production capability of ConFed. However, they were unwilling to admit defeat, or sue for peace. They reasoned that if they could make the EDF advance extremely costly, they might force ConFed to ask for a peace treaty before liberating all the ILR occupied territories.

To that end, the ILR changed their defensive tactics. They began to use civilian hostages as living shields in sensitive areas, forcing EDF liberators to attack them at the risk of killing hundreds of innocents. If a system seemed indefensible, ILR would deliberately raze homes, factories, and farms in order to deny resources to the liberators, and force them to tie up troops in rebuilding efforts. When EDF troops landed, they discovered looted, smoking ruins, with the local population on the verge of starvation – and sometimes, they discovered even worse. Most appalling was the evidence of

organized, racially motivated mass murders.

From the very first days of the war, the ILR had been busily wooing rabbits on the occupied worlds over to their racist philosophy. These attempts had limited success, though most rabbits paid lip service to ILR ideals simply to avoid confrontation with their new rulers. In time, the ILR began to demand more and more from the rabbits on the occupied worlds in the name of racial solidarity. Rabbit children were taken from their families and given ideological and military training on the ILR home worlds. Parents who resisted were identified as race traitors, and placed in brutal "re-education camps" in remote areas. Outspoken rabbits, who had previously been tolerated or placed under house arrest, now were simply executed on the spot.

As the ILR position in a given system became untenable, commandants of the re-education camps were given orders to execute their prisoners en masse – an action taken for practical reasons, it was claimed. It would not be logical or desirable to evacuate them to ILR space or return them into the population of their home world. EDF forces sent to liberate these camps found few survivors – and mass graves.

ILR desperation also led them to develop reprehensible new interrogation techniques in order to gain as much intelligence from prisoners as possible. While both sides sometimes used rough interrogation techniques with prisoners, in the last days of the war torture became a science for the ILR. Few EDF officers who fell into enemy



hands escaped unscathed, and those that did often bore crippling psychological scars. The racist path of ILR philosophy had finally come to its insane and inevitable final destination – lives and happiness were meaningless in the face of racial solidarity.

EDF commanders were at a loss when it came to these brutal methods. Was it better to pursue final victory in the knowledge that it would cost hundreds of thousands of needless deaths, or sue for peace and leave millions living in misery? Their troops were also faced with unpleasant moral dilemmas. EDF soldiers were trained to use the minimum amount of force required to subdue a target, and to act dispassionately and logically on the battlefield. As the atrocities mounted, they found it difficult to maintain a facade of detached war-craft. EDF forces in the field undertook bloody reprisals against ILR captives, sometimes ignoring surrenders.

This new ruthless outlook spread into the upper echelons of EDF command as they realized just how far the ILR was willing to go to ensure that any ConFed victory would be a hollow one. A new battle strategy was developed, and EDF forces were now called upon to do whatever it took to knock out the ILR's ability to wage war or defend. If this meant the wholesale destruction of civilian targets – so be it. EDF spaceships battered ILR worlds from the edge of their solar systems, launching barrage after barrage of ACVs at factories, farms, power and water facilities, civilian communication centers, roadways, and spaceports. ILR ships launched to counter these invasions faced crippling waves of ACVs set to intercept and impact them.

When surface defenses stopped responding, EDF troops were dispatched to the surface to secure what was left. Even then, they often found determined ILR survivors willing to fight to the death over rubble. ILR recruits at this point in the war had been trained to engage in suicidal attacks that claimed as many lives as possible.

Once the Republic realized that the EDF was ready and willing to carry on indefinite bombardments of their home worlds, they finally decided to sue for peace. The treaty

was negotiated in a matter of weeks, and granted surprisingly liberal terms to the ILR. The Republic agreed to withdraw their claims to almost every world they'd invaded – but were permitted to hold on to a number of key resource colonies and occupied systems with large rabbit populations. Both sides considered the deal a victory.

It is impossible to precisely know the number of people who were killed during the ten-year conflict, but it is certainly in the tens of millions. Most of those who died were civilians.

Watchful Peace

The Republic and Confederation quickly switched their efforts to reconstruction of colonies that had been savaged during the final months of the war. ConFed reconstruction crews were surprised to find a significant amount of antipathy towards the liberators -- particularly on those worlds which had been heavily bombed in the EDF counterattack. This antipathy occasionally boiled over into armed attacks against aid workers, but these attacks, and the feeling of betrayal behind them, diminished as more assistance arrived. However, it has never entirely vanished, and memories of the war often contribute to anti-ConFed sentiment in the Outer Worlds.

The Republic has never admitted defeat to its citizens. It paints the war as a deliberate attempt to force concessions from the other colonies, and taken from that perspective the war may be seen as a success. While most accept this version of events, the sheer cost of the war in terms of lives could not be hidden. Rare is the family who did not lose at least one member in the conflict.

After a few years, limited trade relations between the Republic and Confederation were renewed, and the borders were opened to infrequent passenger traffic – mostly businessmen.

Growing Problems

In the aftermath of the war, ConFed found itself by far the largest single political entity in space, with a crushingly powerful military arm. The leaders of ConFed decided to expand the role of the organization to



suit peace-time operations. ConFed was re-engineered as an economic alliance between equal partners, and a powerful peacekeeping force. Member states were given representation in a grand legislature that hammered out trade deals and local treaties. The EDF, now somewhat reduced from wartime strength, was assigned to watch the borders and patrol the space lanes.

Though the ideals of the post-war ConFed politicians were noble, problems began to appear almost immediately. Initial enthusiasm on the part of individual system governments gave way to wariness, and the fear that the powers of local governments would be superseded by the ConFed.

In the year 179 a mining rights dispute arose between the planets Ish-Tako and Zan-Cha in the Ahan-Tako system. The two planets were on the brink of a shooting war when the EDF intervened, and unilaterally claimed the disputed mining zone as ConFed property. It would be developed jointly, and the profits distributed to the ConFed coffers. The impromptu decision was supported by the majority in the ConFed parliament, who believed it to be preferable to loss of life.

The representatives from Ish-Tako and Zan-Cha (who days before had been bitter enemies) were united in their protests. They called the move an act of state-sponsored terrorism, outright theft from the people of their system. They threatened to withdraw from the ConFed, and only skilled diplomacy prevented this break. Even so, the governments of Ish-Tako and Zan-Cha moved to

restrict ConFed movement into the system, and severely limited the EDF presence.

As the years passed, many members of ConFed found they increasingly disagreed with the majority decisions of the collective body. Political groups, active across multiple planetary systems, that the ConFed membership simply locked them into unthinking rule of majority. The population of the Core Worlds is almost equal to that of the rest of Known Space, and since ConFed representation is based on population, the original colonies have an inordinate amount of influence over interstellar policies. Representatives from the Core Worlds, or representatives who supported Core World policies were dubbed *Centrists*, and it was not long before this term acquired a pejorative taint. For their part, Core World representatives argued (and still argue) that their level of representation was fair, reflecting as it does the fact that they contribute most to the EDF.

As the decades passed, the ConFed parliament found itself splintered along lines of stellar cartography and of ideology. Unofficial political alliances and coalitions were formed and reformed, and the process of government itself was largely passed on to the waiting hands of an ever-growing bureaucracy. Citizens on Inner and Outer World systems clamored for change, and in time they elected governments willing to scrap the idea of ConFed and the EDF entirely. By the year 190, some systems had left the ConFed, and many more systems had active political groups lobbying for

separation. Corporate interests, inspired by the success of the Enchawah Group, maneuvered to fill the gap, sometimes funding revolutionary groups. Civil unrest, once an event rare enough to attract interstellar attention, became a daily occurrence on some worlds.

A New Conflict

The ILR watched these new tensions with interest. Their own domestic situation was becoming untenable. Resources were becoming scarce, and the Republic was finding that it could not maintain a rabid consumer culture as well as a powerful military. The specter of mass unemployment was on the near horizon. The entrenched powers in the Republican Congress, corporate clans and military officers for the most part, began to seriously consider the prospect of a round of militaristic expansion.

This time, however, they would not be drawn into a direct conflict with the EDF. Open invasion would simply unify the worlds once more. Instead, they would take advantage of the unrest outside their borders. A plan of action was devised that would throw the ConFed off balance, and splinter it. A new form of warfare was proposed.

The Republic never ceased arming itself after the first war. They have fielded millions of soldiers and pilots. In recent months, the ILR's military scientists have made breakthrough advances in the development of new terror weapons. The Republic is ready – as ready as it will ever be – for a new war with the ConFed. The leaders have learned the lesson of the first war. They cannot hope to survive a head-to-head confrontation with the ConFed worlds. Instead, they intend to covertly support growing instability on the Inner Worlds, tie up EDF resources with lightning feints against lightly defended ConFed targets, and use their new weapons against the Core Worlds themselves. The Republic is fighting a war of terror, one that ConFed may not be able to defend against.

In the year 195, nearly twenty years after the treaty that ended the first war, the ILR struck the first blow in their new war. Under the guise of civilian shipping traffic, the

Republic was able to smuggle an entire mobile infantry battalion onto the planet Derzon. Without warning, cargo ships on the landing strips of the Derzon spaceport opened their bays to reveal armored troop carriers and light tanks. Within hours, they had overcome the lightly armed militia and security forces, and destroyed the EDF headquarters. The EDF response was swift. More than 7000 EDF personnel took part in the liberation of Derzon – a bloody mopping up that cost thousands of civilian lives.

The ILR refused to accept responsibility for the attack on Derzon, blaming rogue elements within its armed forces. The EDF is unsure what to make of this explanation, but believes the ILR is planning a major strike, using several small operations like the Derzon invasion to spread the EDF thin. The Republic correctly surmised that the costly liberation would be a factor that further polarized the worlds of the ConFed. Systems that were skeptical of the ConFed to begin with saw it as justification to leave. Loyal systems closed in on themselves, and handed more power over to the EDF – a body that itself was beginning to show the effects of slowly creeping corruption. Shortly after the Derzon invasion, a grisly attack on mining colonies in a distant Outer World further inflamed public opinion, with some crying that it was a deliberate attack by the ConFed itself to scare wavering members into loyalty.

This is the universe you have entered into – a universe of polarized opinions, conspiracies, random terrorism, and rumors of war. In *Albedo: Platinum Catalyst* you have taken on the role of military officers dedicated to preserving the rule of law, and the rights of sentient life. Your task is similar to that of a firefighter, faced with a thousand rapidly spreading brushfires – as one is put out, more spring up.

Welcome to the universe of *Albedo*.

Power Blocs

Inhabited space comprises a roughly spherical collection of stars, approximately 400 light years in diameter. Tens of thousands of star systems are located within this sphere, hundreds of which contain inhabitable worlds. ConFed astronomers and

explorers believe this section of space is unusually rich in life-bearing worlds, which supports the idea of deliberate placement by a Creator race. Almost every system has been explored quite thoroughly by ConFed, and even systems without inhabitable worlds are often home to resource or research colonies.

Known space is divided into layers, rather like an enormous onion. Each layer represents another wave of colonization. At the center of space are the dozen or so original colonies, contained within a sphere 40 light years across. These worlds are the oldest and generally most populous of the inhabited systems, though the ILR home worlds now match them in terms of population. The Core Worlds are all members of the Interstellar Confederation.

Surrounding the Core Worlds is a rather less defined layer of secondary colonies (the Inner Worlds), including the Independent Lapine Republic and the primary worlds of the Enchawah Group. This layer is perhaps 100 light years in diameter, with "arms" extending out further towards the fringe of known space. Most of the worlds in this layer are aligned in some way with the ConFed, particularly those nearest ILR space. The secondary layer actually envelops the ILR sphere of influence, so ConFed systems may be found on all sides of the Republic. ILR policy makers are painfully aware of this fact.

The rest of space is occupied by the Outer Worlds, which range from well-settled tertiary colonies, to windswept frontier villages at the extreme edge of the

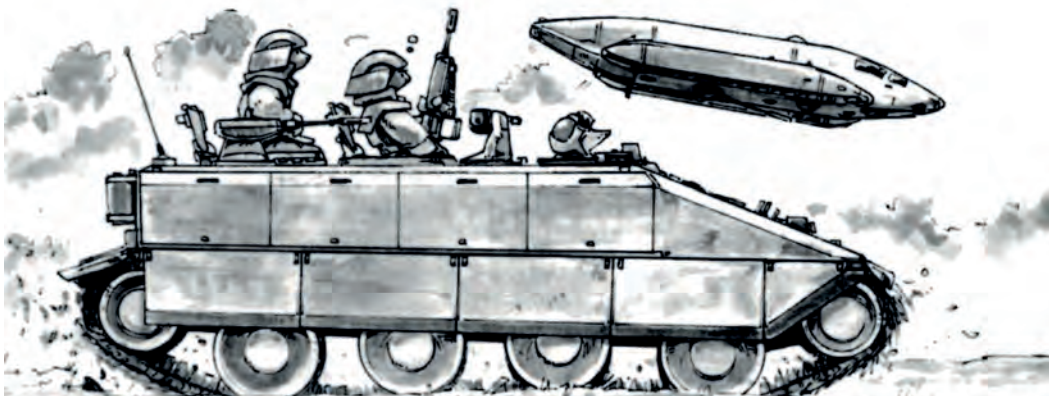
explored universe. While jump ships are capable of exploring beyond the current sphere, the further afield they trek, the more slowly expansion takes place. Partly, this is simply because they are dealing with an ever growing area. Mostly, however, it is a simply matter of infrastructure. There are no ports or stations in place to refuel ships that jump beyond the edge of explored space, and with the current state of uncertainty, expansion of the infrastructure is likely to be slow in coming.

The Confederation and EDF

The Confederation (or ConFed) is the single largest political body in existence. All 12 Core Worlds are full members of the Confederation, as are several of the Inner and Outer Worlds. Many others are closely associated through trade and limited military alliances.

The Confederation was formed thirty years ago in response to an invasion by the Independent Lapine Republic (see below), an aggressive and expansionist union of systems dominated by rabbits. The Confederation actually came into being during the period of warfare, as the Core Worlds hastily organized a unified defense. The ad-hoc alliance was successful, and the ILR was forced to give up most of those systems it had conquered.

Full Confederation members have signed a mutual defense pact, and promise to come to the aid of any member state that is attacked. This defense pact extends to internal threats as well, if they are considered dangerous enough. Military assistance is normally provided through the agency of



the Extraplanetary Defense Force (EDF).

ConFed headquarters is located in the Arras Charka system, and there are offices on nearly every well-settled world. Field offices range from enormous administrative complexes to simple store-fronts housing a single ambassador and his support staff. Confederation offices near ILR space tend to be housed within well-defended EDF bases.

While the Confederation had its foundation as a military alliance, it now plays a powerful political, administrative, and economic role. ConFed member worlds have a voice in the ruling council. They are allowed one representative for every ten million inhabitants. Confederation member states enjoy trade deals with other members in addition to military support. There are some obligations. Member states are required to meet certain standards in regards to civil rights and assured standards of life for their citizens. If a state cannot meet these obligations, it may find itself slapped with tariffs or threatened with ejection from ConFed. Despite this, there is a great deal of latitude allowed to Confederation members, and some (particularly in the Outer Worlds) have been known to stretch the civil rights requirements.

ConFed traditionally enjoys the strongest support among the oldest of the Core Worlds. A growing segment of the population of on Inner and Outer World ConFed systems are coming to regard it as an intrusive, expensive, and antiquated body, a threat to free trade and personal liberties. A number of systems are host to separatist organizations that wish to cut ties to the ConFed entirely. Most are peaceful political organizations that limit themselves to political campaigns and civil disobedience. Others have crossed into the realm of terrorism. A few are large enough to be counted as serious military threats.

The Extraplanetary Defense Force

The Extraplanetary Defense Force (EDF) is a multi-planetary military force made up of volunteers from every planet in the Confederation. The EDF is the only force outside of the ILR capable of carrying out

prolonged, large-scale, military operations light-years from a base planet. The EDF maintains a large force of faster-than-light warships, space-going factories, and transports, and is able to project a significant force across known space in a fairly short period of time.

The official role of the EDF is to respond to any external threat, but in recent years it has begun to devote more and more resources to dealing with separatist violence and domestic terrorism. In most instances, these threats are dealt with by the local Homeguards with EDF coordination. However, some terrorist groups are starting to prey on shipping lanes, and few Homeguards have the aerospace resources to deal with piracy of this kind. In situations such as this the EDF may take a direct military role and station a wing of aerodyne fighters or a destroyer in the system. From time to time, the EDF may also provide disaster relief, particularly if a given system does not have the resources to respond to a large-scale emergency.

Homeguards

Homeguard is a general term used to refer to the non-EDF military, militia, and security forces present on any ConFed aligned world. The Homeguard provide the bulk of local military personnel during times of war, and may also serve as a kind of police force in peace. During conflicts, these forces coordinate with the EDF to provide local defense, allowing the EDF to retain its mobility.

Homeguard units are sent out of their home-system only in extraordinary circumstances, and few Homeguards have the ability to transport troops en masse to another system. In fact, many smaller worlds rely on the EDF, or even civilian contractors, for any kind of off-world transport.

Most Homeguard units are equipped with a combination of EDF and locally produced arms and gear, though some may be armed and equipped entirely with local equipment. They wear local variants of the EDF uniform

The Independent Lapine Republic

A sphere of space, 20 light years across, centered about the densely populated systems of Hiahhoeh and Baliannian, the Independent Lapine Republic was founded about 70 years ago during the second wave of colonization. Originally on the fringe of explored space, the ILR has since been enveloped by the ConFed worlds. The two original systems are home to two-thirds of the population. During the first ILR/ConFed war, the Republic managed to seize a number of Outer Worlds and resource colonies in their initial expansion. Most of these were lost in the ConFed counterattack, and some of the remainder returned under the terms of the treaty that ended the war. In the intervening years, the ILR has founded a handful of resource colonies, but the Republic's expansion is limited by the ConFed. In total, the rabbits hang on to a dozen systems. They also enjoy the support of a handful of unaligned worlds, some of whom have entered into military alliances with the Republic.

The ILR is ostensibly a representative democracy with an open market. In reality, most policy is formed under pressure from senior military officers, or by powerful industrialist clans. Reform is possible, but unlikely given the current social climate. Quite simply, most citizens believe their government is doing the best it can. Outspoken political reformers are branded as traitors by the state media, and may be imprisoned or executed after a show trial.

The most notable thing about the Republic is the intense xenophobia and racism displayed by almost every inhabitant. These attitudes are supported by the government and social institutions, and have become ingrained in society. Even the most liberal of citizens may display a shocking savagery of opinion about the "lesser races." Non-rabbits living within the ILR sphere of influence live rather rough lives, particularly on Hiahhoeh and Baliannian, where more than 98% of the population is rabbit. Even on captured worlds, where rabbits are in the minority, other races are banned from holding important positions and may not vote for

representation in government. They can be imprisoned without trial for long periods, and are required to obtain passes to travel from city to city. Particularly brilliant or skilled non-rabbits may earn special privileges, but these rights are granted at the whim of the government.

Life for the average citizen of the ILR is fairly good, but rather spartan when compared to that in the Core Worlds. In recent years, the standard of living has slowly declined as available resources are consumed, and more industries are taken over by the military. Many older citizens think fondly of the "good old days" of unlimited expansion and ever growing prosperity in early days of the war. This decline in wealth has sparked a call for new expansion, but has also given rise to underground dissent. If the war goes poorly, these whispers of rebellion may grow into a full-fledged revolution against status quo. It is unlikely that even a revolution would change the xenophobic atmosphere in the Republic, at least not overnight.

In the period between the first war the current conflict, a watchful peace descended over relations between the ILR and ConFed. Little direct trade existed, and what was undertaken was routed through the frontier ConFed world, Derzon. It was under this guise that the ILR recently renewed the conflict with the ConFed – troops and armored vehicles launched a surprise assault after being transported to Derzon in civilian freighters. Trade and private travel has been officially suspended, but it still technically possible for someone to travel from the ConFed to the Republic (and vice versa) through an unaligned world on the edge of ILR space. The visitor would need to have a very good reason for doing so, or face immediate arrest upon arrival! Travel and trade with the worlds dominated by the Enchawah Group has been cut off, simply because the Republic does not border Enchawah space.

The official explanation for the current conflict is pre-emptive self-defense. The ILR accuses the ConFed of ongoing economic warfare, claiming that ConFed deliberately claims resource-rich worlds simply to deny them to the ILR. This accusation rings true

for the average person, who has seen his wages fall and prices rise. Using this justification for a new conflict, the military has taken control of nearly every major civilian manufacturing center for the duration of the conflict, and retooled them for arms manufacture. The industrialist families that control almost all manufacturing concerns in the Republic approve of this military involvement, for the most part. Factory owners have been given military rank, and they are assured of contracts. Some fear the military are using the conflict as an excuse to take over the economy and turn the Republic into a military state. These fears may be well-founded – but they are rarely expressed.

The Republic has an unusually rich, almost mythic, history that grows every year. Glorious battles and achievements are re-interpreted as natural indications of the superiority of the rabbit race. The names of heroes and martyrs become synonymous with words of praise, while those of traitors live forever as insults. Every Republican child dreams of become a legendary figure. In some cases, historical figures are regarded with something approaching religious awe, or terror.

Republican Forces

The ILR has created a strong military culture. Unlike the EDF, whose members regard soldiering as a professional career, ILR officers are indoctrinated to see the military as a higher calling in service of their race. All citizens must serve a term in the

military, and every unemployed male of age is automatically drafted in times of war. This requirement does not apply to non-rabbit citizens, though the colony worlds do have small militia forces of non-rabbits under the command of ILR officers.

The Unaligned Worlds

Enchawah Group

The Enchawah Group is the single largest privately owned entity in the universe. It is a multi-stellar corporation that provides nearly every product or service imaginable. It has operations throughout known space, even in the ILR worlds. In fact, the Enchawah Group owns and directly administers fifteen star systems and boasts an impressive space fleet.

Citizens on Enchawah owned worlds are, by default, employees of the company. They are educated by the firm and placed into jobs that best suit their aptitude. It is extremely difficult to transfer into another position once assigned.

While social advancement is somewhat limited, and the standard of life for the average worker is generally comparable to that enjoyed in the Core Worlds. However, the lack of career mobility and social safety net mean that many are trapped in dangerous, unpleasant jobs... for life.

The Enchawah Group is run by a middle-aged badger named Amhast an Therka an Enchawah. He is almost certainly the most powerful individual in space, and by far the wealthiest.



GAZETEER

JASZEN

Short History of Colonization

All known sentient life in the *Albedo* universe originated on the world of Arras Charka. In an effort to determine their origins, the inhabitants of Arras Charka embarked on a program of careful colonization about 100-150 years ago. 14 colony worlds were established in this first wave. Each has developed a unique social identity in the decades since foundation. These worlds are known as the *Core Worlds*. They are strongly socialist, and the inhabitants are generally used to a great deal of government influence in their lives.

A second, less unified, wave of colonization began about 75-90 years ago, and led to the establishment of more than fifty permanent colonies. Most of these were established along racial and ideological lines. For example, the worlds Hiahhochh and Baliannian were founded by rabbits, and later formed the Independent Lapine Republic (ILR). The majority these worlds are members of Confederation, and they are known as the *Inner Worlds*. Planetary governments vary wildly, but tend to be much more hands off than the Core Worlds. Capitalist interests are very strong. The Inner Worlds have very strong social identities, and many are considering separation from the Confederation.

A third wave of tertiary colonization started about 50 years ago as the Inner World colonies matured and began to create colonies themselves. These are known as the *Outer Worlds*. It's not clear how many of these tertiary colonies exist. The older Outer Worlds are fairly well-settled. The inhabitants, who are often first generation, tend to be much more independent than the citizens of the Inner and Core Worlds.

Outer Worlds may or may not be members of the Confederation. Newer Outer Worlds tend to be resource colonies, such as mining operations. They are sparsely populated, and may even have no perma-

nent inhabitants. They certainly are not self-sufficient.

The following is a list of notable systems in the *Albedo* universe, along with a capsule description and home world type for the purpose of character generation. Most planets are identified in terms of their position around their star. For example, Denotah III is the third planet out from the star Denotah. Some planets have specific names, as in the case of Annah (Dornthant II). In most cases the name of the main inhabited planet and the system are interchangeable. Only a pedant would refer to the home world of civilization as "Arras Charka III."

Almost all of these systems have permanent space stations in place to service interstellar traffic or handle communications. These stations often have long-term crews living in residence, allowing players from almost any of the listed planets or system to choose the Space Station home world type.

This list is far from complete. The universe of *Albedo* encompasses tens of thousands of cubic light-years of space, and thousands of solar systems. Players and Game Hosts are encouraged to invent their own worlds.

Core Worlds

Arras Charka (CONFED)

The Arras Charka system is home to a single terrestrial planet, three airless balls of rock, and an enormous gas giant at the edge of the system. Arras Charka III is the original world, the cradle of all civilization, upon which the ancestors of every living person awoke more than 250 years ago. With slightly more than two billion inhabitants it is also the most heavily populated world in the Confederation. Every race in the universe is represented on Arras Charka, and for the most part they live in very diverse and desegregated communi-

ties. Inhabitants refer to themselves as Charkani.

The primary settlement is Center City, a metropolis with more than ten million inhabitants. Center City is home to the administrative headquarters of the Confederation and EDF, as well as the grand council chambers where representatives from every ConFed world meet to decide on legislation. It is also the location of the ConFed "Special Facility," an extremely secure prison used to house particularly sensitive criminals, such as well-known terrorists or important prisoners of war.

The Arras Charka system is extremely well-defended, and picket vessels and powerful space-borne sensor arrays keep a constant watch on in-bound vessels. Thousands of ground and space-based ACVs are ready to be launched to intercept any invasion. The system is also home to a number of permanent residential space stations, most of which date back to the earliest days of space exploration. Small colonies exist on Arras Charka II and IV, and on a moon that orbits the gas giant Arras Charka V.

ARRAS CHARKA SYSTEM

Arras Charka I: Small, rocky planet, sun blasted and airless. No inhabitants.

Arras Charka II: Large, rocky world with a thin atmosphere. There is a solar research station at northern pole, built atop a small ice cap. (Research)

Arras Charka III: Terrestrial world. The cradle of civilization. One small, rocky moon with temporary bases for training EDF personnel in planetary exploration. (Urban, Space Station, Rural)

Arras Charka IV: Small rocky planet with a relatively thick (and poisonous) atmosphere. A few resource colonies exist around the equator. No moons. (Resource)

Arras Charka V: Gas giant, with 6 moons. A research/communications colony exists on the largest moon. (Research)



Aeostah (CONFED)

An important manufacturing center, the Aeostah system has one major inhabited planet and a number of colonies on a smaller terrestrial world. The other three planets are uninhabited. Aeostah is also home to Aelata Station, an enormous EDF shipyard that hangs in orbit around the main planet, Aeostah II, known locally as Aelata. As such, the system sees military and civilian traffic. It is also heavily defended. It is rumored that the EDF maintains a highly classified experimental shipyard somewhere in Aeostah's Oort cloud, billions of miles beyond the orbit of the most distant planet.

Aelata was settled by wolves, and they still form the single largest portion of the population. The colony is named for the woman who largely organized the settlement, and "Aelata" is a very common name among women on the planet. Descendants of the original wolf settlers have organized themselves into loose clans, based on family lines, and led by the eldest or most domineering adult. The clan leader has a strong social influence over the members of his or her family. At times, competition between would-be leaders of a clan can erupt into violence, though the clan is usually careful to limit the conflicts to their own members. While these clans hold no official power, senior members are often elected to the planetary council.

The fourth planet in the system, a small terrestrial world about half the size of Aelata, is also inhabited. It has a thin,

though breathable atmosphere, and a significant amount of native plant life in low-lying marshland. The planet is dotted with pressurized domes, each housing a small community of birds. The planetary gravity is low enough to allow smaller species (such as sparrows) to fly for short distances, a sight that can be alarming for non-avian visitors.

AEOSTAH SYSTEM

Aeostah I: Small planet with shifting, molten surface and thin atmosphere of burning vapor. No inhabitants. One small, irregularly shaped moon.

Aeostah II (Aelata): Well-settled terrestrial world. Large shipyard and many stations in orbit. One large moon, with extensive resource colonies. (Urban, Space Station, Resource)

Aeostah III: Small, airless planetoid. No inhabitants. No moons.

Aeostah IV: Terrestrial world, though cold with low gravity. Sparsely settled. Two small moons. (Nature of settlements counts as Space Station for character backgrounds)

Aeostah V: Frozen planet, with salty subsurface ocean. Subject of ongoing study, but no permanent settlements. No moons.

Chalendar (CONFED)

Chalendar was the site of the first interstellar colony, founded more than 150 years ago. It has risen in prominence and importance so that it now almost eclipses Arras Charka in the minds of ConFed citizens. There is a single terrestrial planet in the system and nine other resource rich worlds (with a space station orbiting each one). The majority of the population lives on Chalendar V, commonly known as Aerandar. The world was named for the head scientist on the team that developed the jump drive, with all continents and major geographical features named for prominent scientists and lawmakers of the period.

The inhabitants of Aerandar practice an advanced form of democratic socialism, and are strong supporters of the ConFed and EDF. The EDF maintains a major officer training academy in the capital city of

Holmgren. A powerful grass-roots political party has recently formed that believes that ConFed members outside the Core Worlds do not do enough to support the EDF. They are petitioning the EDF to withdraw protection from those worlds that do not meet a high standard of support.

Aerandar is home to a selection of fairly advanced native species, including a number of small, land-dwelling crustaceans and worm-like invertebrates. Some of the worms have highly-poisonous skin, while others are commonly harvested for food.

CHALENDAR SYSTEM

Chalendar I (Tamda): Irregularly shaped asteroid in a very close, though stable, solar orbit. No inhabitants.

Chalendar II (Cheamna): Hot, airless, rocky planet. One side is permanently locked towards the sun. Water ice may be found on the dark side, and two small mining colonies collect rare elements. A mothballed EDF training base at the North Pole was used for vacuum combat training in the first ILR war. (Resource)

Chalendar III (Lan): Large rocky world with thousands of active volcanoes and tectonically active surface. Volcanic outgassing is swept away by solar wind before any atmosphere can be formed. No inhabitants, no moons.

Chalendar IV (Jeanjahn): A large, rocky planet, with no minerals of note, and an active, thick, atmosphere that traps heat. It also has expansive steaming seas of scalding, mineral-rich water. The planet has two relative large moons, and two smaller moonlets in slowly degrading low orbits. They are expected to crash into the surface at some point in the distance future. A resource colony exists on the largest moon. (Resource)

Chalendar V (Aerandar): Heavily populated warm terrestrial world, with expansive oceans. Several space stations are in orbit. A single rocky moon is in orbit. (Urban, Space Station)

Chalendar VI (Whandar): Very large, rocky planet, covered in ice. Limited life exists in deep chasms and basins, centered around geothermal vents. No colonies on the surface. The single small rocky moon

is home to a crowded underground colony. (Urban)

Chalendar VII (Tahn): Brilliant green gas giant with an icy ring. A number of resource stations collect rare crystals from the ring. It has four moons, and four moonlets. The outermost moon is relatively large, with active volcanoes and a thin atmosphere. (Resource)

Danet (CONFED)

While Danet was one of the last of the Core world systems to be settled, it quickly became one of the most important and dynamic. Danet has a single inhabited world (Danet IV), three smaller planets, and gas giant in far orbit.

Danet IV was settled almost entirely by mice, and mice are still the largest single group on the planet. They have a number of very large cities, which are home to educational institutions that are renowned throughout the known universe. Of particular note are the schools specializing in obscure academic specialties, such as the Athelind College of Xenology. The inhabitants (known as Danetti) are notoriously easy-going and hedonistic, and polyamorous relationships are the norm. The rights of the individual are extremely important in Danetti society, sometimes more so than the good of society as a whole. The Danet system is quite peaceful, and there are rarely scandals or incidents of civil unrest. There is a small separatist movement that wishes to see the planet stand as an independent body, but they believe in achieving this goal peacefully. The greatest criticism leveled against the average Danetti is that he is apolitical, and not interested in the larger affairs of the universe.

DANET SYSTEM

Danet I: Relatively large and rocky world with near-molten surface. A thin atmosphere is constantly torn away by solar wind. No inhabitants or moons.

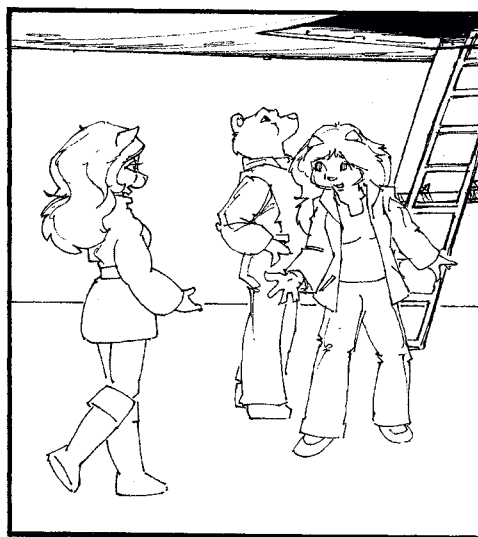
Danet II: Rocky planet with thick, reflective atmosphere containing a high level of carbon dioxide. Pressure at the surface is very high, though one heavily shielded research colony is in place. Danet II has

four small moons in very irregular orbits. (Research)

Danet III: Small, ice-bound planet. Significant cloud cover reflects most of the heat from the sun. Several domed research colonies exist on the surface, and the planet is thought to be suitable for terraforming. No moons. (Research)

Danet IV: Heavily settled terrestrial world with extensive organic farming operations. Several permanent stations in orbit, and a number of dedicated research communities on the surface. Two small moons, (Urban, Rural, Space Station, Research)

Danet V: Freezing gas giant in distant orbit, covered in gleaming white clouds. A small communications and emergency station is in orbit. No significant moons, though Danet V has attracted several hundred tiny asteroids to its orbit. (Space station)



Dornthant (CONFED)

The Dornthant system was selected as a suitable candidate for colonization very early in the first wave of exploration, as it boasts two terrestrial worlds, and a selection of resource rich planets. Dornthant II (known as Annah) and III (known as Doynah) are both well-populated, with cats of various species making up a large percentage of the overall population. Annah is more heavily populated with an impressive manufacturing base, while Doynah is home

to extensive farming operations that feed several worlds.

The inhabitants of the two populated worlds in this system refer to themselves collectively as Dornthantii. They are very cosmopolitan and socially liberated, but also have a very strong sense of civic responsibility and respect for elected authority. They have a reputation for being dull, stuffed shirts, particularly among inhabitants of more hedonistic systems, such as Danet.

Annah is home to a large EDF training academy, and large communities of EDF officers and personnel exist. The EDF is considered the service of choice among young Dornthantii who wish to pursue a military career, and the Homeguard is regarded with slight distaste as a result.

Two disturbing social trends exist in Dornthant currently. The first is the rising incidence of random, motiveless shootings undertaken by deranged citizens. Second is the rise of a new order of ambitious young EDF officers, who hold personal privilege and power as more important than the rights of ConFed citizens. This group is gaining a significant degree of influence in the EDF, and many older officers have retired in disgust – or been forced to resign.

DORNTANT SYSTEM

Dornthant I: An unusual gas giant, superheated to near plasma. It constantly loses mass to the sun. No inhabitants or moons.

Dornthant II (Annah): Heavily populated, warm terrestrial world. Small jungles exist on most continents. One small rocky moon and several space stations in orbit. (Urban, Space Station)

Dornthant III (Doynah): Cool terrestrial world with extensive settlements, and large plains. Open farming takes up much of the land. There are three permanent space stations in orbit, and one large rocky moon with a thin atmosphere, which is home to mining operations. (Urban, Rural, Space Station, Resource)

Dornthant IV: Frigid world with thick, acidic atmosphere/oceans. Subject of periodic scientific expeditions, but has no settlements. Three rocky, airless moons.

Dornthant V: Tiny, rocky world in distant orbit, thought to be a captured asteroid. A communications station trails its orbit. (Space station)

Inner Worlds

Ahan-Tako (CONFED)

A large and well-populated system, with six planets and two extensive asteroid belts. Though it is well-settled and developed, Ahan-Tako has something of the quality of a frontier system. It has been plagued with unrest in recent years. Pirates and raiders haunt the asteroid belt, and the terrestrial planets Ahan-Tako IV (Ish-Tako) and Ahan-Tako V (Zan-Cha) are both home to revolutionary separatist movements, which are large enough to realistically describe themselves as armies. Consequently, local Homeguards are well-equipped and very experienced, and the EDF maintains a strong presence here. The government is a capitalist democracy, though elections have been temporarily suspended in the face of internal unrest. Ish-Tako is home to a underground revolutionary army that hopes to overthrow the planetary government, cut ties with the Confederation, and establish a new system of government based on xenophobic and communist principles. The largest settlement in the system is Tadak City on Ish-Tako, and the city is a regular target of revolutionary attacks.

AHAN-TAKO SYSTEM

Ahan-Tako I (Zion): A sun-charred rocky planet with an extremely rapid rotation. No settlements. Two rocky moons.

Ahan-Tako II (Ktan-Tako): A large, hot, airless ball of rock. It was extensively strip-mined in the first decades of colonization. A few unofficial communities of squatters still exist in the shade of a south polar mountain range. They trade salvaged mining equipment for supplies. Two moons – one planet sized, and one less than 600 km in diameter. (Settlements count as Rural)

Ahan-Tako III (Ish-Tako): Well-settled terrestrial world with several space stations in orbit. Two moons, both airless and rocky. One moon is quite large, and

is in turn orbited by a tiny moon. (Urban, Space Station)

Ahan-Tako IV (Ther-Tonki): Vibrantly colored gas giant with an extensive system of moons. The moons are haunted by hardscrabble pirates who prey on shipping, and each other. The planet has no less than 28 moons, mostly rocky planetoids. The largest moon (Zan-Cha) is a cold terrestrial world with a thin, though breathable atmosphere. It is home to a number of urban colonies around the equator. (Space Station, Urban)

Inner Asteroid Belt: An extensive asteroid belt fills the space between the sixth and seventh planets. There are dozens of resource and research stations in the belt, and a number of illegal settlements run by pirates or revolutionaries. (Space Station, Resource, Research)

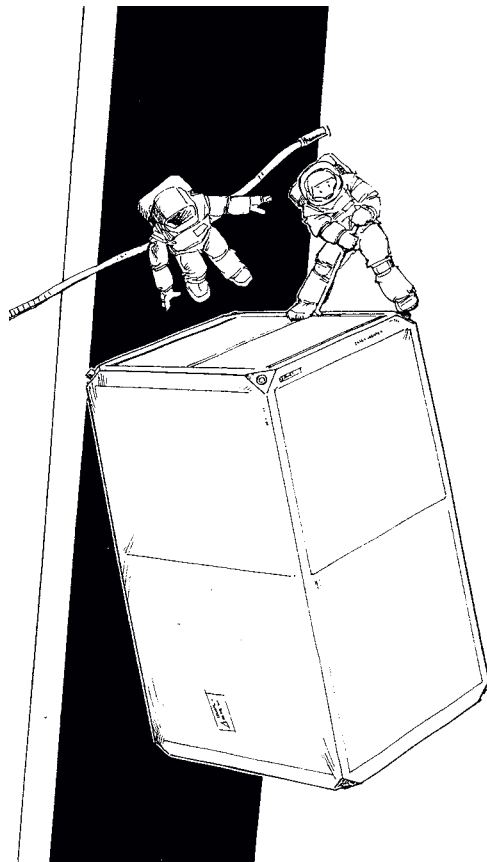
Ahan-Tako V (Ther-Son): Sub-Jovian gas giant, with no settlements and two small moons. Sometimes used as a dumping ground for radioactive waste.

Ahan-Tako VI (Wha-Tako): Frozen, ice-covered planet, with possible alcohol ocean under the surface. A former research colony has been abandoned over piracy concerns. No moons. Pirate colonies may exist in hidden locations.

Outer Asteroid Belt: Comprised mostly of frozen lumps of gas, the outer asteroid belt presents a modest threat to shipping. The EDF maintains a series of unmanned navigation buoys throughout.

Ahnomia (CONFED)

The Ahnomia system has only one planet, a gas giant that orbits the star at a great distance. The system is significant in that it serves as a waypoint to more hospitable places. The EDF maintains an enormous and well-defended transfer station here, in orbit about 100 million kilometers from the Ahnomia star. Here, ships may be repaired or refueled, and personnel reassigned to new vessels. In the past, the Ahnomia system has served as a convenient mustering point for Aerospace taskforces. The transfer station is closed to civilian traffic, though exceptions are made in emergencies.



Civilian ships that need to stop in Ahnomia are normally restricted to a privately-run resource station (permanent population about 40) in orbit around Ahnomia I. The station extracts rare elements from the upper atmosphere of the gas giant. The station operates under contract with the Confederation, and is required to offer basic amenities to outsider visitors.

AHNOmia SYSTEM

Ahnomia I: Large gas giant with rare elements in upper atmosphere. One privately owned resource colony, and two large, airless moons. (Resource)

Denotah (INDEPENDENT, UNALIGNED)

The Denotah system, located far from ILR space, is unusual in that it is an Inner World that did not join the Confederation during the first ILR war. The only settled world, Denotah IV, is ruled by an extremely inefficient capitalist democracy. The government maintains a large surface army/security force, and fields a few small capital space-

ships, none of which are equipped for interstellar assaults. Trade between Denotah and the rest of the universe is infrequent, but there are no restrictions on travel. However, few outsiders wish to visit, and few citizens of Denotah can afford to leave.

Corruption and poverty are widespread. Unsavory corporations lure unsuspecting young people to distant work sites, with promises of high pay. Once there, they find themselves dependent on company stores that charge outrageously high prices which drain most of the employee's salary. Charges for room and board eat up the rest, meaning it takes years to save up enough to return to the main settlements. This practice not technically legal, but companies pay sizable bribes to the government in Batu City to turn a blind eye to the practice. As the government is largely in the pocket of corporate interests, Denotah IV is considered a corporate world for the purpose of character generation.

DENOTAH SYSTEM

Denotah I: Rocky, airless world with a great deal of volcanic activity caused by the tidal interaction of the sun, and the planet's relatively sizable moon. No inhabitants.

Denotah II: Small, rocky planet with a thin atmosphere. Denotah Space Command has interdicted this world, and it is thought that there is a domed penal colony somewhere on the surface. It has three small moons.

Denotah III: Arid, airless world with no significant resources. Sometimes used as a missile testing ground by Denotah vessels.

Denotah IV: Wet, terrestrial world with large oceans and many islands. Well-settled, with a population in the billions. There are two residential space stations in orbit, and some research colonies on the single, rocky moon. (Corporate, Resource, Research, Space Station)

Denotah V: Sub-Jovian gas giant with brilliant rings and small collection of moons. No settlements. Four moons, all rocky, irregular bodies.

Denotah VI: Frozen ball of ice orbiting Denotah at a great distance. A commu-

nications and transfer station is in orbit. (Space Station)



Derzon (ConFed)

Separated from the Core Worlds by the full expanse of ILR space, this lightly settled ConFed system serves a major trade route between the Republic and the Outer Worlds. The EDF maintains a barracks and communications center here, on Derzon II, but has very little in the way of military hardware. The local Homeguard is little more than a police force.

The capital city is Andis. The inhabitants, for the most part, are strong ConFed supporters, but they are inherently pacifistic. In the year 195, Derzon II was briefly overrun by ILR forces working without the official support of their government. The ILR troops entrenched themselves in the civilian population, so the subsequent EDF liberation resulted in extensive loss of life and damage to civil infrastructure. From that point on, the inhabitants of Derzon regarded the EDF and ConFed with great suspicion. The event serves as a rallying point for separatist groups throughout known space.

DERZON SYSTEM

Derzon I: Geologically active world with constantly changing, molten rock surface. No settlements or moons.

Derzon II: Cool, terrestrial world. Sparsely populated, and geologically young with many mountains. One large, airless moon, with resource colonies on the surface. (Urban, Rural, Resource)

Derzon III: Very large gas giant, thought to have swallowed several outer planets in the distant past, and trapped others in its 14 moon system. All moons are relatively large, and 3 have measurable atmospheres. No settlements.

Dilbion (CONFED)

Dilbion is a well-settled system with a strong capitalist economy. There are two settled worlds, Dilbion II and Dilbion III, and two uninhabited planets. Both Dilbion II and III are terrestrial worlds. Dilbion II is a warm terrestrial planet, portions of which are covered in relatively advanced jungle. The colony was founded by horses, but generous settlement packages have encouraged people of all races to immigrate here, and the planet currently has a population of 200 million.

Dilbion III is much cooler, and is largely covered in ice and snow. Liquid water and rain occurs only within a few hundred kilometers of the equator. The planet was settled by an odd alliance of penguins and arctic mammals, such as polar bears, and most of the inhabitants are descendants of the original colonists. The total population of the planet is under ten million.

Dilbion II and III share an elected government and capitalist economy. Dilbion II is home to the legislative assembly, and boasts most of the system's industrial base, while Dilbion III has many financial and banking offices. The planets co-exist peacefully, and have strong ties to the ConFed and EDF. The planets share a coin currency, known as the Star, which is artificially set at an even exchange rate with the ConFed credit. Stars are annually minted, with the faces depicting the current head of the legislature. This practice means that coins picturing short-lived leaders are rare, and sought after by collectors throughout space. The same is true of coins from the early years of the double colony. Coins of this kind may trade for much higher than the official exchange rate.

For the last decade a small political party on Dilbion II has been calling for the separation of the two planets, accusing the banking houses of Dilbion III of manipulating the economy to the unfair advantage of the smaller world. A recent government accounting scandal has brought to light evidence which seems to support this view, and the separatist party is gaining strength.

DILBION SYSTEM

Dilbion I: Volcanic planet with a thick, sulfurous atmosphere. No colonies. One small rocky moon.

Dilbion II: Warm terrestrial planet, well settled. Two small moons with minor colonies. (Urban, Resource)

Dilbion III: Cold terrestrial planet, modest population. No moons. (Urban)

Dilbion IV: Sub-Jovian gas world. No inhabitants. Five airless, rocky moons, with an EDF recon station on the outermost. (Space Station)



Echak

(INDEPENDENT, CONFED ALLY)

Echak is a somewhat barren system, chosen specifically by settlers with a somewhat austere philosophy of independence and beauty in simplicity. They wanted a world devoid of soft lines and easily settled landscapes, and the barely inhabitable Echak III fits this bill perfectly. The other planets in the system are undistinguished balls of rock.

Echak III was settled fairly early on in the second wave of expansion by a clan of foxes and wolves who followed a leader that espoused a philosophy of self-denial and self-reliance. The original Echaki lived off the land, insofar as they were able, building homes from stones and plant matter, and even hunting local arthropods for food. Life was governed by a series of elaborate, graceful rituals that marked the importance of each occasion. The colonists even developed their own language, a strangely poetic yet staccato tongue which few outsiders understand.

The modern-day Echaki are somewhat more liberal, and live in small towns with

light industry, but maintain many of their old traditions and attitudes. For example, they still eat a limited amount of local fauna, though the bulk of it becomes biomass for processed food. They revere all life and pay special attention to "who" they eat, even when it is just tissue culture.

The Echaki sided with the ConFed during the first ILR war, but avoided becoming full members. They are an independent democracy, with a fairly thriving socialist economy. An elected council meets annually to pass legislation. The government maintains a small and highly skilled army, and a fairly substantial interplanetary space force. As part of their mutual defense agreement with the ConFed, they contribute some of their best officers and pilots to the EDF.

ECHAK SYSTEM

Echak I – Small, airless, rocky planet. No settlements or moons.

Echak II – Rocky, airless planet. No settlements or moons.

Echak III – Relatively arid terrestrial world, with most water tied up in lowland marshes. Modestly large population in the tens of millions. One permanent space station, and a single large moon. (Rural, Space Station)

Echak IV – A large, irregular planetoid in the otherwise sparse asteroid belt. Small population of miners live in a resource colony on the planetoid. (Resource)

Ekosiak (CONFED)

The Ekosiak system lies near the edge of ConFed space, and is separated from the Core Worlds by the expanse of ILR space. Trade and travel between the two takes several months. The only inhabited world is Ekosiak I, a relatively young colony with about 50 million inhabitants. The only other planet-sized body in the system is a massive gas giant that orbits the sun at a great distance.

Ekosiak I is nominally a ConFed member, but the local government pays little more than lip service to their membership obligations. There is a Confederate government house, but the office only has four staff. The planet does maintain a large and well-equipped Homeguard. Many of the officers

in this force resent the outside influence of EDF, and bristle at suggestions that the Homeguard is merely an arm of the larger force. The (mostly canine) inhabitants are fiercely independent and even libertarian. There is a strong separatist movement, to the degree that the presence of a single EDF advisor to Homeguard operations once caused the outbreak of civil unrest.

Ekosiak has a strong capitalist economy, and corporations wield an undue amount of power over the democratically elected governor. Some corporate leaders hope to subvert the civil authority entirely, and turn Ekosiak into a corporate world, along the lines of Enchawah. Thus far, they have been unsuccessful, though at least one corporate magnate has had great success encouraging riots against status quo.

EKOSIAK SYSTEM

Ekosiak I – Warm terrestrial world. Lightly settled, with most of the population centered in a dozen cities. Two permanent stations in orbit, and five tiny moons. (Urban, Rural)

Ekosiak II – Massive gas giant in extremely distant orbit. A powerful electromagnetic radiation field discourages exploration or settlement in its system of ten moons.

Kawateena (INDEPENDENT, UNALIGNED)

The Kawateena system is unique in known space, in that it is ruled by hereditary nobility. The system itself encompasses six planets, two of which are settled. Kawateena was settled about 90 years ago, but their noble classes predate the colonization. The colonists were members of an enclave of feline clans on Arras Charka that were only nominally loyal to the socialist government. They managed to get approval for the foundation of a new colony, and were free to indulge their monarchist experiment on a system-wide level. The current ruling family is the House Ardehad, though their claim may soon be challenged if the Lady of the clan proves unable to produce or name an heir. The family is considering cloning as a possible solution to this problem.

The ruling classes are not idle rich, and they are not above the law. They are trained from birth to work towards the service of

the state, and are considered by some to be little more than elevated civil servants. The family of the monarch in particular is expected to maintain a full schedule of public appearances and dull legislative duties. The common people are generally well-cared for, and well-funded social assistance programs are in place for those willing to work. Kawateena is friendly towards the Confederation, but does not have any specific alliance in place. The Confederation regards the government rather coolly, believing that monarchies are prone to abuse of power.

ConFed fears are somewhat justified – Kawateena is far from a perfect state. The monarchs have a considerable degree of direct control over the economy and legislative process, and past rulers have been known to side-step the judicial process to protect a family member or pursue a personal goal. In addition, the ruling clans have used violence and assassination in the past in order to achieve the throne.

The monarch of Kawateena may be male or female, and is referred to as the Lord or Lady. The royal palace – an elaborate structure that combines mansion home and government offices – is located in the capital city of Tehnka on Kawateena III.

KAWATEENA SYSTEM

Kawateena I: A tidally locked, large and rocky planet. A small research colony exists on the border of the dark and light sides of the planet. It has one small moon, with a highly eccentric orbit. (Research)

Kawateena II: Small and dense planet, with a thick, poisonous atmosphere, subject to violent storms. No settlements or moons.

Kawateena III: Warm terrestrial world. Well settled, with strong manufacturing base, and several permanent stations in orbit. Two small moons. (Urban, Rural, Space Station)

Kawateena IV: Cool terrestrial world, with low gravity. Small avian population collected in towns, and a few resource colonies on remote continents. Ruled by feline nobility on third planet. No moons. (Urban, Resource)

Asteroid Belt: The Kawateeni asteroid belt is thought to be remnants of an icy world. Very few resources are found here.

Kawateena V: Relatively small gas planet with extensive ring system collected from asteroid belt. No significant moons, and no settlements.

Kawateena VI: Large, Ice-covered rocky world with a large, distant moon. A communications station is in orbit. (Space Station)

Tun Och Enchek (CONFED)

Tun Och Enchek (or simply "Enchek") has never recovered from the first ILR war. Once home to extensive specialty farming operations, the system now generates only enough food for local use. The system's infrastructure and manufacturing base was badly ravaged during the ILR retreat, and the locals welcome any EDF presence in the system.

The only terrestrial planet in the system, Enchek III, is a pleasant, geologically stable world of extensive plains and rolling hills. It was settled by community of ungulates who wished to establish a planet-wide confederation of loosely allied towns. The early settlers were able to genetically engineer alien grain crops, and cross them with ones from Arras Charka, to produce exceptionally high-yield crops.

Currently, very few farming operations are still running. Many of the towns have been abandoned, and the settlers have moved to the Core Worlds. What is left has been rebuilt by the ConFed, but the population of the system is slowly decreasing. The ConFed has plans to use Enchek III as a refugee resettlement world in the event of a new war, or major disaster in another system. The inhabitants have a representative democracy, but it is limited to the municipal level.

TUN OCH ENCHEK SYSTEM

Tun Och Enchek I: Spinning ball of plasma, very close to sun. Stellar gravity is gradually pulling this world into pieces. No settlements.

Tun Och Enchek II: Small, fiery ball of rock. No settlements or moons.

Tun Och Enchek III (Enchek): Warm, terrestrial world. Slightly reduced gravity, and large bodies of fresh water. Sparsely settled. One small moon. (Rural)

Asteroid Belt: A number of mining companies have recently started new operations in the Asteroid Belt. The EDF also maintains some tracking stations. (Resource, Space Station)

Tun Och Enchek IV: Unremarkable icy ball with no settlements or moons.

Outer Worlds and Other Powers

Baliannian (ILR)

The original ILR home system, Baliannian is crowded, heavily defended system. The main planet is Baliannian III, a heavily developed and industrialized planet with a population approaching ten billion. The main houses of government are located here, along with military academies and major weapons research facilities. The population is overwhelmingly rabbit, though the system is not closed to other species. Indeed, citizens from ILR aligned worlds and conquered territories have access to inexpensive tours that highlight the glories of the Republic.

The population is used to a very rich, consumer economy, but their lifestyle has become more Spartan in recent years. The planet is a representative democracy, but non-rabbits are barred from office, and corporate and military candidates almost invariably win office.

Every planet in the system houses extensive automatic defense and detection systems. Government regulations require all incoming ships to be interdicted and searched before orbiting any planet.

BALIANNIAN SYSTEM

Baliannian I: Rapidly rotating, small, irregular rocky world. No settlements.

Baliannian II: Hot, rocky world with thick atmosphere, full of green house gases. Surface pressure too great for colonization. No stations or moons.

Baliannian III: Cool terrestrial world. Heavily settled, with some cities exceed-



ing 20 million population. Several cargo transfer and residential stations in orbit. One small, airless moon. (Urban, Space Station)

Baliannian IV: Cold, arid world with a thin atmosphere. A single large, volcanic moon orbits. Resource colonies and military training camps are present on the surface, and a transfer station in orbit. (Resource, Space Station)

Baliannian V: Very large gas giant; has no moons, aside from some captured comets and asteroids. An ILR capital ship repair yard is located in orbit, with a large residential section. (Space Station)

Chishatta (INDEPENDENT, CONFED ALLY)

This double star system, located on the far edge of known space, has no planets. The most notable feature is an extensive asteroid belt, believed to be the remains of resource-rich worlds that were torn apart when their sun acquired a twin. It is home to several hundred corporate miners from a number of ConFed worlds, here with the permission of the ConFed Department of Resource Exploration.

Endly (ENCHAWAH GROUP)

Endly is the home system for the Enchawah Group, a collection of 12 corporate controlled inhabited systems, and several dozen resource colonies. Endly has seven planets, all of which have been extensively exploited for their resource wealth. The main planet, Endly V, is a pleasant, terrestrial world with rich oceans. The planet is entirely governed by a private corporation. Corporate inhabitants live in beautiful resort villages, and travel by private helicopter from settlement to settlement. Low-level employees are packed into high-rise apartments, and ride underground trains from home to factory.

Endly has an active movement pressing for democracy and worker's rights. This movement has yet to gain a great deal of strength, as the company, by and large, deals fairly with its employees. The Enchawah Group has trade relations with the ILR and ConFed, but openly prefers the ConFed. If it came to war, the corporation would throw its support behind the ConFed.

ENDLY SYSTEM

Endly I: Hot rock ball with a thin, highly poisonous mineral atmosphere. Two small moons. Robotic strip mines mar the surface of all three. No manned settlements.

Endly II: Small, airless rocky world. Resource colonies are on the surface, and a permanent station is in orbit. (Resource, Space Station)

Endly III: Relatively small gas world. Very warm upper atmosphere is known to harbor complex organic elements, though no true life has been found. The

planet has a system of six rocky moons, one of which is planet sized in its own right, and is home to an extensive research station. The others hold mining colonies. (Research, Resource)

Endly IV: Warm terrestrial world, covered in an ocean of heavily carbonated sulfurous water. Simple bacteria are known to exist in the waves. Several floating research stations exist, and exploration is underway to find exploitable resources on the ocean floor. (Research)

Endly V: Cool terrestrial world with small continents. Well-settled, but bulk of population are limited to crowded cities near manufacturing centers. Three tiny moons. (Corporate, Research)

Endly VI: Airless, rocky world. Most easily accessed resources have been mined. Currently unsettled. No moons.

Endly VII: Small, icy world. A single mining colony exists. (Resource)

Hiahhohch (ILR)

Hiahhohch was the second system to declare allegiance to the Independent Lapine Republic. It is one of the two founding ILR systems, the combined populations of which represent 80% of the ILR whole. Hiahhohch has two terrestrial planets, both heavily populated. As with Baliannian, the system is very well defended.

Hiahhohch is considered a somewhat downscale and less civilized version of Baliannian by many in the ILR – at least, many from Baliannian. It is true that the system has fewer research facilities and centers of higher learning and that young people from Hiahhohch tend to fill the lower ranks of the military. Units from Hiahhohch have a reputation for ferocity, and are often used as expendable shock troops.

The rabbit majority is not quite as overwhelming as it is on Baliannian, though lapines still represent well over 90% of the total population. Outside traffic is not very common – there is simply not as much to see in this system, at least in terms of glorious works of rabbit culture.

HIAHHOHCH SYSTEM

Hiahhohch I: Large world with oceans of molten rock. No significant atmosphere. One captured asteroid in orbit. No settlements.

Hiahhohch II: Very warm terrestrial world with extensive deserts and small oceans. Well settled along bodies of water. Some permanent stations in orbit, and resource colonies in remote areas. Small settlements exist in the deserts. No moons. (Urban, Resource, Rural, Space Station)

Hiahhohch III: Terrestrial world with extensive mountain ranges and highland plateaus. Well settled on plains. Two moons – one large, one small, both airless. (Urban, Space Station)

Hiahhohch IV: Tiny, irregular rocky planet. A communications station follows in a trailing orbit. (Space Station)

Konattahtzah (ILR)

Konattahtzah is a formerly independent system, annexed by the ILR during the first conflict. There were once two inhabited planets, but a failed liberation attempt near the end of the war razed all large cities on Konattahtzah IV. The surviving inhabitants were relocated to Konattahtzah V – in many cases forcibly.

Konattahtzah was settled by kangaroos and a variety of small mammals. It was originally a socialist democracy, and declared allegiance to the ConFed early in the first ILR war. It was swiftly conquered, and ceded to the Republic in the terms of the treaty that ended the war. Several hundred thousand rabbits moved to the system after the war. Most are employed in garrisoning and administering the planet. The government is officially a democracy with two levels of legislature. Unfortunately, the upper house is a council of rabbits appointed by the Republic – it has the power to overturn or change any laws passed the lower house, call new elections, or suspend the lower house entirely. As such, the native population has no voice. Konattahtzah V is home to a number of crumbling, once proud cities, and occasional walled rabbit communities in much better repair. The ILR has not committed funds to repair war damage,

being more interested with stripping resources from the planet. There is an active resistance movement on the planet, which periodically makes impressive attacks against Republican targets.

KONATTAHTZAH SYSTEM

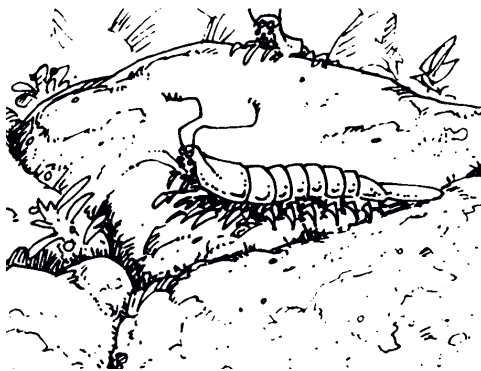
Konattahtzah I: Small, rocky, airless world in eccentric orbit around sun. No settlements or moons.

Konattahtzah II: Small, rocky world with extremely thin atmosphere. Currently being strip mined by Republic, using slave labor. No moons. (Resource)

Konattahtzah III: Large, rocky world with volcanic surface and thick, violent atmosphere. One rocky moon with the remains of a research colony, now abandoned.

Konattahtzah IV: Warm terrestrial world with expansive oceans and verdant local fauna. Several abandoned/blasted cities. Periodically used by ILR as an urban warfare training ground. Some refugees live in remote areas. No moons. (Rural)

Konattahtzah V: Cool terrestrial world, well settled, with permanent space stations in orbit. No moons. (Urban, Resource, Rural)



Biology

The universe of *Albedo* is home to billions of different creatures from more than one hundred different species. Most of these are furry mammals, but there is also a significant population of birds and marsupials. On the Core Worlds, these species live in racially diverse communities. Representatives of a dozen different species may occupy a single floor of an apartment block. This situation is rather different in the Outer Worlds, which tend to be dominated by the

species which founded the colony. However, most of them still boast fairly cosmopolitan and tolerant societies. In many cases, members of a minority race will live in a close-knit community, but this is a matter of choice.

This variation in species has caused a number of social problems, but in some ways it represents a significant advantage. Each species is hardwired differently, and has a tendency to respond to situations in a unique way. The cats of Dornthant are generally reserved, and live in small family groups. The rodents of Danet are much more gregarious, and their definition of family is often extended to include cousins and friends, and friends-of-friends. While the different attitudes may cause social friction, they also encourage tolerance and open-mindedness, and willingness to approach problems in a way one might not normally consider.

Scientists are sure that this multitude of species did not evolve naturally on Arras Charka, but they are certain that they all had their genesis on a single world. Alien species – invariably primitive – have been found on several of the explored worlds. Without exception, all of these alien species have a genetic structure entirely unrelated to that of the sentient races.

Few species consider themselves superior to another, at least not within the Confederation. The rabbit inhabitants of the Independent Lapine Republic (ILR) have built a society on the idea of their entitlement as a superior race. They believe that they, as a particularly fecund species, have the right to a greater share of resources than most. This

doctrine of racial superiority has allowed their leaders to guide the ILR into more than one expansionist conflict with the Confederation. Indeed, the first such confrontation led directly to the foundation of the Extraterrestrial Defense Force (EDF).

The Species of Arras Charka

Players should be aware that the sentient species of *Albedo* do not differ in size to the extreme that real-world animals do. A bear is larger than a mouse, but not to any degree approaching that of bear and a mouse on Earth. The smallest creatures are just above one meter (3'6"-4') tall on average, and the largest around two meters (6'4"). On average, they are noticeably smaller and lighter than a modern human. Nocturnal species groups have better night vision than humans, though no animal possesses perfect night-sight. All characters, no matter their species, have full-color vision.

While every species tends towards certain social behaviors, there is also a great deal of variation. For example, cats tend to be independent and prefer small social groups. This does not mean that an individual cat cannot be extremely outgoing and extroverted. Similarly, wolves tend to be very driven – but your wolf character can be very laid-back, if you wish. Consider the racial personality traits as a general guide to culture and background, rather than hard and fast rules for your character concept.

Science and Technology

Technology in the *Albedo* universe is extremely advanced in comparison to that of the real world, and it has been since day one. The sentient races awoke with a very high baseline of technical and scientific knowledge, and have greatly expanded on this in the two centuries since awakening. Still, with the exception of Jump Drives, most of their tools and technology would not be alien (or even unfamiliar) to humans on 21st century Earth.

ConFed technology is largely based on theoretical extrapolation of real-world technologies, and familiar items like cars,

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Animals vs. Anthropomorphics

Game Hosts should be wary of handing out special abilities to players who choose a species with a unusual or powerful real-world trait. For example, platypuses have poisonous spurs located in their rear claws, and have a limited ability to detect the electric fields given off by living creatures. Platypuses in *Albedo* have neither of these advantages. If a player questions this, point out that every species has been altered to bring them closer to the human form, and this process has eliminated many unusual traits.

ACVs begin hard acceleration to intercept the threatening ILR ship.

The ship has been tracked for more than a week, but only within the last few minutes has its trajectory been confirmed to threaten the planet.

Even at one minute out, it is still 100,000 kilometers away, its exact nature and intent difficult to determine. Only within the last seconds will it be close enough to discern critical details.

Even at 20 Gees, the ACVs will achieve only a fraction of the enemy's velocity before contact and the final closing speed will give them only milliseconds to react to evasive maneuvers made thousands of kilometers away.

With so little time to react, maneuvering rates have to be assumed and attack plots derived from only the smallest hints of apparent evasion.

personal computers, and airplanes all exist in a recognizable form, albeit more advanced. Extremely clean and efficient hydrogen cells are used to fuel vehicles of all kinds, from personal cars to airplanes to submarines, and fusion plants generate electricity for cities and larger vehicles such as cargo ships. The principles behind jump drive are perhaps the only "science fiction" element in the world of *Albedo*. Other commonly seen science-fiction technologies such as artificial gravity, teleporters, hand-held ray guns, and force shields do *not* exist, and are not likely to be developed anytime soon.

Computers are ubiquitous, and almost all have some level of artificial intelligence thanks to their connection with the Net. Even the most basic models of vehicle are connected to the Net, which provides the driver with constantly updated traffic information, and may even take control of the vehicle if the driver is incapacitated.

While some planets are home to colonists who consciously choose to eschew all but the most basic technology, most deni-

zens of the *Albedo* universe choose to live with every technological convenience that is available. Even the humblest apartment will feature several computer terminals.

Astronomy and Astronautics

Space travel, even travel between stars, is an everyday occurrence in the *Albedo* universe. Cargo ships carry manufactured products from the Core Worlds to the Rim, and raw materials back again. New colonization efforts and exploration surveys are put together every year. ConFed couriers and EDF troop ships travel from one end of known space to the other on official business. A growing number of private travelers and tourists are appearing on the space lanes, and dedicated passenger liners connect all major worlds.

However, interstellar travel should not be thought of as equivalent to air travel in the real world. A visit even to the closest star system involves weeks spent aboard a cramped starship, and long periods of

weightlessness on smaller vessels. Few people are willing to undergo these privations for simple tourism.

Spaceships in *Albedo* can be separated into two basic models: aerodynes and starships. Essentially, a streamlined ship that is able to operate in an atmosphere is considered an aerodyne. Aerodynes may or may not possess jump drives. Any large, jump-capable vessel designed to operate only in space is a *starship*.

Personal spaceship ownership, while rare, is becoming more common. A wealthy businessman may own the aerodyne that he uses to visit his orbiting factory. A successful freighter captain may get a bank loan to purchase her own light freighter. However, personal spaceships are possessions on the order of passenger jets or cargo ships in the real world, and those few who can afford them are most likely to purchase them for business use. Even an orbital shuttle requires a trained crew and expensive monthly maintenance. Only the ultra-rich can afford a private pleasure ship.

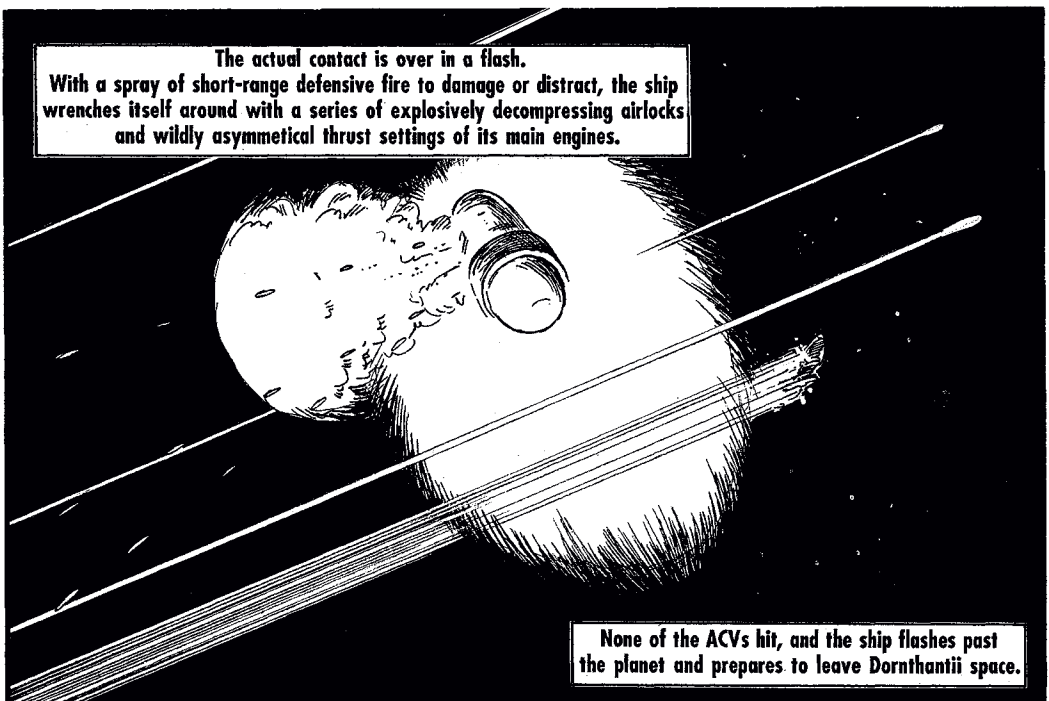
Interplanetary Travel

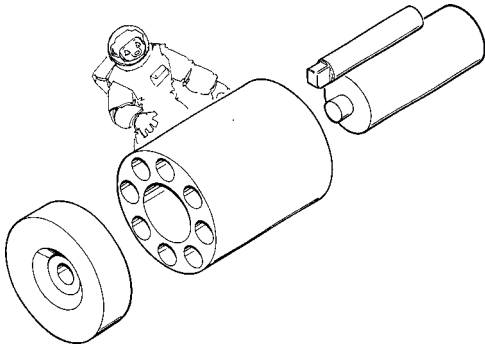
Spaceships are propelled from planet to planet by powerful fusion drives that use hydrogen for fuel. These fusion drives can

generate enormous amounts of thrust over very long periods of time. Scientists have experimented with different drives – such as solar wind sails, electrical ion engines, and chemical reaction thrusters – but fusion thrusters are the most efficient type of space drive available. Some ships with specialized functions may use different engines, particularly if they need to be extremely small, as even the smallest fusion reactors displace more than one ton.

Travel times between worlds can vary greatly depending on the relative position of the planets. Most captains attempt to intercept the destination planet as it swings around in its orbit toward the ship's planet of origin. Most trips between planets will take a week or two at the minimum and much longer if the destination world is several orbits away. Trips to an orbiting space station or nearby moon can be completed in a matter of hours in most cases.

No spaceship is equipped with artificial gravity. However, starships normally accelerate and decelerate at a constant rate as they approach their destination. This constant thrust allows the illusion of gravity, as the passengers feel the constant pressure of acceleration, with "down" being





in the direction of the engines. To an outside observer, the crew might appear to be standing on the "walls" relative to the direction of the ship. True starships are constructed to reflect this – aerodynes intended for short jaunts may not be, meaning the crew must be strapped in whenever the ship is under thrust. When a ship is halfway to its destination, engines are cut and the ship rotates on its axis so that the thrusters are facing the destination. The engines are restarted, and the ship begins to decelerate. Crew members and passengers should be strapped in during the rotation process, during which they are weightless.

Spaceships usually thrust enough to provide slightly less than 1 G of apparent gravity, just under what a human would consider normal. Smaller ships traveling long distances may have serious fuel limitations on thrust, and simply accelerate to a given speed and coast from that point onward. The crew is simply weightless when the ship is not maneuvering.

Few non-military crews would dare subject themselves to more than 2 Gs of acceleration, except in an emergency – fuel expenditure is just too high, and the passengers and crew would be required to don G-suits. Military vessels have been known to thrust at 2 or 3 Gs for hours, even days, on end when speed was essential, but this considered extremely unhealthy. Smaller ships, such as aerodyne fighters, may achieve 9 Gs of acceleration for very short periods during extreme combat maneuvers. If a passenger is strapped in, prone, and wearing a fluid-filled G-suit they can endure up to 7 Gs safely for several seconds. Beyond that, most people pass out quickly,

and may suffer permanent internal injuries if the acceleration is maintained for more than a few minutes.

Interstellar Travel (Faster-Than-Light)

The development of the faster-than-light (FTL) drive is the single greatest achievement in the history of sentient races, one that was developed specifically to help answer one of the oldest questions – "Where did we come from?"

The jump drive itself is network of energy channels buried in the hull of the ship, connected to a series of nodules that contain the jump technology. As energy is passed through this network, the nodules generate a field around the ship that draws it into another dimension, one in which infinite speeds are possible. This field is spontaneously generated when a certain energy point is reached.

Strong gravity fields, such as the ones created by stars, have a striking influence on this dimension, one that governs and limits the use of FTL travel. One common model used to explain the influence of gravity on space is to imagine the universe as a flat-rubber sheet. Here and there on this sheet are placed balls of varying sizes, made of different materials. These balls represent large objects, such as stars. The balls sink into the mat and cause a distortion in space around them. Very large or dense balls sink deeper into the mat, and create a larger distortion. If a toy car (for example) is rolled along the mat, it will be drawn into one of these areas of distortion – the "star's" field of gravity – unless it is pushed with sufficient force to speed on by.

When in jump, the effect of gravity wells (such as stars) is effectively the opposite of that in the model described above. Instead of creating depressions in the mat, the balls create hills and mounds of various sizes. A toy car placed on the edge of such a hill would roll forward across the mat until it encountered another hill, where it bumps to a stop. A ship in jump acts in a similar fashion. It is pushed away from its system of origin until it encounters the nearest stellar gravity field, at which point it "stops" and drops into real space.

Ships may only jump to the closest system along their flight path. The transition from one system to the other is effectively instantaneous, and the passengers do not "see" the jump dimension, even if they are at a window. All that is visible is a bright flash of light. Since navigation is done by setting flight path in the direction of a given star, jump drives become more inaccurate the further one attempts to travel.

This is because there are no fixed points in space, and even stars are constantly in motion. All that may be seen through remote observation is the position of the star as it was when light currently arriving at observer's position left the star. As such, there is a practical range limit of approximately 50 light years for any single jump. Beyond that point, the target star has probably shifted so much that even most careful jump will miss it entirely. Ships that attempt jumps greater than 50 light years are almost invariably lost, either showing up wildly off course, or worse, have their mass dissipated between several relatively nearby stars.

Jump drives may be charged from any energy source, but they are most commonly charged gradually as a ship thrusts out of the system. The output from the onboard fusion engines is passed through a series of Magnetohydrodynamic (MHD) coils before being expelled from the ship as thrust. As the fusion jet passes over the coils, an electrical field is produced, and the jump drive is charged. In this way, maximum use is made of the engine output. The time it takes to charge the jump drive thus depends on the amount of thrust – a freighter accelerating at 0.1Gs will take ten times as long to charge the jump drive as a passenger liner thrusting at 1G acceleration. It typically takes around ten hours of 1G thrust to charge the drives after an interstellar jump.

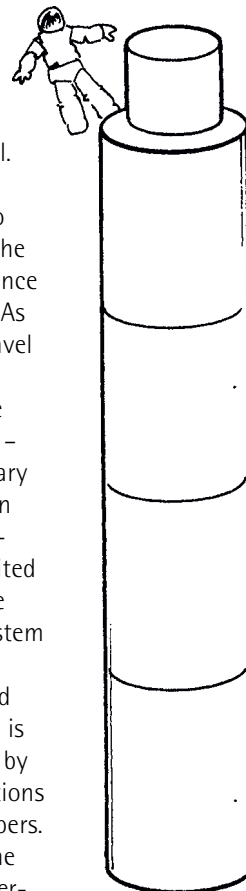
Because of the time required to charge the jump drive, and the requirement for extensive maneuvering to reset the flight path for a new destination, few ships can immediately jump again upon arrival in a new system. However, some military vessels and fast couriers carry additional jump

charges in onboard batteries that allow them to jump as soon as possible after arrival.

It is extremely unsafe for a ship to jump while under the gravitational influence of a star or planet. As such, they must travel to the edge of the solar system before engaging the drive – this distance can vary between four billion and ten billion kilometers in an inhabited system, and may be much more in a system with an extremely dense star. As noted above, acceleration is limited by fuel and by the physical limitations of living crewmembers.

Depending on the fuel available, accelerating out of the system may take several months. Once the ship arrives at its final destination it must decelerate as it approaches its destination, a process that adds even more time to interstellar travel. Even the fastest manned ships typically take at least a month to travel from one system to another, and freighters with small fuel tanks may take the better part of a year to make a single trip.

Interstellar travel by private individuals is uncommon, and the average person will never get the opportunity to leave their home system. The majority of what traffic there is takes place between the Core Worlds, and most private travelers are businessmen traveling on behalf of their company. The time and expense involved in traveling from one system to another means that tourists are rare, though not unheard of. Such tourists are generally the idle rich, or retirees who have decided to use their life-savings seeing the universe. A new trend is for very well-off parents to send their adult children on a tour of the Core



Worlds (or Arras Charka, at the very least) in order to soak up some culture before embarking on a career.

Misjumps

Misjumps are possible. Jumps occur through the agency of energy fields that alter the relationship between the ship and the rest of the universe. Errors in the alignment of these fields can cause serious problems for the ship and crew.

They expose the crew to strange radiations, and "tug" at their atoms. This can cause serious neurological damage, ranging from short term illness to immediately fatal injuries. In very serious cases, the structure of the ship can be compromised.

Short-term effects are known as "jump sickness." The victim can be incapacitated for several weeks. Drugs exist to repair the neuro-physical damage, and patient must avoid making any jumps for some time. This can pose a serious difficulty during combat maneuvers.

Latent psychic abilities may make a spacer more susceptible to the effects of jump sickness. There is no known reason for this.

Vehicles

The futuristic world of *Albedo* is home to many vehicles. The Extraterrestrial Defense Force is mostly concerned with space-worthy ones.

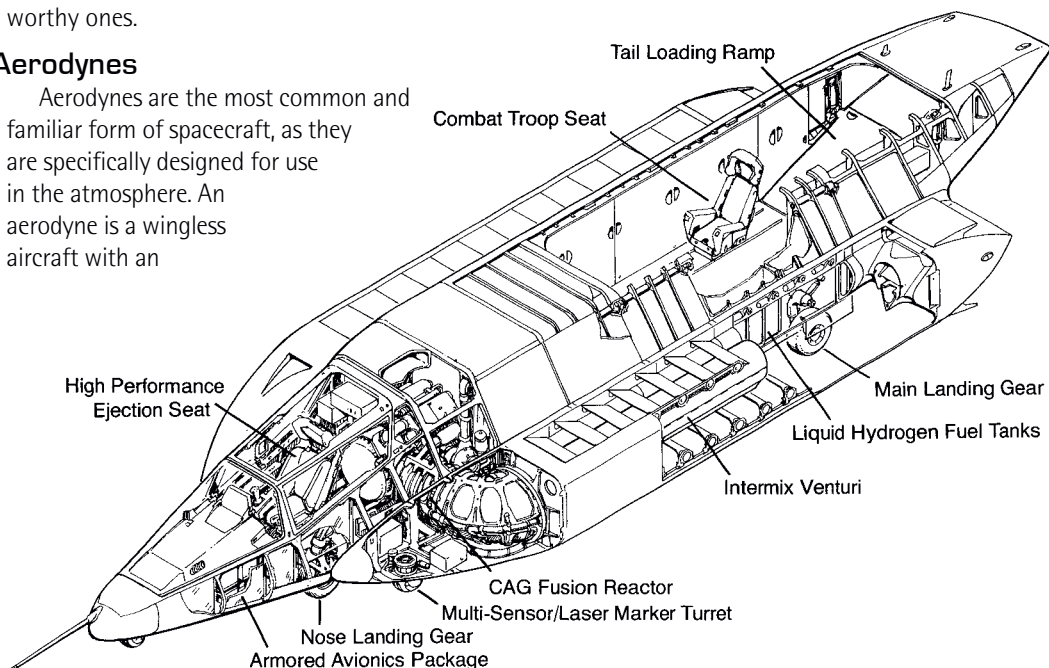
Aerodynes

Aerodynes are the most common and familiar form of spacecraft, as they are specifically designed for use in the atmosphere. An aerodyne is a wingless aircraft with an

aerodynamically designed hull that provides lift. Aerodynes use fusion powered jets while in the atmosphere, and fusion thrusters when they leave the atmosphere. They range in size from single-person, 1-ton gunships to 5,000-ton cargo ships. Above 8000 tons, aerodynes become impractical for atmospheric flight.

Smaller aerodynes are used to travel from the surface into orbit or to nearby space stations, though any aerodyne with sufficient fuel may be used for travel within a solar system. In some systems aerodynes are extensively used as interplanetary shuttles, but they are more commonly used to shuttle passengers and cargo to waiting starships in orbit.

A number of shipping companies have outfitted aerodynes with jump drives to save on the cost of transferring goods from starship to surface in separate landing craft. Jump capable aerodynes generally displace under 1000 tons, and are used for hauling medium sized cargos. They are perhaps the slowest method of interstellar transport. Their relatively small size and need for free cargo space means that they carry as little fuel as possible. As such, they are not able to constantly accelerate as they travel out of the system. The crew spends a great deal of time in zero-gravity conditions as the ship coasts to a jump safe distance.



Jump-capable aerodynes are most often operated by small shipping firms, though some are in the possession of independent captains. Aside from personal yachts sold to the extremely wealthy, these tramp freighters are the only interstellar ship an individual has any chance of acquiring. Smaller vessels are impractical for interstellar travel, and true starships are so expensive as to be the sole province of large corporations or planetary governments.

True Starships

Starships are large cylindrical vessels, rarely displacing less than 8000 tons, equipped with powerful fusion thrusters. Most are jump capable. They may not enter an atmosphere under any circumstance, and usually carry a number of aerodynes in an internal hangar for use as landing craft.

Starships are specifically designed for very long periods of space travel, and more than half the mass of the ship is typically taken up by hydrogen fuel tanks and fusion engines, allowing them to accelerate for long periods as they make their way out of a solar gravity well. There is no limit to the upper size of starships – the EDF has a number of Very Large Command Carriers (VLCCs) that top 5000 meters in length. (See below) A ship this size has a crew numbering in the tens of thousands, and has literally dozens of landing craft, aerodyne scouts, fighter craft, and even smaller starships stored in internal hangers. Some colony ships may exceed this size, as may space-going shipyards.

There are exceptions to these generalizations. Interplanetary craft that are not required to land are often built along the same designs as true starships.

Autonomous Combat Vehicles (ACV)

Autonomous Combat Vehicles (ACVs) are self-directed, multipurpose drones carried by nearly any military vessel larger than an aerodyne. They are also a standard defensive weapon used in planet-side installations. They contain an AI computer in an armored core, powerful sensors, a reactor drive, and sufficient fuel to allow bursts of acceleration up to 50g's. They have no provisions for crew or jump drive, though they may be

adapted to carry small (and very durable) cargos. Some are modified to include point-defense systems such as lasers, mass-drivers, and missiles.

When entering a hostile system, a capital ship launches a number of ACVs. In a typical deployment, some of these ACVs will speed ahead to a target planet or facility and conduct high-speed scouting passes, while the remainder forms a defensive screen several thousand kilometers in front of the vessel. They make sensor sweeps of the space in front of them, and pass the data back to the home ship.

ACVs on planetary scouting runs will rocket past at maximum speed, identifying potential targets and defense structures, and transmit this data back. They may then either impact those targets themselves, circle back to join the defensive screen, or attempt to impact with enemy vessels.

ACVs defend their home ship by simply impacting with incoming missiles and ships. They are capable of tremendous speeds, and not even mono-molecular ship hulls can withstand the transfer of sheer kinetic energy. All but the largest ships will be destroyed by a direct hit, and even capital ships can be severely crippled if they impact with tiny pieces of shrapnel from a destroyed ACV.

Very Large Command Carriers (VLCC)

Very Large Command Carriers (VLCCs) are the undisputed masters of space. They are the largest ships ever built – some more than 5000 meters long, carrying tens of thousands of passengers. Only the EDF and ILR currently field VLCCs, though the Enchawah Group has a few floating factories of similar scale.

VLCCs typically form the foundation of large aerospace forces, as well as ground assaults. They carry troops into battle, and provide them with all the equipment and supplies they require. They carry complete robotic factories within themselves, churning out ammunition and replacements for damaged or destroyed equipment. These factories are highly customizable, and can produce nearly any good. In fact, the EDF



often uses them to produce consumer goods during peacetime.

Ideally, VLCCs are self-supporting units capable on remaining in the field for literally years at a time. They have onboard organic vats for the creation of food, and ample supplies of fusion fuel. In practice, however, they are rarely dispatched for tours longer than a year.

Some Command Carriers lack interstellar capability. Most are in defensive standing orbits around planets or other satellites, and are usually just called "space stations".

Medicine

Medical technology in the *Albedo* universe is capable of extraordinary life-saving feats. Effective treatments eliminate most forms of cancer, if they are caught quickly enough. Advanced artificial organs greatly reduce the chance of rejection, and can operate for decades without surgical maintenance. Cybernetic replacement limbs are available, but are not commonly used, as advanced techniques can save all but the most heavily damaged limbs. Drugs may be tailored to genetic code of the individual patient, and offer quick and effective cures for most diseases. Mortally wounded patients can be placed into a long-term coma resembling suspended animation until their condition stabilizes. Even first-aid on trauma cases in the field has a very high rate of success.

The effectiveness of medical treatment is due, in large part, to the assistance of the Medical Net. Even if you suffer an injury in the home, the Net can quickly summon assistance and provide detailed first aid directions. Once in a hospital, the Net provides information about the latest medical techniques and research. Robotic surgeons under the direction of living doctors can undertake incredibly delicate operations, even grafting individual nerves together.

Unfortunately, even the most advanced medical facility is unable to perform miracles. Instant healing of physical damage and resurrection of the dead are still impossible dreams. A character badly injured in a crash or gun fight will face several weeks in hospital, followed by several months of physical therapy, though their chance of surviving to make a full recovery is very high. A character who is killed in combat will never return, though it is possible to clone a physical replica of the deceased from his genetic material. This replica will have none of the memories of the original.

Agriculture and Food Production

Starvation and malnutrition are extremely rare among the races of the *Albedo* universe. Food is largely manufactured, like any other consumer product. Sufficient quantities of raw nourishment are provided

free to citizens in socialist systems, and for an extremely low cost to others. At the basic level, this usually consists of raw organic material, shaped into bars, balls, or served as a semi-solid paste. Food of this kind is nourishing, although not very tasty. Texture is counted as more important than flavor, at least when it comes to staple foods. Particularly elaborate or flavorful dishes are available for a price, either sold pre-packaged in stores, or prepared to order in restaurants and diners.

Basic foods are grown in enormous quantities in food production factories. Organic material is raised in vats, simple edible lumps of proteins and amino acids. Chemical additives bring flavor and additional nutrients. Citizens in the middle class and higher often prefer not to make food of this kind the staple of their diet, and some claim they can still taste the "taint of metal." Military personnel on long-term operations aboard a ship rely on vat-grown organic proteins, and larger vessels have their own food vats.

Traditional farms exist, where vast fields of grains and leafy plants are tended to by robot crews. These plants are either sold as is in fresh markets, or processed into final food products. Some worlds also harvest sea life and surface arthropods, which may be likewise sold as is, or processed. Specialty restaurants serving fresh fish, clam-cakes, roasted spiders, and green salads have become quite popular on many worlds.

Artificial meat is also produced. This process consists of growing sheets of muscle tissue engineered from raw genetic material taken from animal food sources. Artificially grown meat actually requires more food energy to grow than can be gained from eating it, making it rather expensive. Artificial meat dishes are becoming very popular as predator populations outstrip the capacity of farmers to produce food animals naturally.

The Medical Net passively monitors consumption, and citizens who rely on the government for their food ration (and this includes soldiers) may find their diet altered involuntarily if they are overeating, or seriously neglecting certain nutrients. Of course, it is always possible to buy addi-

tional food on the open market, and obesity has become a problem in some areas.

Carnivorous species are able to live on herbivorous diets for prolonged periods without any serious problems. In fact, certain societies have come to require vegetarian diets of their members. However, a carnivore used to a heavy protein diet will still have strong cravings for protein for many months. These urges can be controlled with effort, and can be eliminated by adding high-protein items to the diet. Herbivores are not similarly comfortable with a carnivorous diet, and may suffer serious health problems if they do not take artificial diet supplements.

Cases of cannibalism (defined as the consumption of one sentient by another) took place during the war, in areas where the structure of society had entirely collapsed. Most cases involved predator species hunting and consuming herbivores. These cases are regarded with universal horror.

Communications and the Net

Every citizen who chooses to do so can be immediately connected to almost any person on the same planet. Unfortunately, science has yet to develop a means of directly broadcasting information at faster-than-light speeds, meaning messages must be carried step by step, from system to system by unmanned message torpedoes. Thus, it can take months for news to reach the Core Worlds from an Outer Colony.

To send a message to another system, it must be broadcast to an orbital communications platform. There, the message is stored electronically on an interstellar message torpedo. These torpedoes can store numerous terabytes of information, enough to accommodate every piece of information generated by several hundred-thousand people over the course of several days. A good portion of this information consists of dry statistics, government reports, and stock market results, bound for the databanks of the Net. Private messages between citizens comprise much of the remainder. The Net itself is intelligent enough to identify information that it feels should be available

to users in other systems, and automatically saves something to every torpedo.

These torpedoes are launched according to a regular schedule, or when they approach their capacity. The torpedo accelerates to the edge of the system. Since the torpedoes have no crew, they can accelerate much faster than manned vessels, and can leave the system in as little as four or five days. Once it is clear, it jumps to the next system. In some of the core systems, a constant stream of message torpedoes enters and leaves the system on an hourly basis.

As soon as the message torpedo arrives, it broadcasts its contents to the local communications center. It then decelerates and docks with the orbital platform for refueling. As it approaches the platform, it may already start accepting new data for transport back to its home system. Messages intended for local recipients are immediately uploaded to the local net. Others are saved to the next outbound torpedo. Certain information, like news and government information, is automatically transferred to every outgoing torpedo. In this way, news and information filters its way through known space over the course of several months.

This time delay has a serious impact on everything from military planning and disaster relief to interstellar trade and politics. During the first ConFed/ILR war, it

was weeks before the Core Worlds became aware of the first attacks, and even more time was required to dispatch a response force.

Note also that the information placed in the torpedoes may be controlled and limited by the local government, or even by private corporations. For example, the government of Denotah is very close-mouthed about revolutionary activity on their world, and takes care to review and edit any information contained in media reports before they are uploaded to the message torpedoes. So, while residents of Denotah may access full media accounts through their local Net, users on Dornthant will have access only to edited information. The Net on Dornthant may or may not be aware of changes made to the information. Corporate interests may also limit the information which goes to the Net in other systems, for reasons of financial gain.

This government censorship may become quite extreme in times of war or unrest, when all independent media outlets and even personal correspondence may be barred from transfer to the message torpedoes. Some Unaligned Systems have chosen not to accept or send message torpedoes except under certain circumstances.

Information stored on message torpedoes is usually encrypted to guard against theft. The most important safeguard, however, is the extreme acceleration the



torpedo is capable of. They simply move too fast to be intercepted – though they may well be destroyed by beam weapons or swift interceptor missiles.

The Net

The Net is an enigma, one that surrounds and supports almost every single citizen in the Confederation and Outer Worlds. It is the voice and personality of a vast communications and information network that connects almost every single computer in the known universe – whether that computer is a university mainframe, robot CPU, or handheld computer.

The Net serves as a nurse, psychiatric counselor, private banker, reference library, confidante, and protector. For many, the Net is a discrete friend and well-informed servant who is constantly available to proffer practical advice. The personality it presents is different for every person who accesses it, geared to their personal preferences.

The Net has existed since the first day of history. Many believe it to have been put in place by the Creators to assist in the development of the sentient races. Most people believe it to simply be a benign tool that assists the sharing of information, no different from the roads or factories left behind by the Creators. Some, more conspiracy minded, believe the Net to be something very different – a relic left behind to monitor (and possibly control) social and technical development. Some believe the Net continues to report in some secret fashion to the Creators.

LIMITATIONS OF THE NET

It is important to realize that the Net is not a singular AI entity, like a robot or stand-alone computer. It is a method by which disparate information from literally billions of sources may be accessed and easily digested. The personality that the Net presents is simply a handy interface to make that access easier. It is not a "person," not even in the sense that an artificially intelligent robot is, though it is programmed to simulate a pleasant and helpful personality. This personality is different for everyone who accesses the net, and is geared to their specific psychology.

While the Net is present on most worlds, it is far from omniscient. It is limited to information that is present in the computers it is *connected to at any given moment*. On a Core World, this represents a great store of data, far greater than any library in the real world. A user on Dornthant can access everything from the writings of a great poet, to an old civil report on ground traffic patterns in Batu City on Denotah.

However, a user on a mining post that does not have regular communications with the universe at large would have access only to data stored on local computers – likely rather dull, practical information about mining techniques, union regulations, and first aid. The personality of the Net may be the same, but it will have far fewer reference tools to work with. Ships in interstellar space do not have access to the larger Net, though the experience of seeking locally stored information from the computer would be indistinguishable.

While the Net is spread through most of known space, and information is shared between solar systems, access to off-world information is limited by the speed at which data drones may be transferred from system to system. It is impossible, for example, for someone on Dornthant to find out what the current weather conditions on Derzon are. At best, one can access the most recent weather records uploaded to the regular data drones. This information will be several weeks out of date. Of course, the Net will happily provide an educated guess about current conditions based on past weather patterns and existing forecasts.

Users of the Net are also limited as to the information they may access locally. For the most part, these limitations are placed on sensitive documents or personal records. An ordinary civilian is unable to review the personal correspondence or banking information of his neighbors, or view the defense plans of the planetary Homeguard. A clever programmer may be able to access restricted information, but the task is well beyond the capability of the average user.

The Net does not see anything, unless it happens to have access to a computer with a camera in a given area. Most Core World

households *do* have cameras linked to their computer terminals, and the Net uses these to personally greet the homeowners and monitor their status.

The Net is largely dependent on the information that it is provided with. It rarely verifies that information, though it is intelligent enough to identify clearly false or forged records. It is possible to fool the Net.

While the Net is aware of the psychological needs of its users, it obviously does not experience these emotional states, and therefore it is not truly empathic. It will offer common-sense advice about things such as romance if asked, but this advice should be taken with a grain of salt.

USING THE NET

Anyone can communicate with the Net through a standard home computer or personal data pad, provided it has access to the local communications network. The Net can communicate via text messages, or through speech. Its default voice at public terminals is androgynous and acentless, but this may be altered to suit local speech patterns or personal whims. A visitor from the Core Worlds should not be surprised to find the Net speaking in an unintelligible drawl when he visits. The Net is intelligent enough to adjust its interface to suit the speech patterns of an interlocutor, provided it is aware of his or her preferences.

The Net on each world offers a number of specialized services, which are generally thought of as "Nets within the Net." While they are not technically separated from each other, and the Net at large, they operate discretely within the larger whole.

MEDICAL NET

The Medical Net draws information from doctor's offices, research facilities, and the like. For most people, it acts as an at-home consultant, providing advice as they administer basic first aid or seek help with common ailments. It is not legally qualified to offer specific diagnoses since it cannot physically examine a patient most of the time, but can make accurate guesses that assist in treatment.

The Medical Net takes a more direct role in treatment at a hospital, where it may interact with the physical world with

specialized robots. Indeed, in some facilities it is not uncommon for a patient to be admitted, treated, and released without ever being examined by a flesh and blood doctor.

SOCIAL NET

The Social Net exists for one reason. It links users to other users with similar interests and needs, through live video chats conducted on hand computers, text messages boards, and by arranging for real life meetings. Users can find fellow enthusiasts for every topic, ranging from informative groups that study the distinctive marine life of Denotah, to parent support groups, to friendship circles, or even sexual partners.

COVERT NET

The Net is the only obvious tie between the current societies of the inhabited worlds and the Creators who placed them among the stars. Several programmers and engineers have searched its records to find out more – some hidden message, perhaps, or a set of instructions that will shed light on the purpose of the Creation. So far, all have failed.

The Net does, in fact, contain a secret artificial intelligence that monitors the development of society, watching developments and predicting trends. This program, known as the Covert Net, works towards an eventual goal that not even it is conscious of. It rarely takes obvious action, or identifies itself. From time to time it will select certain extraordinary individuals and encourage their careers, or hamper the movements of others. It may delay the release of information, or ensure that a certain document happens to show up on the computer of someone who can act on it. By and large, these actions have the result of obviously upholding the good of the greatest number of people. An outside observer might credit these events to the action of coincidence, but some have come to suspect the truth.

The recent growing crisis has prompted the Covert Net to take a direct hand from time to time. When this takes place, it is always on an individual basis. An EDF officer on a lonely patrol might suddenly find his hand computer speaking personally to him, telling him of a conspiracy among his

superiors. A politician asleep in her private quarters might be awakened in the middle of the night by her personal computer, which instructs her to flee the planet before a planned coup.

Those that the Net elects to guide in this way are known as the Net's "Chosen." They often find themselves thrust into the middle of extraordinary and world-shaking events, whether they wish to be or not.

In recent months, a group of power-hungry EDF officers and Confed officials have developed software tools that are capable of erasing records from the Net. While using this tool to change public record, they found that certain files were being removed, as if by magic, and moved elsewhere as if to protect their contents. The cabal has come to suspect the existence of the Covert Net, and regard it as an enemy.

Robots

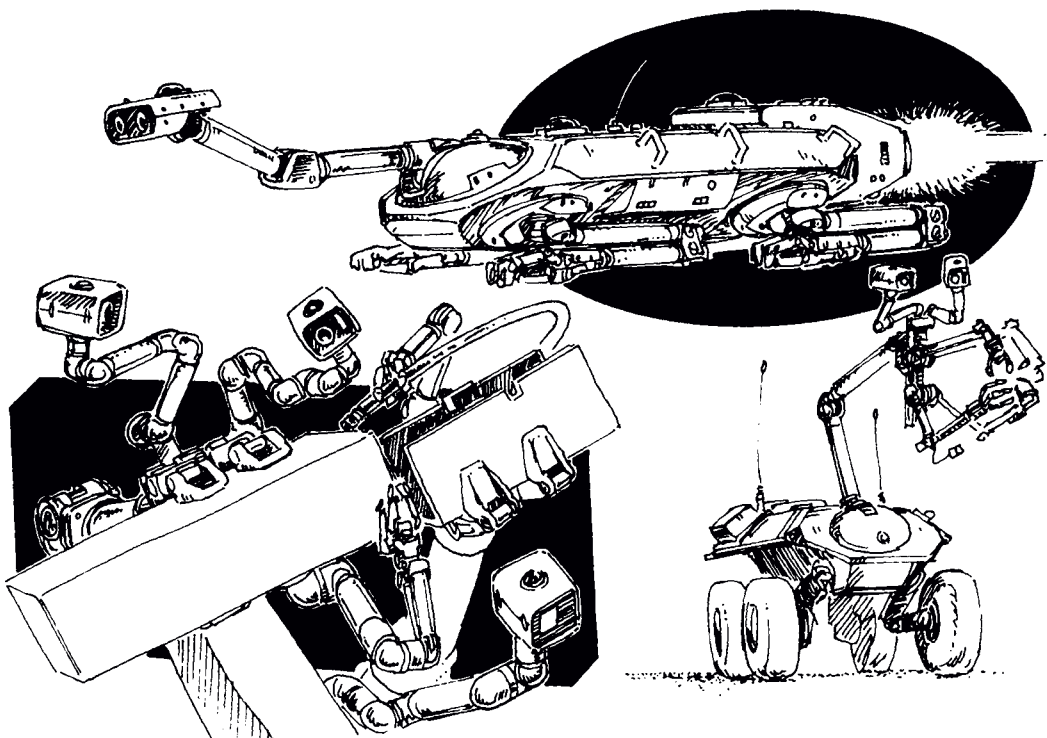
Robots are a fact of life on most well-developed worlds, but rarely seen or noticed. They work behind the scenes to support industry and infrastructure, and are seldom seen operating independently in public. They are most often found in government facilities and corporate factories,

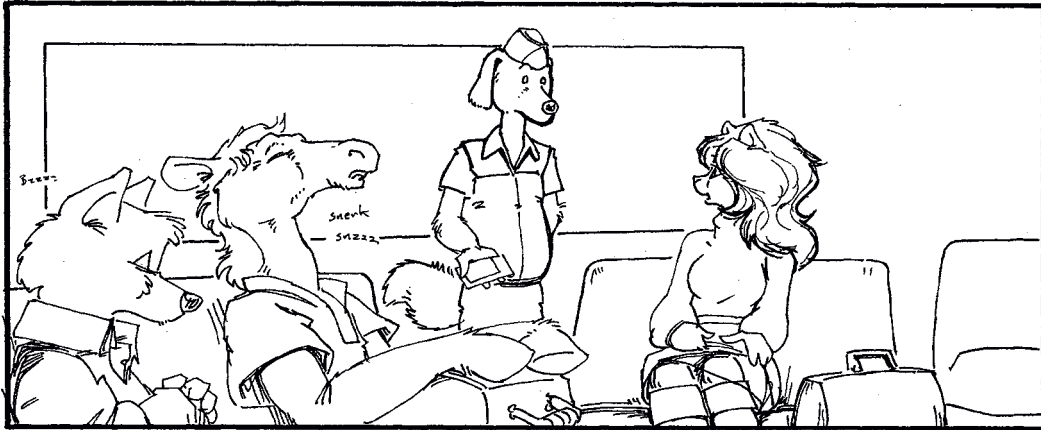
though models used for menial household tasks such as cleaning are becoming more common among the upper class.

All robots are linked to the Net, unless specifically created without any kind of communications equipment. This means that speaking to a robot is indistinguishable from speaking to the Net. However, robots tend to have very specialized programming, and simpler models (such as one dedicated to building aerodynes) may not be able to offer all the functions of the Net.

Most robots are quite limited in function and mobility. They have one or two arms, and are locked onto a track on a factory floor. They can do one or two tasks quite well, but are totally incompetent when it comes to anything outside their narrow programming. Other robots – like the electronic surgeons at central hospitals – are extremely advanced with flexible intelligence, but far too delicate to leave the facilities they operate in.

A robot capable of independent movement outdoors is usually quadrupedal, with two primary manipulator arms at the front and additional, smaller arms along the length. They walk fairly low to the ground, and are capable of sprinting indefinitely at





speeds of about 30 KPH. Any of the limbs can be folded compactly against the body of the robot. Wheeled versions also exist, as do ones fitted with thrusters for work in space. A flexible and extendable neck carries a camera and sensor suite in the "head." The head does not contain the central processor or Net link, but destroying it would still render the robot effectively blind. Robots of this kind are used for a multitude of roles, and can be found in mining camps, military bases, or anywhere else there are difficult or dangerous tasks that need to be completed.

Independent robots have an excellent level of general knowledge, and will actively seek information from the Net when confronted with a new situation. For example, a terrorist plants a bomb in a corporate office. The cleaning robots encounter the bomb in a remote hallway, but ignore it. Even though they have a Net connection, they are not programmed to enquire about new items they encounter, so they pass on by. Hours later, a general duty robot en route to the factory floor spots the bomb, and finds no match for the device in its internal memory.

The robot uplinks to the Net, and discovers the device is a bomb. It immediately contacts building security and issues an alert to the police. Further examination reveals that the bomb will explode before security teams can possibly arrive. Linking to the Net once more, the robot accesses bomb disposal information. It is able to defuse the explosive with nearly as much skill as a flesh and blood professional.

Armed robots also exist. ACVs, for example, are simply space going robots. However,

field experiments have proven that robots are not practical as a replacement for infantrymen in direct combat roles. They are too expensive, subject to costly breakdowns, and incapable of the same role flexibility as a flesh and blood soldier. Combat robots are used for extremely dangerous scouting missions, or tasks such as disarming ordnance. They are placed under the direction of Command and Control officers at the local HQ. They are distributed to squads on the basis of need, and usually require brigade-level authorization.

It is thought that both the EDF and ILR have secretly developed independent “sniper bots,” relatively small robots that cram themselves into hidden nooks on the battlefield, and await the passage of enemies. These units are little more than walking guns, with just enough intelligence to identify uniforms and targets. ILR models may be rigged to explode if disturbed. Similar, even smaller, robots have been reported by police forces. They are essentially pistols with legs, programmed to kill a specific person.

Society and Social Institutions

Castes and Classes

Social class plays a significant role in the lives of citizens on many worlds. It determines the company one keeps, opens (or closes) doors to advancement, and may influence the way in which one is treated. Class is generally determined in terms of wealth, at least on capitalistic or corporate

worlds. Elsewhere, it is judged by one's fame, service to society, or circumstance of birth.

Upper Class

Citizens on worlds with capitalist economies are, for the most part, constantly striving to achieve a foothold in the upper class. Wealth brings significant advantages on every world in known space, and the lifestyles of the ultra rich – private space stations, secluded homes with robotic servants – are the subject of simultaneous envy and disdain.

For most, being in the upper class simply means access to a large amount of ready capital with which to buy luxuries. Most in the upper class will still have a job – that job is simply very lucrative.

On a typical capitalist world, a member of the upper class will have a large home in a desirable location. He or she will have access to the most expensive electronics and appliances, own a lavish personal car (or cars), and may own a small atmospheric aircraft, such as a helicopter. He or she may have a small staff of servants. Interplanetary travel is affordable, and occasional trips to another star system are possible – though still costly for all but the very rich indeed. A job in the highest echelons of management, or actual corporate ownership, may put one in this class.

On some worlds with a hereditary nobility or similar ruling class, people join the upper class by simple accident of birth. This may not necessarily entail inheritance of wealth. There are impoverished nobles, and many societies have hereditary positions that come with the respect and esteem of society without attendant financial benefits.

The term "Upper Class" is nearly meaningless in the Core Worlds, and on planets that have adopted their example of paternalistic socialism. Social class on these worlds is largely a factor of responsibility rather than one's ability to generate wealth. As such, a senior EDF officer or a notable ConFed diplomat comes closest to the capitalist idea of upper class. They will have access to a sizable monthly stipend from the government, and be entitled to reasonably lavish quarters and a personal vehicle. These perks are likely owned by the state – the

individual "owners" are merely temporary stewards.

It is possible for a corporation president to generate a great deal of wealth in the Core Worlds, and even to become a member of the idle rich, but they will not be afforded the same degree of respect as a citizen who is actively involved in administration or social service.

Middle Class

The middle-class is the default status of the largest portion of the population, and the lifestyle of a middle-class family in the Enchawah Group is not significantly different from that of a family in the Core Worlds.

A middle-class individual owns a modest home or apartment in a relatively nice area. He or she has a selection of home electronics, and, in the corporate worlds, a personal car. Middle-class families can afford fairly regular vacations on their own planet, and from time to time may splurge for an interplanetary flight. Interstellar travel is beyond their means, unless they are a member of the crew.

A middle-class lifestyle can be maintained by nearly anyone with a regular job, on most worlds. In the ILR, rising prices have put the squeeze on the middle-class, and it is rapidly shrinking as more and more people are forced to take on additional work to maintain their lifestyle. In the ConFed Core Worlds, anyone who works more than 20 hours a week is provided with a government allowance that essentially assures them of a middle-class position.

Lower Class

Lower-class lifestyles range greatly in quality. People with very menial jobs in the Enchawah Group are considered lower-class, as are those who simply choose not to work in the Socialist Core Worlds. Yet, both are assured a relatively comfortable and commodious existence. They have enough to eat, and are adequately clothed, and have access to the public Net.

Lower-class life on some of the less settled frontier worlds, or less forgiving Inner Worlds, is a very different matter. On Denotah, for example, working poor struggle to keep up the debt incurred by

company stores. Others simply give up, and make a living on the street as beggars. Starvation in the midst of plenty is not unheard of in some systems, and the concept of organized charity has not been developed.

Economics

Economics is the science of production and the theory of distribution of wealth. It is rarely a precise science – economies on a planetary scale are nearly impossible to quantify except in very general terms. There are a number of different economic theories in force throughout known space, as philosophers and charismatic leaders sought to create communities free from the Socialist systems of the core worlds. These may be divided into three general types: Capitalist, Communist, and Socialist.

Although most economic systems can be generally described in those terms, few planets make use of totally pure forms of these systems. A largely communist planet may, for example, allow small businessmen to keep their profits. A world with a healthy capitalist economy may have a number of government controlled monopolies running utilities, or services such mail. Local variations and combinations of each philosophy exist, and the game host is encouraged to be creative. In addition, any economic theory may also form the philosophical basis for actual legislative and executive government. For example, the Enchawah Group uses capitalist principles to guide the day to day governance of their planets, as well as their economies. All administrative decisions – about everything from placement of traffic signals to interstellar relations – are made in terms of the possible impact on long-term profitability.

The Confederation uses a universal unit of trade known as the *Standard*, created shortly after its foundation, when several planetary currencies were folded into one. After the War, the value of the Standard was allowed to fluctuate against other monetary units, and currency trading is a major past-time of interstellar investors. The Standard has long been the strongest currency in known space, though recent

unrest has caused it to lose value against the Enchawah dollar.

The Standard is normally exchanged electronically, though physical banknotes exist. Many other currencies are available (such as the Dilbion “Star”) but these are rarely accepted outside a given planet, though they may be exchanged for a fee at most banks. Some corporations issue company scrip to their employees. These notes may only be spent at company stores, and cannot be traded on the interstellar market. The ILR uses a unit of currency known as the “Credit.” While it can be exchanged in for Standards in ConFed space, Standards may not be changed into Credits while in the Republic.

Capitalism

Capitalism is an economic system in which the means of production and distribution are privately or corporately owned, and development is proportionate to the accumulation and reinvestment of profits gained in a free market. Capitalism may be closely monitored and checked by government controls, or the market may simply be dominated by the companies that make the most money. Capitalism at its worst pursues profit without any regard for health, environment, or social mores. Ideally, participants in a capitalist economy self-limit that sort of behavior, if only in the interest of long-term profitability.

Communism

Put simply, Communism is an economic system characterized by the collective ownership of property and by the organization of labor for the common advantage of all members. Everyone in a Communist state is a “worker.” Workers in a factory or office own that facility collectively, and direct its production. However, in its final form, Communism can be much more than this. The philosophy of Communism can extend to all levels of government and society, and may even dominate private social life. Citizens in a truly Communist state must measure every act as to whether it serves the greater good. Communism in the *Albedo* universe is not necessarily a revolutionary movement, though groups advocating violent overthrow of existing

governments have begun to appear.
Strangely, limited Capitalism often exists on
otherwise Communist worlds.

One common problem with Communism is that production is often not undertaken to meet specific demand. Thus, extreme shortages of one product may arise at the same time as warehouses are filling with products no one wants. The Net is able to mitigate this problem to a significant extent, but it still exists. Another concern in a true Communist state is the necessity for the individual to subjugate his or her personal life to the good of the population as a whole. This can be mercilessly enforced.

Communism also fails to account for the natural tendency of social groups to form hierarchies. This tendency conflicts with Communist principles, and unofficial hierarchies often form around charismatic or ambitious individuals. Alternately, people may compete for particularly glamorous or important jobs, which often come with influence beyond what Communist philosophy suggests. These individuals may eventually achieve officially recognized power, despite the ostensible ideals of Communism, either by force or by popular acclaim. In addition, some Communist planets have a ruling class of "coordinators" whose original purpose was to oversee the establishment of the Communist economy. These coordinators rarely give up power, and may even engineer a crisis to maintain control.

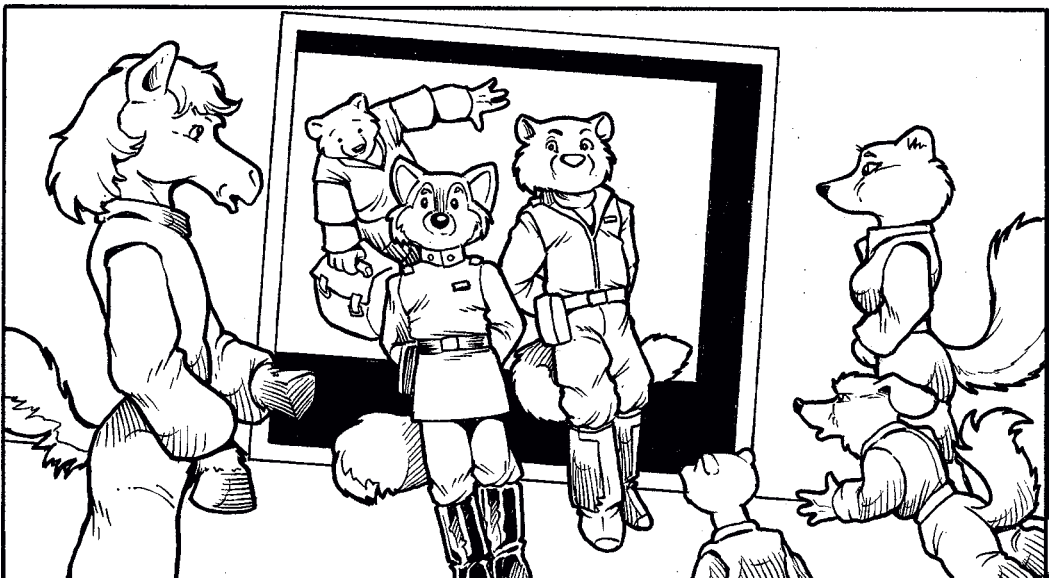
Socialism

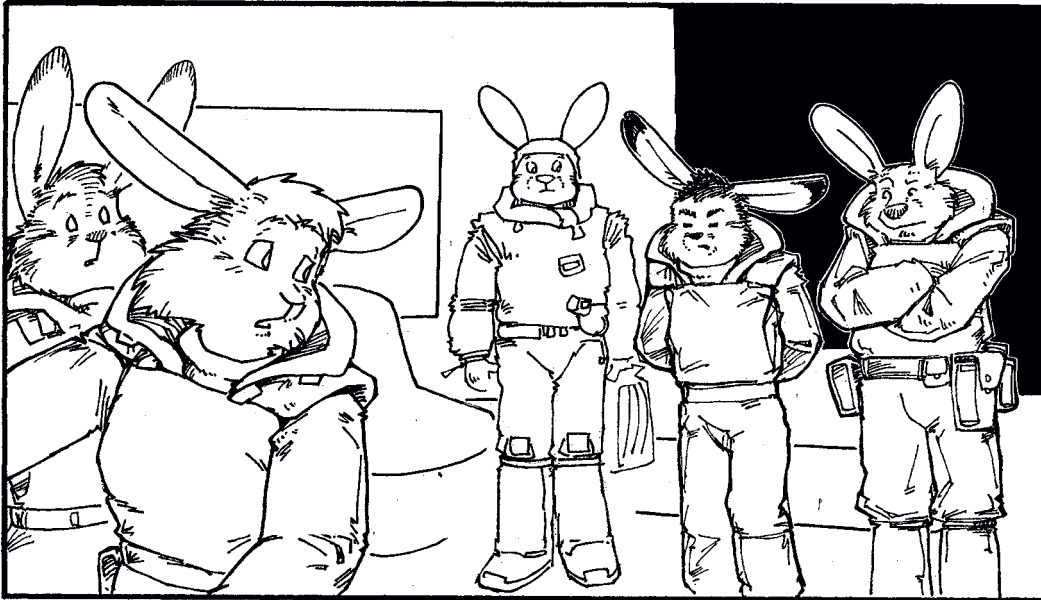
Socialism is the single most common form of economy and government in Known Space. This was the system that existed on Arras Charka on the day of Awakening. Socialism may be viewed as a significantly softer form of Communism, in which the means of production and distribution is controlled collectively by the population, through their elected government representatives. Extreme socialist governments allow for no private ownership at all, while most only control significant or vital industries and allow a significant Capitalist influence on the economy.

True Socialist governments limit personal advancement through commerce, but in exchange offer a comfortable social safety net to those who are not as competitive or lucky. The majority of worlds in the ConFed are Socialist to one degree or another.

Politics

Politics refers to the system by which laws are made and questions of community importance answered. This system is usually planet-wide, though some worlds are home to multiple political bodies. The three economic systems listed above can, in some situations, also serve as the de facto political system on a given planet, though it is more common to see one of the economic systems combined with a political system. A political structure on any given colony may





have been deliberately put in place by the original settlers, or it may have arisen over the years as the original structure evolved to suit the concerns of the locale.

Anarchism

Anarchism does not exist as the recognized system of government on any known world, though this simply means that other governments refuse to recognize "anarchy" as a political state at all. It is commonly defined as the absence of a political system, though it would be more correct to refer to it as the rejection of all forms of coercive control and authority. Anarchists have no laws, police, or taxation. Businesses may exist, but are rarely larger than one-man operations. Any kind of community services, such as fire crews or ambulances, are organized on an ad hoc basis and are composed entirely of volunteers. "Anarchy" does not mean that individuals are free to murder or steal – it means that the onus for dissuading thieves and killers lies with the individual. Anarchists may also form non-hierarchical communities that work for the common betterment of all – at least in theory. Unofficial hierarchies often appear, based on respect for skill or simple charisma.

Anarchism effectively does exist on several worlds, particular on the fringes of space. These worlds tend to be settled by small family groups or individuals who have no desire to have a formal government in

place over them. They may or may not describe themselves as anarchists. Anarchy may also exist as a temporary condition on any world where the government has lost control. Some worlds have seen the appearance of violent self-style anarchists who wish to dismember the instruments of the state by whatever means necessary. These few tend to color public impressions of all those who describe themselves as anarchists.

Confederacy

A Confederacy is an association between one or more states, designed to provide mutual assistance and open doors to profitable trade for all parties involved. The Interstellar Confederation (ConFed) is an obvious example. In a Confederation, decisions are made by a body of representatives from each member state. Individual citizens in each member state may have a direct voice in the electoral process, or the Confederate representatives may be chosen or appointed by the individual governments. The success or failure of a Confederation is largely dependent on the strength of its individual members, which may have widely differing political systems. In some Confederations, the Confederate legislature is very powerful, and has effective control over the individual states. In others, the legislative body serves as little more than a forum for discussing common concerns.

Conservatism

Conservatism is not so much a political system, as an attitude that emphasizes respect for status quo and the established order. Conservative governments of all kinds exist – though it is most often identified with nationalist or democratic states. Conservatism in the Core Worlds often refers to governments with cautious fiscal planning.

Fascism

Fascism is any system of government that stresses the unity of all classes and peoples in the service of national pride and strength. This pride is often embodied in a single person, who serves as dictator. All business and social life must work to the greater glory of the state, and individual rights are immaterial beside that end. While it is possible for any political system (except Anarchism) to have fascist elements, in practice it almost invariably leads to Totalitarianism. State sponsored bigotry and the active suppression of conflicting ideas are not uncommon. Almost any form of government can take on elements of Fascism – it is perfectly possible for a democratic planet to have a fascist dictator, provided he is able to hold on to popular support. Indeed, fascism is often a very populist. An unpopular fascist dictatorship would be more accurately described as a totalitarian state.

Liberalism

Liberalism, like Conservatism, is an attitude towards governance rather than a specific set of political principles. It holds dear the autonomy of individuals and the importance of civil liberties. Citizens under a Liberal government are free from arbitrary authority, and always have input in the political process. Unlike Conservatism, Liberalism is essentially incompatible with a number of forms of government. For example, Liberal Monarchies cannot truly exist, no matter how enlightened the noble class is.

Nationalism

Nationalism is a political philosophy that largely rejects the ideal of cooperative relations with other governments. A Nationalist government believes that independent action is the only way to

secure what is best, and that the goals of the home nation are more important than the concerns of outsiders. Any government may be Nationalist, though they are most often seen in Fascist and Totalitarian regimes. Citizens in a Nationalist regime often have a very poor view of outsiders.

Totalitarianism

A Totalitarian regime is one in which the government has complete and total control over all aspects of the economy and society. This control is not limited by a constitution or Bill of Rights. Any civil rights enjoyed by a particular citizen are granted at the whim of the government, and may be withdrawn immediately. Totalitarian governments often exist on planets where the original political system went wrong, and power was taken up an ambitious cabal or dictator. Sometimes, a government facing a crisis may introduce a *de facto* totalitarian system for the duration of the emergency. Totalitarian systems can enjoy the popular support of the citizenry, particularly if they are headed by a very charismatic leader. Popular regimes of this kind can actually be very efficient... though this efficiency may be horribly misdirected.

Franchise

Perhaps the most important feature of a government, and one which may be the truest indication of how well it serves the needs of the planet, is the level of franchise extended to the citizens. Franchise refers to the direct input that the population have into the political process, and it may be as simple as casting a single vote every few years.

Aristocracy

A hereditary ruling class governs the planet, and the common people have no real say in the political process. True executive power is passed on through the family line as an inheritance. The holder of this hereditary office is generally known as a King or Queen. In most cases, an elaborate hierarchy of noble titles exists to distinguish those who are related to the ruling family, and therefore in line (though sometimes distantly) to the throne. Monarchies are very rare, and are not permitted to join the

Confederation. The best monarchs are educated to be true servants of the people. They seek the counsel of the common folk, and must submit to the very laws that they, the monarch, create. The worst monarchs are simply debauched libertines who use their supreme executive power to live a life of ease, or terrorize their subjects.

Democracy

Democratic systems are by far the most common among the planets of the Confederation. In a Democracy, the population has a substantial influence on government policy. This is usually done through an election in which qualified voters cast ballots in support of a given candidate who represent their opinions in a legislative body. However, the level of Democracy on a given planet can vary to a great extreme. On some planets, representatives are elected for life, or the vote is limited to a very small group. On others, every single adult citizen is considered a member of the legislative body – everyone votes on issues and may draft legislation. This last model is only practical with extensive use of the Net to tabulate votes and keep track of legislation.

Dictatorship

In a dictatorship, a single individual is invested with all the powers of the government. This can occur as a result of a violent overthrow, popular revolt, or even the normal democratic process. In most cases, the dictator came to power at with the support of, at the very least, a significant portion of the population. Once in power, the dictator is free to ignore the will of the people, and they are effectively disenfranchised. Still, wise dictators court the favor of their people, and may even hold regular elections to give the appearance of input into the political process. However, these elections have no binding relevance, and are held at the whim of the dictator. Often, they are simply approval polls. Rather than offering a choice of candidates, the voters simply indicate whether or not they feel the dictator should continue as leader.

Meritocracy

A Meritocracy is a system in which skills, raw ability, or knowledge indicates what

rank in society an individual holds. The most talented or most intelligent, as determined by standardized tests or simple qualitative impressions, are the leaders. The best corporate-run worlds are Meritocracies, wherein senior executives must prove their competence. Scientific colonies are also often Meritocracies, with the population deferring to senior scholars.

Oligarchy

An Oligarchy is government by a few, especially by a small faction of persons or families. These often arise by default on frontier planets without a formal system of government. The founding family, or a large clan, has effective control over all major decisions. Oligarchies may also be founded by design. For example, ILR occupied worlds have an Oligarchial political system, with the rabbits effectively serving as the ruling class.

Plutocracy

A form of government in which the supreme power is lodged in the hands of the wealthy classes, Plutocracies are common on those Capitalist worlds that have few or no curbs on corporate activity. The Plutocratic class may have the best interests of the poor in mind when they make decisions, but more often they take actions simply to cement their domination over society.

The Arts

Art and Culture

The oldest society in the *Albedo* universe has existed for just slightly more than two centuries. As such, characters in *Albedo* do not possess the same breadth and depth of cultural reference that we enjoy in the real world. There are few well-known paintings or written works, and no famous pieces of music at all. While there are many talented artists, there is no *Albedo* universe equivalent of Shakespeare or Michelangelo. While individual artists may have a level of skill to match those human geniuses, they live in a society that simply does not recognize artistic achievement in the same way that ours does. The generally practical nature of society means that the few museums and galleries that exist are almost entirely

educational institutions that use artistic works to educate visitors.

For example, in the militant Independent Lapine Republic, school children tour military museums that contain nothing but skillfully created pieces of propaganda art. Dramatic sculptural tableaux depict war heroes and great political leaders, and highly expressive portraits enjoin the viewers to dedicate themselves to the service of the Republic. On Dornthant, school-children might visit a museum dedicated to the ideals of civic pride and cooperation.

Still, the sentient species of the *Albedo* universe possess a definite urge to create things of beauty for the sake of beauty alone. Even as the shadow of war falls across known space, new artists have appeared who create skilful works of art in the service of nothing but art itself. Indeed, the uncertainty of life in the known worlds may be one of the driving forces behind this growing appreciation for art and music.

Of course, the inherent behavioral differences between species, and social differences between worlds, mean that the artistic urge is expressed in very different ways. Restrained, civic minded Dornthantii might create a work of public beauty, such as a garden. A hedonistic Danetti artist is more likely to design a suit of flamboyant clothes, a uniquely portable masterpiece. Artists of every species strive to

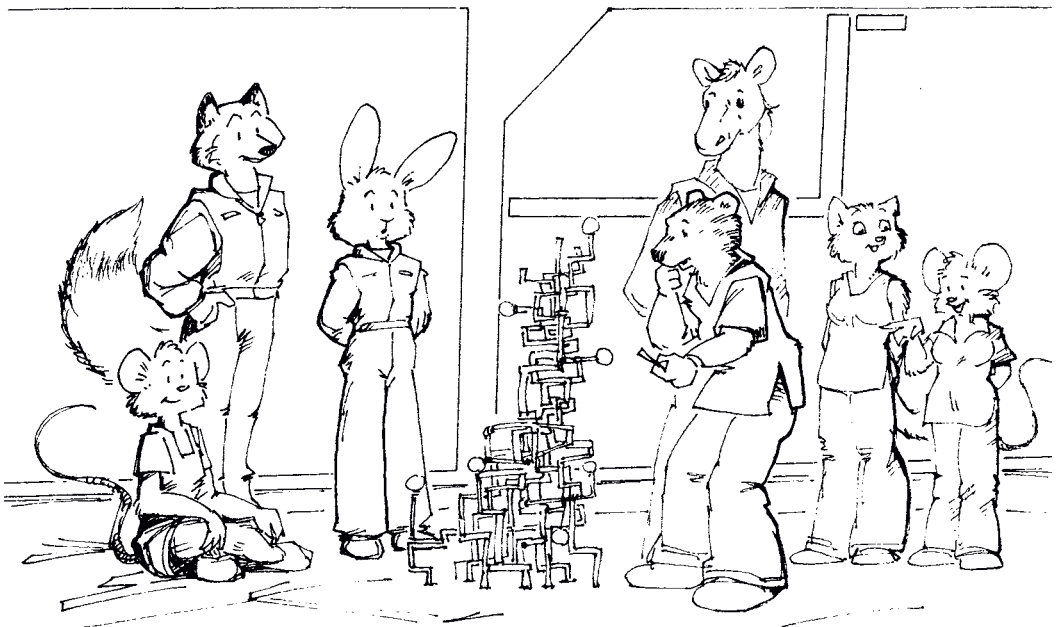
create works that trigger a specific emotional state in those who witness their work – what state they are aiming for is largely dependent on the culture from which the artist came.

Music

Recently, music has started to become recognized as a proper art form, and listening to music has become a popular way to while away idle hours. The art of music is still quite primitive – songs usually consist of pleasant tones and simple beats that are intended more to encourage relaxation than dance. Singing is more or less unknown, though poems and rhymes with sing-song spoken rhythms are not uncommon.

In recent years experimental musicians have begun to create quite complex arrangements that incorporate vocal tones and more interesting beat structures, sometimes taken from environmental noises, like the rattle of a heating vent. Some of these artists are quite dedicated, and professional. Full-time musicians are making names for themselves throughout the Confederation.

Listening to music is highly personal experience, and as such it is not broadcast over any particular medium. Listeners are able to access the works of notable musicians by subscription over the Net, and these songs are saved in digital format on



hand computers. Even in public performances, the audience listens on personal headphones.

Fun and Games

In the earliest days, leisure activities were unheard of. Sports and intellectual games of imagination were regarded as the province of children. This is still largely true, though more leisurely pastimes have been invented in recent decades.

Conversation is the single most popular past-time, followed closely by sports, simple board games, and computer games – mostly simulations and trivia games.

Domestic Life

Family is very important to the races of *Albedo*, though the definition of a “family” can vary widely from society to society. On some worlds, it may refer to an extended collection of unrelated family friends, as well as blood relatives. On other worlds, only your spouse and children are considered family. At the core of these definitions is the society's definition of marriage.

It is important to realize that the nature of *Albedo* society means that the way children are raised is partly dependent on the species of the parents. Lion fathers often leave their children entirely in the hands of the mother. Wolves raise their children as part of a larger clan. Society also plays a role. Danetti partners raise their children jointly. Dornthantii couples usually take advantage of an extended social network of parents with similarly aged children, and the task of raising them is nearly a communal affair.

Marriage

Marriage exists, in some form, on almost every world, though it is largely limited to a civil arrangement that confers certain duties and privileges on those involved. Even the hedonistic and free-spirited Danetti extend certain legal rights to dedicated partners – though a Danetti marriage might include two husbands and a single wife, five wives and four husbands, or any other conceivable combination, the individual members of which may be any species.

Most worlds are rather more traditional, and recognize only partnerships between two individuals. Some worlds limit the legal

recognition of these arrangements to opposite sex partners of the same species. Others recognize any two people living together with a romantic bond as a “married couple.” These differences can cause trouble when traveling to other systems. Although ConFed law requires that all member states recognize a marriage made in another system as legal, this does not protect the couple (or partners) from negative local attitudes.

In the Republic, marriage is condoned only between a man and woman of rabbit stock, and the purpose of the union is as much the production of future citizens as it is recognition of romantic ties. Marriages between rabbits and “lesser” species are not recognized. Non-rabbits on ILR occupied worlds may marry each other – but only with the permission of local government authorities. This permission may take years to arrive, meaning many simply live together in a state of de facto union without official recognition. Subject species who wish to have children must also receive permission.

Marriage and child rearing is not necessarily linked on most worlds. Partners who do decide to raise children are usually eligible for additional legal protections and social support. The term “marriage” is not normally used in the Core Worlds, and spouses are usually referred to as “partner” or “mate,” regardless of their sex. The word is used on more conservative worlds, especially those with hereditary clans or a noble class.

Social Groups

Socialization outside of family is an important part of mental well-being, a fact that is often highlighted to EDF officers looking to boost their SPI ratings. Social clubs of all kinds have sprung up throughout known space to feel this need. Some are based around common interests or professions, or serve to better the minds of their members, while still others meet simply to socialize or find romantic partners. One popular form of socialization is support of a particular political party or activist group.

Certain species are driven to socialization as a matter of course. Wolves, for example, often organize themselves into clans, with distinct hierarchies. These clans often pursue specific goals designed to increase

the power and prestige of individual members, and often become important players in planetary politics. Some species of birds will also naturally congregate. Avian groups are more like extended gossip clubs than anything else.



Daily Life

The Net has molded the character of social life on the Core Worlds, more than any other factor. Privacy does not exist in the Core, not as we understand it. Every moment of every day, the citizens find themselves under the benevolent eye of the Net. Terminals allowing citizens to interact with the Net are as common as telephones and clocks in the real world, and almost every terminal includes a tiny camera complete with a full range of infrared and UV filters. This surveillance is constant, though passive, as the Net only makes its presence known if it notes a problem, or if it is addressed directly.

The constant watch offers many advantages. The Net is there to assist with any crisis, however small.

- . A child, looking for a toy, asks the Net to help. The Net uses its cameras to search the house locate it. Then it plays a game of "Hot and Cold",

directing the child to the lost toy.

- . A senior, waking in the night with a sudden panic attack, is immediately soothed back to sleep by a friendly voice he has heard all his life.
- . A factory worker at a remote installation is injured on the job, and stumbles to her car and passes out. The Net takes control of the car, contacts emergency services, and drives the unconscious worker to the nearest aid.

There is a dark side to this constant attention. The Net keeps note of the mental health of its citizens, and monitors their social interactions. A person who develops certain eccentricities would find their *Social Political Intelligence* index adjusted accordingly. While this rating is normally kept secret from all except one's private physician, EDF officers and ConFed staff must face regular SPI reviews. If the numbers have changed for the worse, the Net will pass this information – and the reason for the change – on to their superiors. This raises the unsettling prospect of being forced to discuss very private matters with near-strangers.

Worse, a citizen may find his SPI being altered for reasons beyond his control. Chronic nightmares, for example, or a bout of serious depression, may trigger an SPI reassessment. The lower a citizen's SPI rating falls, the less control he has over his life. If the SPI rating falls into the range of mental illness, the citizen may find himself placed involuntarily into an institution. While there are no laws against avoiding contact with the Net, actively ducking notice will raise flags and get one pegged as anti-social. This will in turn alter an SPI rating.

Because of this, the need for a "clean" SPI is something that Core World professionals have drilled into their heads from youth. Some avoid eccentricities of any kind, and devote themselves to their professional lives and civil service.

COMMAND REVIEW • АРКАНАД РЕГЕРУ

Social Political Intelligence

With their love for numbers and quantifiers, the ConFed has been using SPI much the way "Intelligence Quotient" has been used in the past – that is, often incorrectly as a measure of someone's "brains." While an average SPI is anywhere from 8-25, numbers of 100 or greater are often scored by the ConFed's favorite citizens. There are many who believe that SPI is a tool for keeping people in line, because non-conformist behavior reduces the index and can prevent one from getting certain positions.

EXTRAPLANETARY DEFENSE FORCE

EXTRA-PLANETARY
DEFENSE FORCE



The Confederation and Republic learned a great deal about waging war during their first conflict, knowledge gained at the price of tens of millions of lives. Both powers have adopted different philosophies of battle as a result of their wartime experiences, and continue to hone and refine their weapons and techniques. EDF battle strategy is based almost entirely on flexible, reactionary responses to ILR aggression. For its part, the Republic is dedicated to developing weapons and strategies that deliver maximum damage with minimum effort.

Despite these differences of philosophy, the very nature of interstellar war means that some elements of military thought are universal. The first of these is the need of overwhelming initial force. Interstellar warfare is an expensive and uncertain prospect, and any attacking force must be large enough and flexible enough to deal with any conceivable situation. Static siege warfare is almost unknown. Invaders (or liberators) rely on devastating attacks from interplanetary space, followed by quick seizure of key points by ground forces. If a ground invasion is repelled, the invaders do not dig in, but withdraw for another attempt.

Large forces require high levels of organization and support. The EDF and ILR were

forced to rapidly develop a structure for their militaries, to keep them supplied and maintain lines of communication. In their current form, they are highly organized, with specialized services and chains of command. The EDF has three primary operational branches: *Aerospace Operations*, *Surface Operations*, and *Administrative Operations*.

















Joint Chiefs of Staff

The Extra Planetary Defense Force is presided over by a *Board of Directors*, which meet on Arras Charka, the recognized homeworld of all civilization. The Board has the following officers:

- . **Chief of Surface Operations**, the officer who presides over all Surface Operations.
- . **Chief of Aerospace Operations**, the officer who presides over all Aerospace.
- . **General Secretary**, a Chief of Administration responsible for recording the minutes and disseminating the directives of the board.
- . **General Treasurer**, a Chief of Administration responsible for the fiscal duties of the EDF.
- †. **Board Members**, persons granted honorary ranks of Vice Chairperson, one per world with a population of at least 134 million citizens. Being a Confederation, the rules at the planetary level for electing a Board Member vary greatly.
- †. **Board Attendees**, being persons nominated from worlds or other recognized governing bodies of planets with a Population Index less than 6. Board Attendees are allowed to attend meetings but cannot vote on policy.

Table of Ranks

Originally composed of individual Homeguards, the Ranking System of the EDF has grown by ad-hoc laws. This ranking table is only for Officers – Specialists use the Warrant Officer table (p. 67). While the Rank Table lists the “official names” of each rank, officers will usually be referred to by the title of their command, such as “Wing Commander Felna”.

<i>Rank</i>	<i>SPI</i>	<i>Insignia</i>	<i>Surface Ops.</i>	<i>Aerospace</i>	<i>Administration</i>
Officer 16 (016)	240		Chief of Surface Operations	Chief of Aerospace Operations	Chief of Administration
Officer 15 (015)	200		General	Admiral	Chairperson
Officer 14 (014)	160		Brigadier General	Vice Admiral	Vice Chairperson
Officer 13 (013)	130		Sr. Commander, 1 st Class	Sr. Commander, 1 st Class	Sr. Commander, 1 st Class
Officer 12 (012)	110		Sr. Commander, 2 nd Class	Sr. Commander, 2 nd Class	Sr. Commander, 2 nd Class
Officer 11 (011)	90		Sr. Commander, 3 rd Class	Sr. Commander, 3 rd Class	Sr. Commander, 3 rd Class
Officer 10 (010)	70		Commander	Commander	Commander
Officer 9 (09)	50		Lieutenant Commander	Junior Commander	Lieutenant Commander
Officer 8 (08)	40		Lieutenant, 1 st Class	Ensign, 1 st Class	Lieutenant 1 st Class
Officer 7 (07)	30		Lieutenant, 2 nd Class	Ensign, 2 nd Class	Lieutenant, 2 nd Class
Officer 6 (06)	20		Lieutenant, 3 rd Class	Ensign, 3 rd Class	Lieutenant, 3 rd Class
Officer 5 (05)	15		Cadet, 1 st Class	Cadet, 1 st Class	Cadet, 1 st Class
Officer 4 (04)	10		Cadet, 2 nd Class	Cadet, 2 nd Class	Cadet, 2 nd Class
Officer 3 (03)	5		Cadet, 3 rd Class	Cadet, 3 rd Class	Cadet, 3 rd Class
Officer 2 (02)	3		Cadet, 4 th Class	Cadet, 4 th Class	Cadet, 4 th Class
Officer 1 (01)	1		Cadet, 5 th Class	Cadet, 5 th Class	Cadet, 5 th Class

Surface Operations

Surface Operations is in charge of the “meat and potatoes” of any combat operation – the ground troops who actually take and hold territory. Aerospace Operations may play an essential role when it comes to transporting these forces to the battlefield and subduing enemy resistance, but infantry and armor are needed to complete the job.

Surface Operations: Order of Battle

<i>Name</i>	<i>Staff</i>	<i>Units</i>	<i>Commanding Officer</i>
Army	150,000	2 Corps	General (015+)
Corps	37,800	2 divisions & Corps HQ	Brigadier General (014+)
Division	18,800	4 brigades & Division HQ	Colonel (013+)
Brigade	4,700	4 battalions & Brigade HQ	Lieutenant Colonel (012+)
Battalion	1,200	8 companies & Battalion HQ	Major (011+)
Company	145	4 platoons & admin staff	Lieutenant Commander (09+)
Platoon	36	4 squads & admin staff	Lieutenant (08+)
Squad	8	2 fireteams	Lieutenant (07+)
Fireteam	4	n/a	Lieutenant (06+)

Armies

Armies are fielded in only wartime. Armies are commanded by Generals (015) and typically put together to conquer a very well-defended or well-populated planet. They are composed of divisions, rather than

corps, and during the first ILR conflict ranged in size from 150,000 troops to more than a million.

As a space-borne force, the EDF places particular emphasis on infantry over armor, since soldiers are much easier to deploy from orbit, and take up much less space aboard ship. In a standard action, light and heavy infantry are dropped on the surface at their targets by aerodyne gunships that serve as armored personnel carriers and a kind of flying tank. The EDF *does* field tanks and APCs, but uses them primarily for garrisoning and securing a planet after an initial assault. Otherwise, they are used to support infantry in the destruction of enemy fortifications when air-space has not been secured, or aerodynes are otherwise engaged. The EDF does not have any dedicated artillery units, as this battlefield role is adequately served by the presence of aerodyne gunships and spacecraft capable of accurate bombardments from orbit. In a pinch, long-range tank guns can be used as a replacement for indirect fire.

Light infantry make up the bulk EDF surface manpower, and a typical squad is armed with a mixture of anti-personnel weapons. Their role is to neutralize enemy soldiers and seize important targets, such as government offices or civil infrastructure. If they encounter a strong-point or armor, they call in an aerodyne strike. Heavy infantry are used when facing a particularly well-fortified force, and when the enemy is making extensive use of armor and mechanized infantry.

VHALO (Very High Altitude Low Opening) units are heavily-armed and specialized infantry that are trained to operate on an individual level if necessary. VHALO squads are launched from low-orbiting space ships in converted Autonomous Combat Vehicles (ACV). The ACVs split open and release the squad into the air while still about 15,000 meters above the surface. The squad achieves a terminal velocity in excess of 300 kph as they plummet to the ground, and open their parachutes less than 600 meters from impact.¹In a typical action, VHALO

¹ Assuming a world with a gravity of 1 G and 1 bar of atmosphere.

COMMAND REVIEW • APKNANB NEEGUP

Organization of the ILR

The Independent Lapine Republic specializes in occupation. The Republic Armed Forces has only one branch of service, very much like the EDF's Surface Operations. Discipline is high – there are plenty of recruits to choose from on the ILR homeworlds, and insubordination has harsh penalties.

squads are launched in the hours preceding an attack in order to secure lightly defended (but important) resources, such food storage or power production facilities. VHALO squads may also be used in conjunction with infantry in attacks on fortifications. The infantry engage the enemy, and VHALO troops are dropped on the fortifications while the defenders are distracted.

The EDF can dispatch a brigade on short notice from any of the Core Worlds to anywhere within the Confederation, using a standard VLCC group. These fast response brigades are made up of mixed battalions, ensuring maximum flexibility of response on arrival. Each mixed battalion is comprised of 3 light infantry companies, 2 heavy infantry companies, 1 mechanized company, 1 armor company, 1 VHALO company, and battalion Admin staff. Units larger than a brigade exist as purely static planet-side forces or organizational units in peace-time, and are only created for dispatch to other systems in times of war.

Of special note are the freefall infantry units. While these units are in the ordinary Aerospace chain of command, they are organized as Surface units. Freefall infantry are normally used as shipboard security in the event of a boarding, but they may also undertake boarding actions themselves. These rarely occur in battles between starships, but are not uncommon in civil

security actions, such as smuggler interdiction, or when dealing with enemy space stations. When used against another ship, they are deployed in the same sort of modified ACV used by VHALO troops. When the ACV approaches the enemy vessel, it opens, and the squad departs using Extra-vehicular Activity (EVA) rigs (see below). They are trained to fight in zero-g and the vacuum of space, and to make effective use of the EVA rig. Smaller capital ships will have a squad of freefall infantry, or even a single fireteam. A VLCC might have an entire company aboard.

Squads

The most basic "complete" military unit, a squad is the smallest unit normally assigned a specific goal in a battle plan. The precise composition of a squad varies from service to service, as noted below. Infantry and VHALO squads may be divided into two four-man fireteams, one of which is led by the assistant squad leader. The composition of fireteams is usually decided in the field, based on the skills of each soldier and the particular requirements of the situations. The squad is the basic building block of every Surface Operations unit. Even a light infantry division is basically nothing more than a collection of hundreds of squads, with Administrative and command staff tacked on to keep them functioning as a well-oiled machine.



Armor

Armor squads in the EDF are deployed to support infantry actions against particularly well-fortified targets, and do not often see action in the first hours of conflict. They are dispatched later against enemy hard points, as an adjunct to bombardment by aerodyne gunships. Armor has much more of a role in Homeguard actions, where it may be used as the spearhead of an overland assault. A typical EDF armor squad consists of four armor crew and four technicians, all operating in support of a single tank. The technicians are rarely dispatched into battle, though they are armed as light infantry riflemen, and may be called into action as fireteams in support of armored actions. Tank crews carry MPKW machine pistols, and have access to a MAKW light machine gun stored in the tank. As with mechanized companies, an armor company has two devoted armor support squads, using APCs modified for towing and field repair.

Surface Operations: Branches of Service

Engineering (ENGS)

Trained in construction and destruction of materiel, all Engineers are trained in Weapons of Mass Destruction (WMD), including their deployment and disposal, and Hazardous Material (HAZMAT) environment. Many EDF divisions have an amphibious corps of Engineers, as well.

Heavy Infantry (HI)

Heavy infantry squads have nearly the same structure as light infantry squads, but differ significantly in the arms they carry. The support weapon specialist carries a portable rocket-launcher, and is assisted in the firing of this device by one of the riflemen. Snipers are replaced by a second support weapon specialist bearing a grenade launcher. The remainder of the squad carries LAKW 1-30s, the assault variant of the basic LAKW rifle, which includes an underslung grenade launcher.

Light Infantry (LI)

Light infantry is the force most commonly encountered in an EDF deployment. A typical infantry squad is made up of a squad leader, a support weapon specialist, and five riflemen, one of whom serves as assistant squad leader. The final squad member may be a medic, electronic warfare specialist, or sniper, who works to support the entire platoon. The support weapon specialist carries a MAKW light machine gun or GAKW grenade launcher, while snipers carry a military CKW precision rifle. The term "sniper" is somewhat misleading, as these troops do not carry true sniper rifles. However, they fulfill much the same role on the battlefield. Snipers and support weapon specialists also carry an MPKW as a sidearm for closer actions. All other squad members carry the standard LAKW rifle.

Mechanized (MECH)

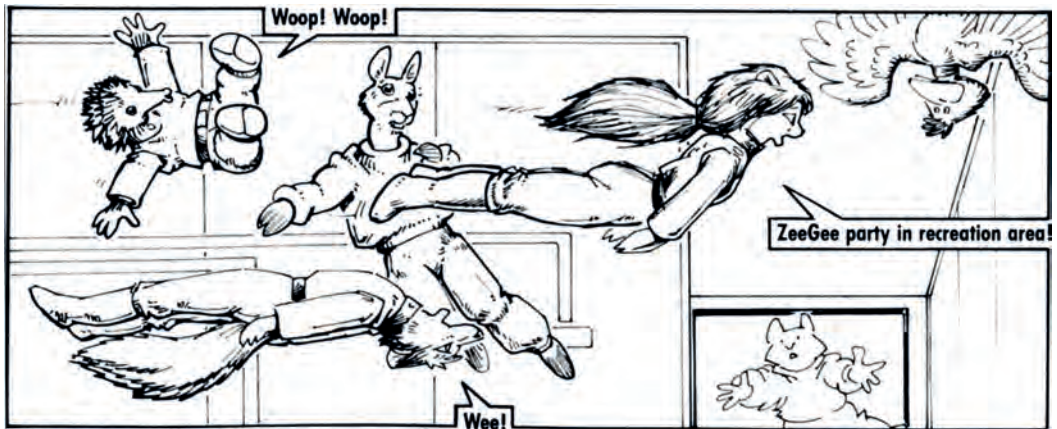
Mechanized infantry squads rely on fast, armored vehicles to move from place to place. Mechanized infantry is most commonly seen in planetary Homeguards, as the EDF makes use of aerodyne gunships for rapid deployment and support of infantry. Still, every fast-response brigade has a mechanized company, one that usually deployed to assist in patrolling an area after it is secure. An EDF mechanized squad consists of two APC crew, a support weapon specialist, four riflemen (one of whom is squad leader), and either a medic, sniper, or electronic warfare specialist.

Mechanized infantry take advantage of the carrying capacity of the APC to haul more supplies, ammunition and a selection of common support weapons into field. The

COMMAND REVIEW • АРМАНД НЕГЕУР

Organization of the Homeguards

Recognizing the need for defense, most planets of the Interstellar Confederation maintain their own Homeguards – at least, the ones that can afford it. Most will use equipment identical to the EDFs, and many will be staffed by former EDF officers. However, each planet has its own ideas for what makes for a good army, and no two Homeguards will be organized exactly the same way. Technically, by their charter with the ConFed, *all* EDF officers outrank all Homeguard officers ... but when coordinating EDF/Homeguard operations, a wise commander will be wary of local politics.



support weapons specialist can choose from a light machine gun, automatic grenade launcher, or portable rocket launcher. The APC crew carries MPKW machine pistols, while the remainder of the squad carries standard LAKWs. The squad is transported around the battlefield in an armored personnel carrier (APC), with the APC crew acting as driver and gunner.

Every mechanized company has two armor support squads, each consisting entirely of APC crew/technicians who are responsible for the maintenance of vehicles in the company. Each squad has access to a pair of mobile repair vehicles – essentially a standard APC fitted for towing, and carrying a selection of tools and replacement parts.

Mobile Surgical Hospital (MSH)

Doctors and support for wounded civilians and personnel, Mobile Surgical Hospital units are often located aboard VLCCs, and only relocate to the surface when it has been largely pacified.

Very-High Altitude, Low Opening Paratroopers (VHALO)

VHALO (Very High Altitude Low Opening) squads are trained to act as individuals. Squads exist primarily as a means of identifying those VHALO troopers who are assigned to the same ACV drop pod. The squad is commanded by a 1st class Lieutenant; this allows them to give tactical orders to traditional infantry squads they encounter in the field. VHALO soldiers are more heavily armed than normal infantrymen. Each carries LAKW 1-30 assault rifle with grenade launcher, as well an MPKW machine pistol and a selection of hand grenades.

Aerospace Operations

Aerospace Operations is the most visible and perhaps prestigious branch of the EDF. It represents the core of the ConFed's ability to wage war in space, and its officers represent the best and brightest of the known worlds. Aerospace Operations transports troops, maintains supply lines, and defends every ConFed system from attack. It encompasses everything from one-man aerodyne gunships to the enormous VLCCs that are capable of carrying an entire infantry division through interstellar space. Aerospace Operations is divided into two branches – Aerodyne Command and Strategic Command. Aerodyne Command manages the operations of small transport and combat vessels, while Strategic Command handles capital ships and all other vessels incapable of atmospheric operations.

Aerospace Operations: Aerodyne Command Order of Battle

<i>Name</i>	<i>Staff</i>	<i>Units</i>	<i>Commanding Officer</i>
Group	5,000	4 wings (512 aerodynes)	Aero Commodore (O11+)
Wing	1,000	8 squadrons (128 aerodynes)	Wing Commander (O10+)
Squadron	130	4 flights (16 aerodynes)	Squadron Officer (O9+)
Flight	30	4 aerodynes	Flight Officer (O8+)

Aerodyne Command falls under the overall direction of Aerospace Operations, but the sub-branch enjoys a great deal of latitude when it comes to military planning. While most people immediately think of gunships when they think of aerodynes, a significant amount of work done by Aerodyne Command involves unglamorous interplanetary transport. About two-thirds of all aerodyne units have combat roles, and these fly small fighters and gunships. The remainder operates transport ships, some of which displace several hundred tons. Only officers may pilot aerodynes, though some of the larger transport vessels require co-pilots, and this role may be filled by any qualified cadet.

During any military action Aerodyne Command is assigned the task of transporting ground troops to their targets and providing them with ongoing support. These operations make extensive use of the A2 gunship (also known as a dropship), which has room for a standard infantry squad in the passenger compartment. The pilot drops from a home ship in orbit and accelerates to their drop-off point, where they land and open the rear doors. When the squad departs, the aerodyne typically remains in the area to provide aerial support by as firing missiles at targets identified by the ground troops or destroying enemy vehicles with gunfire.

The Aerodyne chain of command runs parallel to that of Strategic Command until the Group level. There are no dedicated Aerodyne officers higher than Aero Commodore. Aerodyne units larger than a Group have never been formed by the EDF, and if a large operation required the combination of more than one group, it would simply be under the command of an Aerospace Commodore. Unlike Surface Ops, Aerodyne Command includes Administrative Operations staff in their personnel totals.

Flight

The flight is smallest aerodyne unit assigned to independent operations. In an invasion, each flight is assigned an infantry platoon to transport and support. A flight is usually comprised of 4 pilot officers, 16 technicians/crew, 3 supply/logistics crew-

men, and a flight medic. Smaller capital ships, such as destroyers, may have a flight of aerodynes stored in their hangars.

Squadron

Aerodyne squadrons are large enough to take on a multitude of combat and support roles, and may be the only EDF presence in a given system. They often feature mixed-role flights to enhance their flexibility. For example, a squadron assigned to monitor and protect shipping in Ekosiak might have 2 flights of space fighters, 1 flight of transports, and 1 flight of gunships. At squadron level, the Admin staff complement includes a doctor, morale officer, and civilian liaison in addition to the normal supply/logistics crews.

Wing

An aerodyne wing is typically assigned to the defense of an entire planet. A wing is rarely composed of squadrons of a single type though in times of war dedicated fighter wings are not unheard of. They have a large contingent of Admin staff, typically including enough doctors to staff a small hospital, as well as a team of experienced engineers. An entire aerodyne wing can be contained within the hangars of a VLCC.

Group

Only the most valuable colonies or systems can boast the presence of an aerodyne group. They are extremely flexible space-forces in their own right, with wings devoted to defense and supply. Several hundred Admin personnel are assigned to a group, including mental health professionals and advanced aeronautic specialists.

COMMAND REVIEW • APNNAK REFEUP

Organization of the Enchawah Group

Enchawah Group does not have a formal military structure, but they do have recognized levels of authority, a paramilitary hierarchy, where officers are likely to be called "Comptrollers" or "Field Officers". Field Divisions are given a great degree of autonomy to manage as they see fit, as long as they get results. Military discipline is also lacking; personnel are more likely to be demoted or dismissed than to receive counseling or internment, despite the presence of internal-affairs personnel.

Aerospace Operations: Strategic Command Order of Battle

<i>Name</i>	<i>Staff</i>	<i>Units</i>	<i>Commanding Officer</i>
Carrier Group	5,000	1 VLCC, 1 capital squadron, 2 aerodyne squadrons	Vice Admiral (O14+)
Capital Squadron	40	2 large capital ships, 1 support vessel	Commodore (O11+)
Taskforce	20	1 capital ship, 1 support vessel	Captain (O10+)
Capital Ship	16	1 ship of at least corvette size	Commander (O9+)
Patrol	4	2 non-capital vessels	Flight Officer (O6+)

Strategic Command is responsible for the operation of any jump-drive equipped or non-atmospheric spacecraft in the EDF. While capital ships (the large, armed vessels that act as command centers for squadrons and taskforce) are the most visible part of Strategic Command, several classes of smaller vessel also fall under its purview.

As the Order of Battle indicates, the Strategic Command branch of Aerospace Operations is extremely flexible. Aerospace units at this level are centered on the presence of capital ships, and these vessels range in size from corvettes with a crew of 12 to the gargantuan VLCCs that can hold tens of thousands of personnel. A taskforce of three capital ships might encompass anywhere from 30 to 1000 personnel. As with Aerodyne Command, Administrative staff is included in the numbers indicated above.

Life for a typical aerospace officer during wartime is one of weeks, or even months, of boredom, punctuated by incredibly brief periods of frantic action. Given the distances involved in space travel and the

power of sensor technology, weeks can pass before a detected attack on a ship actually arrives. For example, a cruiser arriving in a hostile system will not be noticed by planet-side detectors for several hours, at the very least. The planetary defenses must spend more time plotting the likely course of the cruiser before launching ACV defenses to intercept. Even at maximum thrust, it will take several days for them to reach the cruiser – which has in turned launched ACV defenses of its own.

When the two forces meet, the action is resolved in split seconds. Given the relative velocities involved, even a glancing blow from the shrapnel of a destroyed ACV can cut through a capital ship's hull, and wreak havoc as it passes through the vessel. As such, EDF ship personnel are encouraged to maintain an almost paranoid concern for safety. They wear vacuum-suit liners at all times, and keep their helmets at the ready.

Patrol

A patrol is typically a very short-term formation of at least two small ships, usually scout vessels or non-aerodyne fighters. They are assigned to a single duty, such as scanning an incoming freighter convoy, and the patrol is dissolved at the completion of that duty. They are not always short-lived units, however. In wartime, a patrol of dozens of ships might be assigned to escort a carrier group as it accelerates to a jump point over the course of several weeks. Obviously, in cases like this an ensign would not be in command. Patrols have no Admin personnel beyond that which is assigned as crew to the ships that comprise it.

Capital Ship

The eventual goal of almost every Aerospace officer is command of a capital ship. Even command of a tiny corvette indicates a very high level of trust and respect for an officer's skills, as even the smallest ship represents an extraordinary investment of resources, and effectively commanding a crew of any size requires a great deal of self-possession and expertise. As such, command of a Capital Ship represents the pinnacle of a career. Capital ships are often deployed individually to complete specific

operations, and may remain in the field for months at a time.

While most capital ships are used for purely military operations, Strategic Command often places older or idle vessels at the service of the civilian ConFed authority. These ships maintain a military crew, but also take on a large complement of civilian experts, and may even be under the command of a civilian captain. They are used for exploration of new systems and scientific research, and often range very far from home. Larger ships have recycling technology onboard that allows them to operate independently for years, allowing them to be dispatched on long-term missions of exploration to the extreme edge of known space. While a five-year mission in search of new life and new planets may be a hardship for the crew, they represent an excellent way to advance one's training and career.

Even the smallest capital ships have a complement of Administrative staff on board, most typically medical and science specialists. Ships of destroyer class or larger will also have a contingent of planet-based staff attached to their crew. This staff remains behind to act as a convenient liaison for ships on extended duty.

Taskforce

A taskforce is simply a group of capital vessels and support vessels brought together for a specific purpose. The size and composition of a taskforce varies according to the task it must complete, though if it contains a single VLCC, it is counted as a carrier group. However, if more than one VLCC is present, the collective may still be considered a taskforce, though it would be commanded by a very high-ranking flag officer. The line between a taskforce and a capital squadron (see below) is often unclear. Generally speaking, if a taskforce has more than one vessel of cruiser size or larger it may be considered a squadron. A taskforce is also more often a long-term arrangement, whereas capital squadrons tend to be formed for single engagements.

Capital Squadron

Capital squadrons are ad hoc formations, usually created in response to a specific, short-term military threat. For example, if

unknown vessels suddenly appear on the edge of a system, any large capital ships sent to investigate would be considered a capital squadron. Once the threat is gone, the squadron usually dissolves.

Carrier Group

Carrier groups are the basic elements of all large aerospace operations. They are organized around the support and defense of a VLCC ship, and tend to be very long-term organizations. Indeed, individual VLCCs are constantly at the center of their own carrier group. The sheer amount of fire-power and production capability represented by a single carrier group dwarfs that of many colonies. Carrier groups are dispatched to respond to extremely dire threats. If two VLCCs are present, then the unit is reformed as a kind of super taskforce, under the command of an Admiral or the senior VLCC captain.

Aerospace Operations: Branches of Service

Aerodyne Vehicle Operations (DYNE)

Trained to operate Aerodynes, especially in the context of landing troops and interplanetary defense from raiders. Aerodyne pilots form the backbone of any EDF operation.

Engineering (ENGA)

Trained in the deployment and repair of Aerodynes, ACVs, and other outer-space vehicles, the aerospace Engineering division is vital to the maintenance of space vehicles and orbital staging platforms. While it's not often talked about, the Engineering corps is extensively trained in the use of ACVs from orbit and the deployment of nuclear weapons, like their Surface-Ops cousins.

Freefall Infantry (FI)

Freefall infantry rarely operate in units larger than platoon. Their job is to board enemy vessels and secure them for search, or subdue the crew and seize control. As such, they require a high level of technical competence in order to secure ship systems. Each squad is comprised of a squad leader, two electronic warfare specialists, and six riflemen. All are armed with LAKW 1-30 carbines (minus the grenade launcher) and a

selection of variable hand grenades. Freefall infantry are not equipped for long-term operations, and are rarely expected to be in the field for more than a few hours.

Interplanetary (INT)

The bulk of Aerospace crews, who maintain the very-large arrays that never land, Interplanetary is largely composed of medical personnel, along with psychologists and administrators.

Interstellar and Jump-Space Navigation (FTL)

Trained in astrophysics, hyper-dimensional mathematics, diagnosing and preventing misjumps, and interstellar navigation, any VLCC must employ a number of Navigators. FTL staff do not enter combat except in the most dire circumstances.



Administration

Administrative Operations is a vital body that supports and coordinates the men, women, and resources of the far-ranging EDF forces. Admin covers a wide range of operations, encompassing everything from supply clerks to battlefield doctors, aeronautic researchers, civilian liaisons, morale officers, and disaster response planners. Of particular significance to troops in the field are the Command and Control (C&C) specialists who constantly monitor and direct every aspect of battles on the ground, down to the level of the individual soldier, passing on the directions of the officers managing the operation. The colonel in command of a corps level Admin unit is quite literally responsible for managing

everything from the mental health of the enlisted men, to the safe disposal of their sewage. In a battle, his staff maintains communications with the field, and make sure each soldier is where he is meant to be. Admin officers can be found in every branch of the military, and are often posted to civilian positions with the Confederation. They make sure that the EDF can do the jobs it is meant to do, by providing practical support of every kind.

Administration:
Order of Battle

<i>Name</i>	<i>Staff</i>	<i>Units</i>	<i>Commanding Officer</i>
Corps Admin	5,000	2 division admin and extra staff	Senior Commander (012+)
Division Admin	2,400	4 brigade admin and extra staff	Commander (010+)
Brigade Admin	6,00	4 battalion admin and extra staff	Lieutenant Commander (09+)
Battalion Admin	150	8 company admin and extra staff	Lieutenant (08+)
Company Admin	17	4 platoon admin and extra staff	Lieutenant (07+)
Platoon Admin	4	n/a	Lieutenant (06+)

The organizational structure listed above reflects the administrative groups assigned to Surface Operations units. Aerospace units make use of similarly sized groups, each operating independently on a capital ship, and therefore suited to the size of the crew on that ship. For example, a cruiser with a total crew of 120 would have a company sized Admin Group aboard. Aerodyne units are supported by the Admin Groups attached to the capital ships they operate from, or rely on local Surface Operations Admin Groups in the case of ground-based aerodynes.

There are literally hundreds of Admin specialties, and each group by and large maintains their own chain-of-command within the specialty. For example, the captain in charge of civilian relations on Derzon cannot order a lieutenant serving as a

surgeon to perform an emergency medical procedure. However, all branches eventually report to one person, either the senior officer of a given Admin unit, or (ultimately) the Chief of Administrative Operations on Arras Charka. In some ways, the organization of Administrative Command most closely resembles a large corporation, with several semi-independent departments. While the supervisor of accounting cannot fire a technical support staffer, she can direct her complaint to the CEO, who can take action.

With the exception of C&C specialists, administrative officers have limited authority when it comes to combat operations. They cannot typically give orders to normal aerospace or surface operation combatants, unless the chain-of-command has been seriously disrupted and no other officers are present. An Admin doctor with the rank of captain who happened on a squad of infantry on the battlefield could not countermand the combat orders of the squad if a surface operations lieutenant was present. He *would* be expected to take command of the squad if the squad commander were not present, though his directions would likely be limited to generalities ("Escort me back to base") rather than specific battlefield orders, which he would leave to the discretion of the senior squad member. Despite the often sedentary nature of their work, Administrative personnel do receive a modicum of combat training. They are expected to be able to defend themselves and understand the basics of military tactics. All receive basic firearms instruction, and have the option to pursue optional training that prepares them to take an active role in combat.

Platoon Admin Group

A platoon admin group represents the most common contact the soldier in the field has with Administrative Operations. Platoon admin personnel are responsible for keeping track of supply shipments to the unit, preparing meals in the field, and ensuring that every soldier is assigned appropriate arms and gear. They are permanently attached to a given platoon, bunk with them, and travel with them on interstellar operations. However, they conduct their business alongside other platoon

Admin groups in a company or battalion Admin facility. In most EDF operations, platoon admin groups remain in orbit until the surface is stabilized, and then assist in setting up a company or battalion level HQ on the ground. A platoon admin group consists of two general laborers (who are most often employed in preparing meals), one weapon technician (who is specifically responsible for making sure that the platoon's gear is in working order), and an admin group commander who serves as quartermaster for the platoon.

Company Admin Group

A company Admin group is simply the sum total of the platoon groups with the addition of a commanding officer/C&C specialist who serves as an overall director and liaison for the group.

Battalion Admin Group

In addition to the component platoon and company level Admin groups, a Battalion Admin Group has 14 extra staff members who provide specialized services to the troops. A Battalion Admin Group adds an administrative coordinator, morale officer, battalion doctor, robotics specialist, C&C coordinator, motor pool director, and nine general duty staff who are usually busy with laundry, or assisting the platoon quartermasters. At this level, a number of resources are also available, notably a small number of robots that are assigned to other units on the basis of need. Depending on the location of the battalion, up to a dozen light personnel transports and trucks are also available, intended for transporting personnel in peacetime. These vehicles are not suitable for battlefield use, though they may be pressed into service evacuating injured troops from the field, or as scout vehicles.

Brigade, Division, & Corps Admin Groups

At the brigade level, the Admin group has become a considerable unit in its own right, one that is able to provide a wide range of services and resources. A brigade has a fully functional field hospital, sizable motor pool, basic manufacturing facilities, several robots, and highly specialized experts such as psychological hygiene officers, military police,

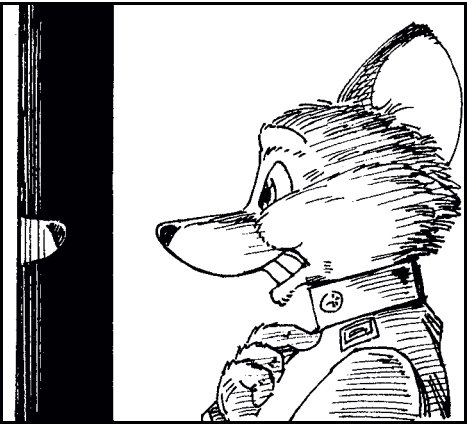
engineers, and a civilian liaison team. They typically remain aboard a VLCC until the surface is secured, at which point the group may occupy a large surface structure, such as an office block.

Division and corps Admin groups are comparable to small towns, with specialists in every conceivable field spread throughout the component units, supported by a central HQ staff numbering in the hundreds. The group has a substantial manufacturing capability, and is able to operate indefinitely given access to raw resources. They keep track of every aspect of the lives of those in influence, and supply every need. A corps level Admin group commander is an extremely powerful and influential person, though his position is hardly glamorous.

Administration:
Branches of Service

Industry and Procurement (IP)

A fancy title for the factory workers, these are the folks who build or purchase the materiel and ship it out.



Liaison (L)

Diplomats and media supervisors, who meet with the civilian governments that contribute to the EDF, often to lobby for more funding, to allay fears of ILR attack, and to justify the existence of the EDF.

Quartermasters (QM)

Most units have one or more of these, to count the beans and balance the books.

Special Services (SS)

Viewed with suspicion among the troops in the field, Special Services is staffed with psychologists and criminologists who investi-

gate crimes committed by EDF members, including embezzlement, theft, and accusations of atrocity. Special Services also interrogate terrorist leaders, crime lords, and other leaders in an attempt to better understand their motivations and tactics.

Specialists

Recognizing the need for personnel trained in unusual or difficult fields of study, the EDF maintains ranks of Specialists. These personnel have a special rank, known as *Warrant Officer Ranks*.

Rank	SPI	Specialist Title
Specialist 7 (S7)	120	Master Warrant Officer
Specialist 6 (S6)	80	Chief Warrant Officer
Specialist 5 (S5)	60	Warrant Officer, 1 st Class
Specialist 4 (S4)	40	Warrant Officer, 2 nd Class
Specialist 3 (S3)	20	Warrant Officer, 3 rd Class
Specialist 2 (S2)	10	Warrant Officer, 4 th Class
Specialist 1 (S1)	5	Warrant Officer, 5 th Class

While all Specialists are technically officers, their training in military fields may be limited and their reputation as combatants is lacking. Also, while a Warrant Officer is officially equivalent to a regular Officer of the same rank, in practice "true" Officers are awarded more respect.

Emissary (EM)

A euphemism for "spy", the EDF is not supposed to engage in covert operations. However, many EDF chairpersons recognize the need for such operatives. Emissaries are often kept secret, even from each other. Emissaries report directly to the Chairpersons of Administration.

Exploration (EXP)

Scouts who move into uncharted space, Explorers report directly to the Vice Admirals of Aerospace.

Research and Design (R&D)

These engineers develop new machines of war. Since most of the plans and theories used are already in the massive data libraries, most of R&D is either finding more cost-effective ways to produce machines or applying the same old designs in new ways. R&D corps report directly to the Chairpersons of Administration.

MAKING CHARACTERS

NÄHYND HANNAHZEN

To start the game, each Player makes their Characters. All Players begin with one Main Character and five Supporting Characters.

Main Character

Choose a Species

The Interstellar Confederation recognizes over 160 Species. The most common ones are presented in the Species chapter, p. **Error! Bookmark not defined.**

Your Species determines starting Attributes – write these numbers in your character sheet, in the appropriate blanks. Main Characters have Body, Clout, and Drive points that can be spent to improve rolls and to use certain Gifts or abilities.

Your Species gives you several Marks in Skills – add these Marks to your Main Character Sheet.

Choose *one* Species Gift. Write this Gift on your Main Character Sheet.

Choose a Homeworld

You can choose a Homeworld from the Gazetteer, or you can make one up. Each Homeworld has a basic type, with descriptions beginning on page 82. Note your Homeworld's name and type on your character sheet.

Your Homeworld gives you several Marks in Skills – add these Marks.

Choose *one* Homeworld Gift. Write this Gift on your Main Character Sheet

Choose a Personality

In the Personality chapter, you will find four choices. Each one improves either your Clout or your Drive.

The blanks for noting personality traits are next to either Clout or Drive on your Main Character Sheet – check each aspect appropriately.

Choose a Service

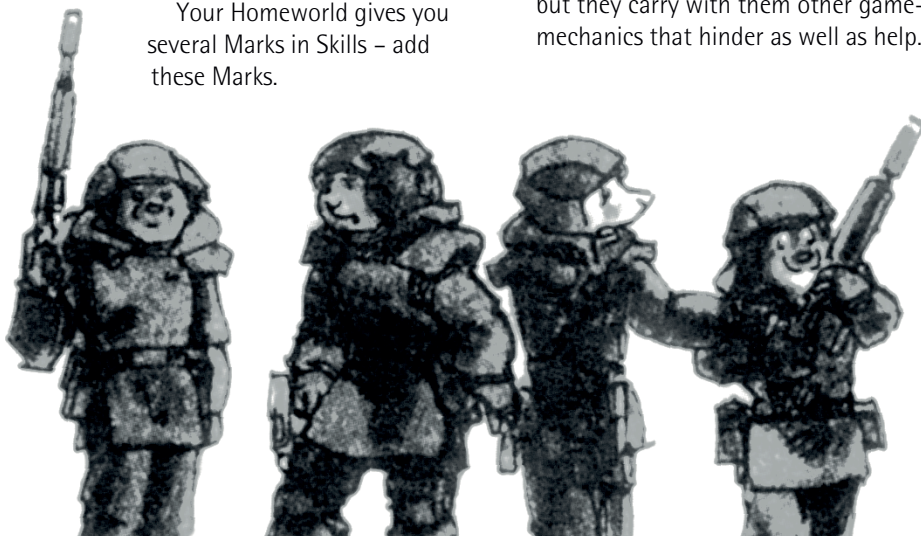
Choose a Branch of the EDF, and then a Service. Your Branch of Service gives you several Gifts: one Basic and several Gift Groups. Write these Gifts on your Character Sheet. Add Marks to your Skills, as dictated by your Group Gifts.

Choose Electives

Next, you can add 10 Marks into any of the Skills, with a limit of 3 marks in any given skill. You can buy any Skill you want, even ones you have zero Marks in at the moment.

Choose a Personal Gift

You may choose one personal Gift. This Gift can be any Gift that you qualify for. *Basic Gifts* and *Group Gifts* have no qualifiers. *Dubious Gifts* also have no qualifiers, but they carry with them other game-mechanics that hinder as well as help.



Advanced Gifts have requirements that must be met before you take them.

Choose Personal Details

Flesh out your character's name, gender, and other personal details.

Name

Naming practices differ from planet to planet, between species, and even among different family groups of the same species and culture. Not having any cultural background for choosing and developing names, the first settlers on Arras Charka selected simple names for themselves, often nonsense syllables that were distinctive and sounded pleasant. Others took

COMMAND REVIEW • HANAZEN DEFENSE

Sample Character Names

Aldeat; Alhacka; Ali; Alo; Alri; Alt; Alto; Ani; Anni; Anrat; Ar; Ardea; Auitharar; Bosgar; Char; Charlashi; Charsa; Chato; Dadoghera; Dadorath; Dagasa; Darfidoi; Darkoki; Dasho; Dea; Deaar; Deaat; Deagai; Deaki; Deaosh; Deashoas; Dhea; Dheana; Dheao; Dohath; Dorfier; Dorna; Driar; Drishi; Edohath; Egan; Ekheka; Elfheshi; Elgar; Elper; Elra; Elta; Endos; Enrath; Enro; Erfhejia; Erfyferfon; Erla; Erni; Erpath; Erpoor; Erto; Fefar; Fel; Felda; Felkhethok; Felos; Felrak; Ferpath; Feter; Feth; Fhega; Firea; Fishaeth; Freeth; Frerak; Freshata; Gaeth; Gan; Gar; Gheda; Hath; Huer; Hufida; Huharka; Huka; Huko; Hula; Hulharda; Hulkhoteth; Husho; Kaat; Kaer; Kafon; Kari; Kashagan; Kathok; Katik; Kedyka; Kehyoth; Kei; Keon; Khashi; Khesa; Kor; Kora; Korda; Kori; Korn; Korthok; Korti; Kotik; Laat; Laat; Lagarat; Larak; Lashion; Lidhea; Lini; Lugalier; Lyhac; Lyki; Lyri; Lyshithok; Madai; Masi; Mesi; Moosh; Myla; Myshofaloth; Na; Nago; Narath; Narhefon; Nyhath; Nyosh; Nyrath; Oghega; Okhateth; Orfheda; Orni; Pahoon; Pida; Pidegalgai; Pifior; Pigan; Pio; Pygai; Pygar; Pyos; Rashi; Reteth; Rhedar; Rhei; Ri; Rolani; Rydodhea; Ryfon; Ryhacthol; Rykhoteth; Ryro; Sa; Safheeth; Sahai; Sasa; Sashier; Sasi; Serrak; Serri; Serta; Shafyat; Shaon; Shaor; Shathok; Shi; Shia; Tadoni; Tana; Taro; Tata; Tetfikhaos; Teth; Teth; Tik; Tol; Tollathok; Tolni; Tolo; Tolor; Tolrak; Tolro; Totik; Ty; Tykadyri; Zhoa; Zhodygan; Zhofihac; Zyer; Zyki

names that described positive traits they wished to emulate – Charity, Patience, and so forth. Still others appended these names with distinctive surnames, others with the name of their clan or hometown.

Almost any collection of pronounceable sounds is appropriate for a name. Some players might choose to select unusual real world names, though Game Hosts should discourage common human names such as "Paul" or "Stephanie," as these may detract from the mood of the game setting. Characters in *Albedo* typically have one, two, or three names, though more are possible. Players who are having difficulty selecting a name may use the following chart to generate an appropriate one. The name developed by this chart is most suitable to a character from the Core Worlds, where common names often cross boundaries of species or culture.

Gender

Characters in *Albedo* can be male or female. The Extraplanetary Defense Force has an official policy against discrimination by gender.

Personal Details

Choose the color of your character's eyes, the shade of their pelt (fur, feathers, hide, etc.), the pattern of their speech, other details as you see fit. Remember that your Main Character represents your starring role in the game.

10 + Clout + Drive: Social Political Intelligence (SPI)

The Extraplanetary Defense force requires all personnel to submit to regular testing to determine their SPI index.

Your SPI is equal to 10 plus your Clout Rating plus your Drive Rating, plus or minus any modifiers from Gifts. Among other things, the Main Character's SPI will determine what Rank they start the game with.

Rank

Your Main Character starts the game with the highest Rank your SPI qualifies for. See page 57 for more information on Ranks.

Damage Thresholds

Whenever a combatant is hit by an attack, dice are rolled against one's *Damage Thresholds*. The higher the thresholds, the less likely you are to be injured.

Threshold	Value
Wounded	Body x2 + Armor
Crippled	Body x2 + Armor + 10
Incapacitated	Body x2 + Armor + 20
Devastated	Body x2 + Armor + 40

Recovery

Main Characters have a *Recovery*, a number that measures how fast they recover from Damage. This number is their lowest Attribute Rating times their highest Attribute Rating, divided by 5, rounded down. You can find a chart for this number on page 132.

Supporting Characters

Supporting Characters are fleshed out in much less detail than your Main Character.

You start the game with *four* Supporting Characters, known as the *Retinue*. These four have served under the Main Character for some time now, and all have Trust in their commanding officer's ability.

A Supporting Character has a *Species*, with appropriate Attributes, and a *Service*, with appropriate Gifts and Marks.

Supporting Characters can be of any Species. Three of them should be from the

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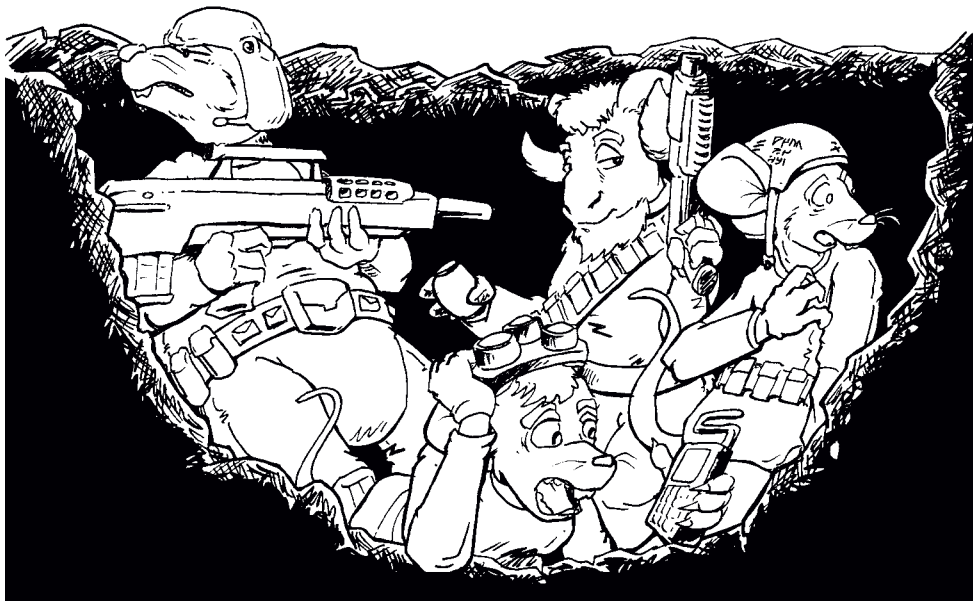
Why Have Multiple Characters?

In the dangerous setting of *Albedo*, much of the drama is derived from the constant threat of mortality. If characters aren't put in mortal danger on a regular basis, then the drama lacks sincerity. On the other hand, if Player-Characters spent most of their time in the infirmary or hiding in bunkers, the story would lack interest. Commanding officers aren't at the front of the party, or bearing the brunt of danger – that's why a command structure exists. With *Albedo*, the Players should identify strongly with their Main Character, but also have respect for their supporting cast. Game Hosts should craft plots that challenge the Main Characters to do the right thing, with a level of danger that often results in grievous harm to the Supporting Cast, as a reminder of the seriousness of the game.

same Branch of Service as your Main Character. The fourth can be from a different branch.

Supporting Characters do not have Attribute Points – they have Morale, as granted to them by their commanding officer (your Main Character.) Supporting Characters start the game with a Rank one less than the Main Character.

Unless specified otherwise by the Game Host, a Supporting Character who Trusts their commanding officer (or better) starts any battle with 1 Morale.



Ten Steps to Character Creation

Step 1: Choose a Name (p. 69), Species (p. 74), and Gender for your character. Your Species determines your Attribute Ratings, and will add Marks to your Skills. You can also choose Species Gift.

Step 2: Choose a Homeworld (p. 82). This will also give you free Marks in several Skills. Choose one Homeworld Gift.

Step 3: Choose your four Personality types (p. 85). Each choice boosts Clout or Drive.

Step 4: Choose your Branch and Service (p. 86). These will give you several Gifts and Marks.

Step 5: Choose your Elective Skills: +1, +2, or +3 Marks in any Skills, up to a total of 10 Marks.

Step 6: Choose your Personal Gift (which can be Basic, Advanced, or Dubious; p. 94).

Step 7: Enter your Recovery here (highest Attribute \times Lowest Attribute \div 5; see p. 129).

Step 8: Enter your Damage Thresholds here, based on your Body and Armor (p. 70)

Step 9: Determine your SPI (10 + Clout + Drive). Your Rank is the highest you qualify for (p. 57).

Step 10: Choose your Supporting Characters. Three of them must be from the same Branch and Service as your Main Character; the fourth can be from any service. Equip them with Weapons (p. 118). Their "Attack" is their Weapon's Skill Marks; "Def." is short for their Armor's Deflection (p. 137). Thresholds are based on Body Rating and Armor.

ALBEDO PLATINUM CATALYST
MAIN CHARACTER

Name: _____

Species: _____ Gender: _____

Homeworld: _____

Personality: ☐ Extroverted ☐ Reserved ☐ Perceptive
☐ Inward ☐ Thoughtful ☐ Judgmental

Branch: _____ Rank: _____

Service: _____ S.P.I.: _____

Gifts: _____

Height: _____ Weight: _____

Build: _____

Deflection: _____ Recovery: _____

Thresholds: _____

Incapacitated: _____ Devastated: _____

Body: _____

Drive: _____

Skills:

- Brawl
- Climb
- Presist
- G-Force
- Hike
- Jump
- Mileage
- Run
- Sneak
- Spacesuit
- Swim
- Throw
- Bribe
- Disguise
- Gossip
- Impress
- Intusendo
- Lead
- Persuade
- Question
- Listen
- Longrange
- Medical Sciences
- Navigate
- Physical Sciences
- Planetary Sciences
- Pistole
- Plan
- Repair
- Research Analysis
- Scrounge
- Search
- Sensor Operations
- Slath Sense
- Small
- Spot
- Vehicle Operations
- Vehicular Weapons
- Weapons of Mass Destruction

SUPPORTING CHARACTERS

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1.								
2.								
3.								
4.								

ATTRIBUTES

АТТРИБУТЫ

Attributes represent qualities that almost all characters have. Simply put, everyone has physical capacity, social standing, and mental energy. It's really a question of how much. Attributes range from zero (no appreciable quality) on up.

Rating

The maximum number of Points a character can have is their *Rating*. For example, if your Clout Rating is 10, you can never have more than 10 Clout Points. On the character sheet, completely fill in boxes, leaving empty boxes equal to your Rating.

Points

When your character performs certain actions, or attempts to rise above their normal limits, they must spend *Points* to act. Also, things like damage from attacks, social impositions, and frightening situations can deplete Points.

Points can never go below zero. A character cannot elect to damage. If a character is forced to lose Points they don't have, they suffer 1 Damage for every 1 Point they can't spend.

Spent Points are pretty easy to recover. After a Rest period of 8 hours, a character recovers all spent Points.

On the character sheet, mark spent Points with a slash, "/".

COMMAND REVIEW • АПКАНАБ НЕГЕУР

Why Don't Attributes Increase Skills?

Think of Body, Clout, and Drive as the reserves of power that a character has to bear. By spending their Attribute Points, characters can strive for overwhelming success, push themselves past their limits, and retry when others would give up. While it's tempting to think of Clout and Drive as how sociable or smart someone is, actual capacity is measured by a character's Skills. Characters who are better at common Skills will probably have Group Gifts (p. 90).

Who has Attribute Points: Major Characters vs. Supporting Characters

The Players, their major allies, and their major opposition, are *Major Characters*. In terms of the story, they set the stage and they drive the plot. These characters are afforded an extra level of detail, by having Attribute Points they can spend.

The various other characters, such as subordinates, clerks, merchants, civilians, and other characters that come and go are *Supporting Characters*. While these characters perform vital roles in society, they are not the focus of the storyline. Supporting Characters can be granted Points from Main Characters, in the form of *Morale*.

Damage

Sometimes, lasting effects can take their toll upon a character. Exhaustion, bodily harm, embarrassment, social mishaps, and emotional trauma – all can take their toll on a character, in the form of *Damage*.

Damage is worse than a spent Point; until the Damage is removed, the lost Point cannot be recovered. For example, if you have a Rating of 10 and two Damage Points, then the maximum Points you can have is $(10-2=)$ 8.

If the Rating is reduced below the character's current reserve of Points, excessive points are lost. Following the above example, if you had 9 Clout Points and had your Rating reduced to 8, then you are left with only 8 Clout Points. (Damage doesn't actually reduce any Points you already have, it just lowers your Reserve.)

While spent Points are easily recovered, Damage takes longer, and can require long and expensive care. On the character sheet, mark Damage as an "X" until recovered.

Body

A measure of your size and physical fitness, *Body* is a general indicator of strength, speed, and health.

Carrying Capacity

Often just called *Carry*, any character can carry a load of 2 times their Body in kilograms with no ill effects.

Lift

Any character can *Lift* 5 times their Body rating in kilograms over their heads.

Injury (DAMAGE)

Falls, gunshots, and other kinds of physical abuse can cause *Injuries*.

A character that has even 1 Injury point is *Wounded* for purposes of Damage Rolls during Combat (q.v.). *Do not reduce a character's Wound Thresholds* – that's way too much math, and this rule takes the injury into account.

Should a character's Injuries ever equal or exceed their Body Rating (thus reducing it to zero or worse), that character lapses into a coma. They will require immediate medical attention or they will die.

Clout

A measure of your social standing, *Clout* represents strength of personality, attractiveness, and social status.

Oversight (DAMAGE)

Social gaffes, mistakes, and errors can lead to bad reputations, which in turn can make it more difficult to get people to take

you seriously. Also, getting folks to do favors or to commit themselves can take up a lot of time. Both errors and investment can lead to *Oversight*. Oversight is Damage that reduces a character's Clout Rating.

If a character's Oversight ever equals or exceeds their Clout Rating (thus reducing it to zero or worse), the character suffers an embarrassment that could end their career. At the very least, the character would be demoted.

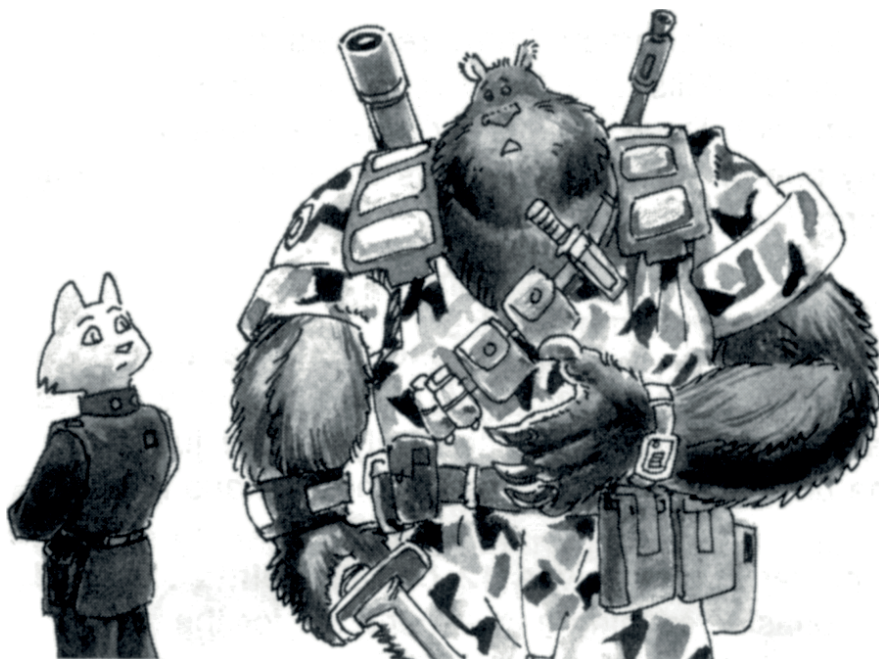
Drive

A measure of mental energy, only unusual people have *Drive*. This attribute allows characters to push themselves to greater feats in a shorter amount of time than characters who lack Drive.

Trauma (DAMAGE)

Stressful situations, not the least of which is combat, can inflict lasting harm on one's psyche, called *Trauma*. Each Trauma reduces a character's Drive Rating by 1.

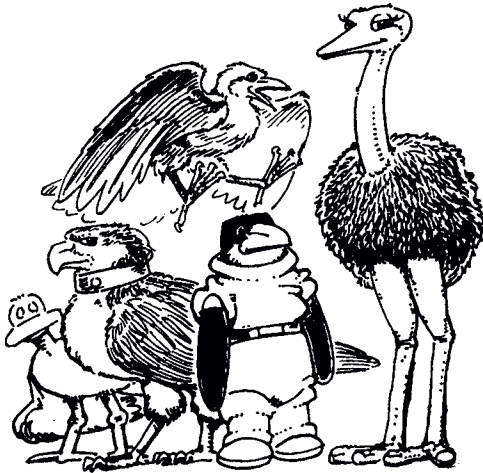
If a character's Trauma ever equals or exceeds their Drive Rating (thus reducing it to zero or worse), the character suffers an emotional breakdown. The character is in permanent Panic all the time. The character will require psychiatric help, which can be a role-playing opportunity.



SPECIES

Z4CZCZ

There are over 160 distinct Species recognized by the Confederation of Worlds. The simple definition of a Species is that offspring between two members of the same Species breed true, fertile offspring. (While other Species can interbreed with each other, the results are always sterile.)



Birds

Birds of all types and sizes can be found in the worlds of *Albedo*, ranging from small finches to ostriches and emus. They are found on almost every settled world, and are particularly common on planets with low gravity. Some species have a preferred environment. Penguins, for example, often colonize polar regions of a given planet.

The avian body form presents some difficulties peculiar to these species. Most notable is the extremely light frames that birds have – they have hollow bones, and as such the species is unsuited to heavy labor. All birds have wings with simple hands, roughly where the wrist joint is located in real world birds. No sentient avian is able to fly in normal gravity, but they may be capable of impressive wing-assisted leaps, or even long-distance glides depending on their wing-to-body size ratio.

The situation is quite different in weightless conditions or on very low-gravity worlds. Provided there is an atmosphere, all bird characters (even penguins!) are able to propel themselves through the air with their wings while weightless. Their speed and the degree of control they have over this flight depends on the size of their

wings. A sparrow is quite quick and maneuverable, while an emu is capable only of fluttering in a general direction. In low-g conditions (less than half-gravity), many small birds are still capable of flight, and all but the largest species are able to make controlled glides.

Because they are well-feathered, most birds disdain the use of clothing altogether unless it serves a practical purpose, such as protection from inclement weather. Some birds will dress in elaborate fashions that highlight their plumage, but this is usually decorative. Members of military organizations such as the EDF and Homeguard wear specially tailored uniforms and battle armor.

Ratite birds include most species of flightless bird, such as ostriches, emus, and kiwis. They have very robust frames, and strong legs. Unlike most birds, they cannot use their wings to assist in leaps or for gliding, except in very low-g environments. Ostriches and Emus are excellent long distance runners, and can execute powerful, dangerous kicks. Kiwis also have very strong legs, but are better suited to hiking than running.

Bird Characters

Body: 5 Clout: 8 Drive: 6

Increase All Skills:

- +5 Sneak
- +2 Spot

Choose One Skill:

- +2 Freefall
- +2 Run
- +2 Swim

Choose One Gift:

- Ambidextrous
- Belligerent
- Conformist
- Congenial
- Energetic
- Fast
- Healthy
- Impulsive
- Indefatigable
- Small
- Velocity Expert

Canines

Ranging from tiny fennecs to rugged timber wolves and burly St. Bernards, canines represent the single most diverse mammal species in the Known Worlds. In addition to wolves and coyotes, every single breed of dog known in the real world can be found in *Albedo* – though most dogs would be described as cross-breeds.

Canines are gregarious and social by nature, and most have a strong respect for authority and established order. This makes them a very common sight in the armed forces. However, their perception of authority is based on the competence of those in power, and a leader who appears to be incompetent or weak will not last long in office. This is especially true of wolves, who are renowned for constantly testing the resolve of their leaders, and demanding the complete loyalty of their underlings.

Canines, unlike cats and most other species groups, can interbreed. However, distinct species tend to prefer partners of the same species. Still, any number of combinations are possible, meaning that canines as a group (and dogs in particular)

are largely unconcerned about appearance.

Canine Characters

Body: 8 Clout: 9 Drive: 7

Increase All Skills:

+1 Hike
+1 Listen
+1 Run
+1 Smell

Choose One Gift:

Belligerent
Charismatic
Congenial
Coolness Under
Fire
Cosmopolitan
Energetic
Healthy
Natural Leader
Overconfident
Righteous
Strong
Suspiciousness

Felines

Cats are nearly as diverse in body type as canines, and vary in size from petite Sand Cats to the imposing Tigers. All the domestic variations regarded as "Housecats" in the real world exist, and are simply described as "cats." Cats are reserved and aloof, and



prefer to socialize in small groups of friends.

Cats cannot generally interbreed outside their immediate species, but exceptions can occur. For example, the offspring of a tiger and a lion is known as a "liger." Such cases are very rare.

Small Cat Characters

Body: 8 Clout: 7 Drive: 6

Increase All Skills: *Choose One Gift:*

+1 Brawl	Ambidextrous
+1 Climb	Cold-Hearted
+2 Jump	Cosmopolitan
+1 Listen	Energetic
+2 Sneak	Fast
	Following-Fire
	Expert
	Grace Under
	Pressure
	Healthy
	Impulsive
	Overconfident
	Quick Loading
	Small
	Velocity Expert

Great Cat Characters

Body: 10 Clout: 7 Drive: 6

Increase All Skills: *Choose One Gift:*

+1 Brawl	Ambidextrous
+1 Climb	Cold-Hearted
+1 Jump	Cosmopolitan
+1 Listen	Energetic
+1 Sneak	Fast
	Following-Fire
	Expert
	Grace Under
	Pressure
	Healthy
	Impulsive
	Large
	Overconfident
	Quick Loading
	Strong
	Velocity Expert

Lapines

Rabbits may be found anywhere in the Confederation, but since the conflict with the ILR, they are rarely found in senior positions. Many ConFed rabbits, particularly those dwelling on frontier worlds, experience a kind of low-grade mistrust and wariness that makes it difficult for them to advance in commercial or political arenas.



Rabbit Characters

Body: 7 Clout: 8 Drive: 6

Increase All Skills: *Choose One Gift:*

+3 Jump	Charismatic
+1 Listen	Conformist
+2 Sneak	Congenial
+1 Spot	Cosmopolitan
	Energetic
	Fast
	Gadfly
	Impulsive
	Indefatigable
	Small
	Young

Marsupials

A fairly rare group, the Marsupial group includes Koalas, Kangaroos, Tasmanian Devils, and Opossums. They are different from most of the other mammalian species in *Albedo* in one significant regard.

Female members of the species have a natural pouch of skin on their midsection that is used in child-rearing. Marsupial children are born quite early in their development, and are then placed in this pouch until such time as they approach the stage at which most mammalian infants are born. The mammary glands are located within this pouch and the infants nurse almost constantly. Even after they have developed enough to spend time outside the pouch, the child often returns to sleep, nurse, or simply

to seek comfort from his mother. This means that marsupial mothers can work throughout their pregnancy and for several months after the birth without worrying about babysitters. This arrangement is greatly envied by mothers of other species.

This natural pocket can potentially be quite useful in day to day life as well – though few marsupials use it except in a pinch. The pouch is not so useful for smuggling items past security forces – it tends to be the first place that searchers look.

Kangaroos and Koalas are fairly social creatures, and get along well with most other species. Koalas have the ability to go without liquids indefinitely, provided they eat food that contains a modest amount of moisture. Koalas forced to live on dry foods, such as biscuits, will require water in small amounts.



Marsupial Characters

Body: 6 Clout: 8 Drive: 6

Increase All Skills: *Choose One Gift:*

- | | |
|----------|----------------------|
| +1 Brawl | Ambidextrous |
| +2 Climb | Belligerent |
| +1 Jump | Conformist |
| +4 Sneak | Congenial |
| | Cosmopolitan |
| | Gadfly |
| | Grace Under Pressure |
| | Impulsive |
| | Quick Loading |
| | Small |
| | Tough |

Monotremes

Monotremes are a species group that includes Platypuses and Echidnas. They are a highly unusual and distinctive group of mammals that share some traits with Avian species. Most well known is that they lay eggs rather than give birth to live young. In addition, like birds they have a single body opening for reproduction and excretion known as a cloaca. They have no teeth, and no external ears. Ear canal openings are located at the base of jaw. In most other respects, Monotremes act like ordinary mammals, with the exception of some internal differences in bone structure.

Macropod Characters

Body: 8 Clout: 8 Drive: 6

Increase All Skills: *Choose One Gift:*

- | | |
|---------|----------------------|
| +1 Hike | Conformist |
| +2 Jump | Congenial |
| +2 Run | Cosmopolitan |
| +1 Spot | Fast |
| | Gadfly |
| | Grace Under Pressure |
| | Impulsive |
| | Indefatigable |

Monotremes are accepted freely on most worlds, though they are rare enough that they are often the subject of curious gazes. Their reputation as a mysterious group of creatures is strengthened by their oddly isolated lifestyles. They rarely collect in groups larger than nuclear family, and seem content to keep to themselves. Since they share many characteristics of personal physiology, Monotremes in military service often find themselves sharing quarters with Avians. Monotremes are omnivorous, but have a particular liking for insects and similar arthropods.

Echidna Characters**Body: 6 Clout: 8 Drive: 8***Increase All Skills:* *Choose One Gift:*

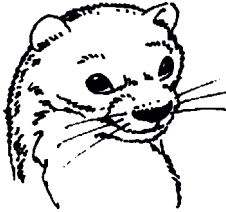
+2 Brawl	Ambidextrous
+4 Sneak	Belligerent
	Cold-Hearted
	Coolness Under
	Fire
	Energetic
	Grace Under
	Pressure
	Healthy
	Righteous
	Small
	Tough

Platypus Characters**Body: 6 Clout: 8 Drive: 8***Increase All Skills:* *Choose One Gift:*

+2 Brawl	Ambidextrous
+1 Swim	Belligerent
+3 Sneak	Cold-Hearted
	Coolness Under
	Fire
	Energetic
	Grace Under
	Pressure
	Healthy
	Righteous
	Small
	Tough

Mustelids

Encompassing weasels, minks, otters, polecats, badgers, and wolverines, Mustelids tend to be lean creatures with surprising strength. Smaller members of this species group tend to be thin and quick-footed, while the larger members are relatively slow and hulking. They are carnivores, but most are capable of living healthily on a vegetarian diet.

**Skunk Characters****Body: 7 Clout: 7 Drive: 7***Increase All Skills:* *Choose One Gift:*

+1 Climb	Belligerent
+1 Listen	Congenial
+2 Smell	Coolness Under
+3 Sneak	Fire
	Grace Under
	Pressure
	Healthy
	Impulsive
	Overconfident
	Suspiciousness

Otter Characters**Body: 7 Clout: 8 Drive: 6***Increase All Skills:* *Choose One Gift:*

+1 Listen	Ambidextrous
+1 Smell	Cosmopolitan
+2 Sneak	Energetic
+3 Swim	Fast
	Following-Fire
	Expert
	Gadfly
	Impulsive
	Overconfident
	Quick Loading
	Sniper Expert

Weasel Characters**Body: 7 Clout: 8 Drive: 6***Increase All Skills:* *Choose One Gift:*

+1 Brawl	Ambidextrous
+1 Jump	Belligerent
+1 Listen	Cold-Hearted
+1 Smell	Coolness Under
+3 Sneak	Fire
	Energetic
	Fast
	Following-Fire
	Expert
	Impulsive
	Overconfident
	Small
	Sniper Expert

Procyonines

Raccoons and their kin tend to be very social and curious, though inattentive, and as such as often found working as "idea men." In the EDF, they often gravitate to technical support roles that allow them some degree of flexibility.



Rodents

An extremely numerous group, rodents can be found on every world. All rodents have a pair of pronounced front incisors, and this may be the most obvious hallmark of the species. Rodents are omnivorous, but most prefer vegetables to meat.

Mouse Characters

Body: 5 Clout: 8 Drive: 6

<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+1 Climb	Ambidextrous
+1 Jump	Energetic
+2 Listen	Fast
+1 Smell	Grace Under Pressure
+4 Sneak	Grit
	Impulsive
	Small
	Young

Raccoon Characters

Body: 6 Clout: 8 Drive: 6

<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+2 Climb	Ambidextrous
+1 Listen	Cosmopolitan
+3 Sneak	Energetic
+2 Spot	Fast
	Following-Fire
	Expert
	Healthy
	Impulsive
	Sensor Expert
	Small

Rat Characters

Body: 7 Clout: 8 Drive: 6

<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+1 Listen	Ambidextrous
+1 Smell	Belligerent
+3 Sneak	Conformist
	Congenial
	Energetic
	Fast
	Grit
	Healthy
	Impulsive
	Indefatigable
	Small
	Velocity Expert

Squirrel Characters

Body: 6 Clout: 8 Drive: 6

<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+2 Climb	Ambidextrous
+1 Jump	Energetic
+2 Listen	Fast
+1 Smell	Following-Fire
+2 Sneak	Expert
	Grace Under Pressure
	Healthy
	Impulsive
	Quick Loading
	Small
	Velocity Expert



Ungulates

Ungulates are hoofed animals. They may be roughly separated into two groups, even-toed and odd-toed. Even-toed ungulates include cattle, sheep, goats, pigs, and antelopes. Odd-toed ungulates include horses and rhinos. Elephants are also



Ursines

Bears have a stocky frame, regardless of species. Though often considered somewhat slow-witted, they acquit themselves equally well in combat roles and support positions that require a great deal of careful thought and planning. However, they may be somewhat uncomfortable on planets dominated by smaller creatures. Everything is too small, or too delicate, for

considered ungulates.

Most ungulates are fairly large and robust herbivores or omnivores, with a well-developed sense of society. They can be found throughout known space, and generally work very well with other species. In fact, Ungulates may be the single most common species group in terms of overall population.

Ungulate Characters

Body: **11** Clout: **9** Drive: **6**

Increase All Skills:

- +1 Run
- +1 Spot

Choose One Gift:

- Charismatic
- Conformist
- Congenial
- Energetic
- Fast
- Gadfly
- Grit
- Healthy
- Indefatigable
- Large
- Tough

their large paws. They may react to this discomfort by becoming quite antisocial.

Bear Characters

Body: **12** Clout: **8** Drive: **6**

Increase All Skills:

- +1 Brawl

Choose One Gift:

- Belligerent
- Cold-Hearted
- Conformist
- Coolness Under
- Fire

Choose One Skill:

- +1 Climb
- +1 Swim

- Grit
- Healthy
- Indefatigable
- Large
- Righteous
- Tough

Vulpines

Closely related to canines, the Vulpine species group has enough variety within itself to count as a separate group. Vulpines are foxes, and they range from tiny Fennecs with bat-like ears to bushy-tailed Red Foxes. Vulpines on the whole have very light and athletic bodies, and are rarely larger than the smaller canine species. They are highly social creatures who find success in a number of fields, though their size tends to keep them from active combat positions. Vulpine species have successfully colonized a number of worlds, though they are more commonly found within a larger, mixed, population.



Fox Characters

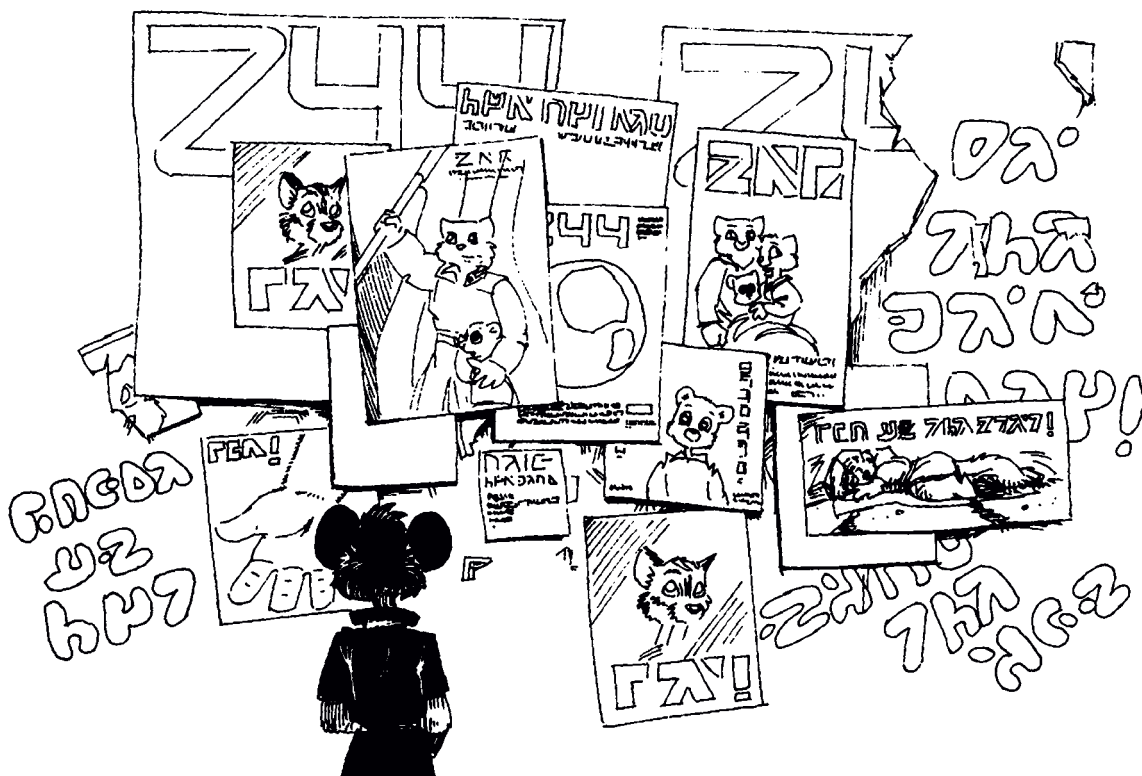
Body: 7 Clout: 7 Drive: 8

Increase All Skills:

- +1 Hide
- +1 Listen
- +2 Sixth Sense
- +1 Smell
- +1 Sneak

Choose One Gift:

- Charismatic
- Cold-Hearted
- Coolness Under
- Fire
- Cosmopolitan
- Energetic
- Fast
- Gadfly
- Grace Under
- Pressure
- Healthy
- Impulsive
- Overconfident
- Quick Loading
- Small
- Sniper Expert
- Velocity Expert



HOMEWORLDS

KPNPPNIDZ

Your character's Homeworld determines their education and upbringing. A Main Character's Homeworld gives them Marks in several Skills and one Homeworld Gift.



Corporate

Citizens on corporate worlds are almost invariably employees of a large capitalistic organization that owns most, or all, of the planet. On most worlds, each citizen-employee is also a shareholder. Very early in their education they are given aptitude tests, and steered into specific careers. While most corporations (such as Enchawah Group) offer a degree of flexibility when it comes to changing careers later, it is still much harder to switch professions than it is on most worlds. Characters from corporate worlds have a skill specialty of their choice, and know how to "grease the wheels" of corporate bureaucracy to get what they want. As shareholders, they have been exposed to hundreds of financial reports throughout their life, and know how to read sense into reams of numbers.

COMMAND REVIEW • KPNPPNIDZ

What Makes for a Homeworld Gift?

Since characters will be members of the Extraplanetary Defense Force, some of the Gift choices are biased towards people who would sign up for military service to travel to faraway planets. For example, while young people eager to see the world are always eager to sign up, older people would only sign up for duty if they were already had applicable skills or had run out of other opportunities.

Increase All Skills:

- +1 Bureaucracy
- +1 Impress
- +1 Innuendo
- +1 Persuade
- +1 Question

Choose One Gift:

- Aristocratic
- Influence
- Belligerent
- Charismatic
- Congenial
- Economic
- Influence
- Energetic
- Gadfly
- Grace Under Pressure
- Impulsive
- Righteous
- Suspiciousness
- Young

Research Colony

Whether it is a tiny outpost on an inhospitable world or a full-fledged community of academics, research colonies are dedicated to the pursuit of pure science. Smaller colonies are purpose built to look into local phenomenon, whereas larger ones conduct general research and development. In either case, children are rare in these settlements, and characters raised in such an environment tend to be treated as little adults. They learn early on the importance of careful observation and research, and usually pick up a solid science background. Alternatively, they might rebel against the staid atmosphere, and deliberately refuse to learn their parent's academic specialty.

Increase All Skills:

- +1 Medical Sciences
- +1 Planetary Sciences
- +1 Physical Sciences
- +1 Research Analysis
- +1 Search

Choose One Gift:

- Cold-Hearted
- Conformist
- Doctor
- Factotum
- Grace Under Pressure
- Instructor
- Old
- Sensor Expert
- Spacer Influence
- Young

Resource Colony

Founded purely for the extraction of a valuable mineral or other resource, these colonies are often isolated, hardscrabble places with few amenities. A typical example is a mine in a hollowed out asteroid on the far rim of known space. They are usually run by a corporation or government, but independent resource colonies do exist. Only in rare circumstances do they survive more than a single generation, and most have a high population of transient inhabitants who stay a few months or years and move on. No sensible person brings their family to a resource colony, but the isolation often prompts even the temporary inhabitants into relationships and child-rearing. Children on a resource colony rarely receive an education that covers more than the skills used by adults to maintain the colony and extract the resources.

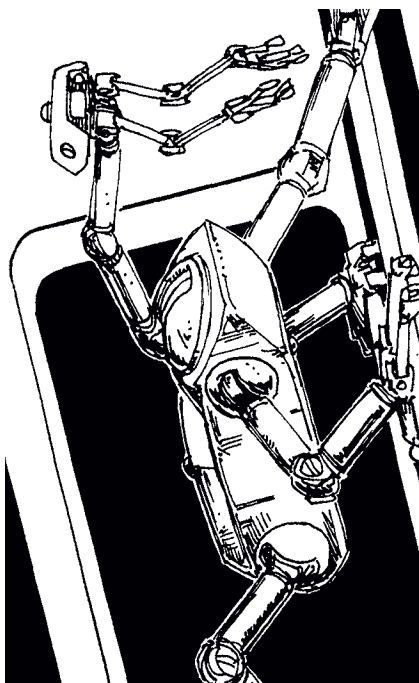
<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+1 Planetary Sciences	Armored-Vehicle Expert
+1 Information Analysis	Conformist Doctor
+1 Vehicle Operations	Economic Influence
+1 Repair	Factotum
+1 Scrounge	Grace Under Pressure
	Healthy
	Indefatigable
	Old
	Spacer Influence
	Velocity Expert
	Young

Rural

Rural worlds may have very large over-all populations, but they have few centralized cities. The inhabitants might live in extended family groups, or in small towns of less than 1000 people. Most first-generation colonies would be considered Rural. Farming is often the largest industry on a Rural colony, and may be the reason for its existence. Others were founded by groups of independently-minded individuals that dislike large communities, or are colonies that simply could not attract

enough immigrants to create large cities. A character raised on a rural colony will have received basic survival education as a child, and knows how to get by without the extensive infrastructure available to someone from an Urban colony. Rural colonists know how to maintain the technical equipment they need to survive, and may have extensive practical experience in botanic sciences and the lifecycles of local animals.

<i>Increase All Skills:</i>	<i>Choose One Gift:</i>
+1 Climb	Congenial
+1 Hike	Doctor
+1 Medical Sciences	Energetic
+1 Scrounge	Grit
+1 Swim	Healthy
	Indefatigable
	Instructor
	Tough
	Young



Space Station

There are hundreds of space-stations throughout the known Universe. Most serve a specific purpose – such as shipyards or fuel stations – and it is not uncommon for them to host large residential populations. Stations with permanent crews have rotating residential sections, with centrifugal force mimicking gravity. Some stations are quite large, with a

population numbering in the thousands. Characters born and raised on a space station are likely the offspring of station technicians or service industry staff. Their childhood was limited by the extent of the station corridors, and they were constantly exposed to stories about the wider universe. They picked up some basic shipboard skills, as well as a healthy respect for the fragility of an artificial environment. Many leave as soon they are of age, driven by a burning curiosity to visit a place where the horizon does not end at the next bulkhead.

majority of inhabitants live in well-served cities with Net connections and a multitude of municipal services. Life is easy, particularly on the socialist Core Worlds. Urban dwellers are exposed to high-technology from birth, but may not have any real idea how it works. They generally develop skills in dealing with municipal bureaucracy, Net use, and socialization. Characters with an Urban background have been exposed to people of many different races and opinions, and are often quite liberal and open-minded.

Increase All Skills:

- +1 Build
- +1 Freefall
- +1 Repair
- +1 Sensor
- Operation
- +1 Spacesuit

Choose One Gift:

- Ambidextrous
- Cold-Hearted
- Conformist
- Doctor
- Gadfly
- Grace Under Pressure
- Old
- Space Influence
- Tough
- Velocity Expert
- Young

Increase All Skills:

- +1 Design
- +1 Gossip
- +1 Innuendo
- +1 Repair
- +1 Vehicle
- Operations

Choose One Gift:

- Aristocratic
- Influence
- Belligerent
- Charismatic
- Cold-Hearted
- Congenial
- Economic
- Influence
- Gadfly
- Grace Under Pressure
- Impulsive
- Natural Leader
- Righteous
- Suspiciousness
- Velocity Expert
- Young

Urban

As the name suggests, urban planets are very well settled, typically with populations in excess of 500 million. Few planets outside the Core Worlds meet this criterion. The vast



PERSONALITY

PERSONALITY

Choose one of each of the four Personality aspects to represent your character. Each step increases one of your Attribute Ratings.

Social Orientation

How does your character relate to others?

Extroverted:

+1 CLOUT RATING

Your personality is outgoing and social. You prefer large, social situations like parties.

Introverted:

+1 DRIVE RATING

You are introspective and a bit of a loner. You prefer to be alone, or to have private relationships.

Experience Awareness

How does your character experience the world?

Sensitive:

+1 CLOUT RATING

You prefer to go out there, and see what's going on. You are more socially active than most folks.



Intuitive:

+1 DRIVE RATING

You tend to think in patterns and the abstract, more concerned with what may be than what is.

Social Awareness

How does your character decide what they would do?

Emotional:

+1 CLOUT RATING

You are sensitive to the needs of others. You actively work to help people resolve their emotional problems. When others around you are unhappy, you're unhappy.

Thoughtful:

+1 DRIVE RATING

You prefer hard data and facts. You prefer analytical analysis, a quality good for scientists and accountants. You accept that conflict is an inevitable part of social relationships.

Action Orientation

How does your character decide how to act?

Perceptive:

+1 CLOUT RATING

You prefer to understand what's going on, then improvise as time requires. You always have one eye on the big picture.

Judgmental:

+1 DRIVE RATING

You are a meticulous planner, and you expect others to follow the same plans. You focus on the task at hand.

COMMAND REVIEW • PERSONALITY

Personality as a Role-Playing Guide

You can use the personality guide as a role-playing aid for your character. How would an Emotional Introvert handle a mission briefing? When planning a mission, how would a Sensitive, Judgmental character assign duties, as opposed to an Intuitive, Perceptive character? Players are encouraged to look up more information on personality types and how they might interact with one another.

BRANCHES OF SERVICE

BRANCHES OF SERVICE

Both Main Characters and Supporting Characters belong to a branch of service. When either a Main or Supporting Character, choose a Branch of Service, and add the Gifts and Marks to appropriate skills.

Not all of a Player-Character's Retinue have to come from the same Branch of Service as their commanding officer, but they should at least come from the same division (Administration, Aerospace, or Surface Operations).

See "Ranks in the EDF", page 56.

Special Services (SS)

Gift: Administration +1

Gift: Socialization +2

Gift: Suspiciousness

Information Analysis +1

Pistol +1

Question +2

Search +1

Administration

Boring, but necessary, the Administration branch of the EDF oversees the logistics of distribution, procurement, recruitment, and other bean-counting activities.

Industry & Procurement (IP)

Gift: Administration +2

Gift: Socialization +1

Gift: Economics Influence

Pistol +1

Plan +2

Scrounge +2

Liaison (L)

Gift: Administration +1

Gift: Socialization +2

Gift: Cosmopolitan

Gossip +2

Innuendo +1

Persuade +1

Pistol +1

Quartermasters (QM)

Gift: Administration +2

Gift: Socialization +1

Gift: Logistics Expert

Lead +1

Pistol +1

Plan +2



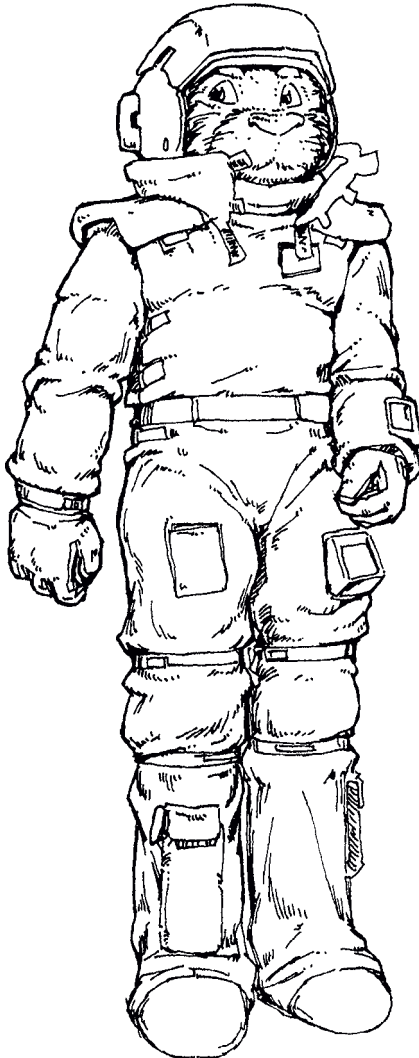
Aerospace

When most people think of the Extra-planetary Defense Force, they think of the *Aerospace* division. While the idea of piloting rocket-ships to the stars might sound glamorous, the bulk of Aerospace work is in maintaining the delicate equipment.

All members of the Aerospace branch have the following Gifts:

Aerodyne (DYNE)

Gift: Astronautics +2
 Gift: Firearms +1
 Gift: Velocity Expert
 G-Force +1
 Navigate +1
 Sensor Operations +1
 Vehicle Operations +2



Engineering (ENGA)

Gift: Astronautics +2
 Gift: Firearms +1
 Gift: Group – Engineering +1
 Build +1
 Repair +2
 Scrounge +1
 Sensor Operations +1

Freefall Infantry (FI)

Gift: Astronautics +1
 Gift: Firearms +2
 Gift: Semi-Automatic Expert
 Longarms +2
 Sixth Sense +2
 Spacesuit +1

Interplanetary (INT)

Gift: Astronautics +2
 Gift: Firearms +1
 Gift: Hyperspace Expert
 Hyperspace Sciences +2
 Navigate +2
 Vehicle Operations +1

Specialists

Officers who aren't part of any specific branch, *Specialists* have niche roles in the EDF.

Emissary (EM)

Gift: Socialization +2
 Gift: Subterfuge +1
 Gift: Cosmopolitan
 Bribe +1
 Gossip +1
 Innuendo +1
 Search +2

Exploration (EXP)

Gift: Astronautics +1
 Gift: Sciences +2
 Gift: Hyperspace Expert
 Information Analysis +1
 Navigate +1
 Sensor Operations +2
 Vehicle Operations +1

Research and Design (R&D)

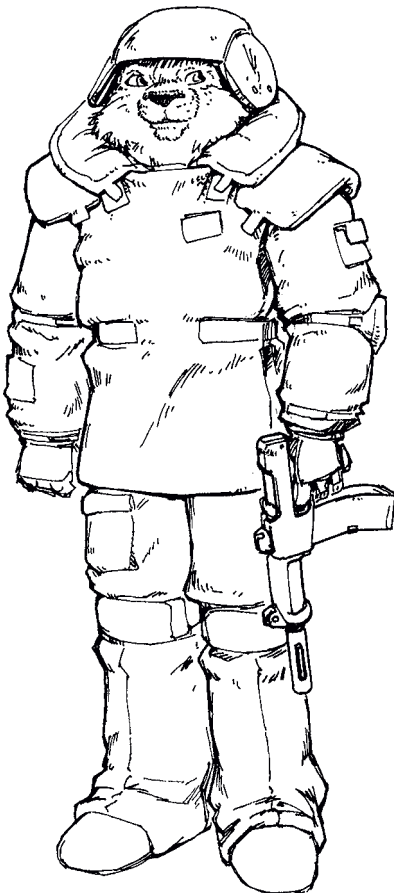
Gift: Inventions Expert
 Gift: Engineering +2
 Gift: Sciences +1
 Research Analysis +2
 Design +3

Surface Ops

It's a dirty job, but someone's got to do it.
 The branch of *Surface Operations* does most of the armed work of the EDF – removing insurgents from occupied zones and the like.

Engineering (ENGS)

Gift: Athletics +2
 Gift: Engineering +1
 Gift: Firearms +1
 Build +1
 Hike +1
 Repair +1
 Scrounge +2



Heavy Infantry (HI)

Gift: Athletics +2
 Gift: Firearms +1
 Gift: Following Fire Expert
 Heavy Weapons +1
 Hike +1
 Longarms +2
 Navigate +1

Light Infantry (LI)

Gift: Athletics +1
 Gift: Firearms +2
 Gift: Semi-Automatic Expert
 Hike +1
 Longarms +2
 Navigate +1
 Sixth Sense +1

Mobile Surgical Hospital (MSH)

Gift: Athletics +2
 Gift: Firearms +1
 Gift: Doctor
 Hike +1
 Sixth Sense +1
 Medical Sciences +3

Mechanized (MECH)

Gift: Athletics +2
 Gift: Firearms +1
 Gift: Armored Vehicle Expert
 Vehicle Operations +1
 Heavy Weapons +1
 Navigate +1
 Repair +1
 Sixth Sense +1

VHALO Paratrooper (VHALO)

Gift: Athletics +1
 Gift: Firearms +1
 Group – Astronautics +1
 Gift: VHALO Expert
 Hike +1
 Longarms +2
 Sneak +1
 Spacesuit +1

SKILLS

ZHYZ

A *Physical Skill* can be Pushed using Body Points. A *Social Skill* can be Pushed using Clout Points. A *Mental Skill* can be Pushed using Drive Points.

Each Skill is part of one or more Groups, listed after the type. Every time a character takes that Group Gift, they get +1 Mark in that Skill.

Brawl *

[PHYSICAL: ATHLETICS]

For most citizens in the *Albedo* universe, the concept of physical contact to cause harm is distressing. Nevertheless, it's sometimes necessary.

The Brawl Skill covers all unarmed attacks, such as punching, kicking, clawing, biting, grappling, and wrestling.

Bribe *

[SOCIAL: SOCIALIZATION]

Sometimes, you have to grease a few palms to get what you want. The Bribe skill allows you to assess what might actually bribe someone – such as money, favors, promotions, etc. – and also how to tender such a bribe without offending anyone or attracting undue attention.

Build

[MENTAL: ENGINEERING]

Many military vehicles are shipped to planets in pre-fabricated parts, air-dropped from very-high altitudes. Build Skill is necessary to construct any item with the proper parts and proper plans.

Bureaucracy *

[MENTAL: ADMINISTRATION]

If you ask some folks, they wonder how anything gets done with all the forms, paperwork, and requisitions that need to be filled out. Because the EDF derives their

funding from the Confederation of Worlds, regulations can be complex and draconian, and a high Bureaucracy Skill is required to follow through all the red tape.

Climb *

[PHYSICAL: ATHLETICS]

For infantry, the ability to scale over obstacles is important. Use Climbing Skill to climb ladders and maneuver over objects when in gravity. For pulling oneself along in zero-gravity, use Freefall.

Computer Sciences

[MENTAL: ENGINEERING]

While the computers of *Albedo* use standardized designs, protocols, and code, that doesn't make the task of programming them any less daunting. Most folks will prefer to interface with a helpful Net Artificial Intelligence, but those schooled in Computer Sciences will be able to get more done.

Demolitions

[MENTAL: ENGINEERING]

Destruction of materiel with explosives falls under the Demolitions Skill. This ability covers the best way to collapse walls, break engines, set explosive charges and booby traps, and to set and to disarm mines. This Skill does not cover delivered explosives, such as from a gun or artillery – use the appropriate weapon's Skill, instead. This Skill also does not cover large-yield explosives that might take out more than one building – use Weapons of Mass Destruction, instead.

Design

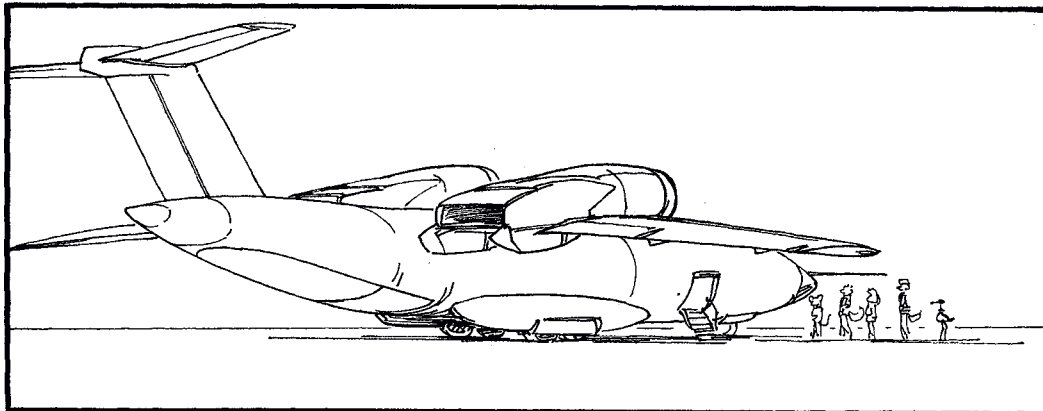
[MENTAL: ENGINEERING]

Every military threat has a unique challenge to it. Sometimes, the proper solution is to draft a new device in the field to deal with it. Using Design Skill in the field can be risky – such devices will be temperamental and prone to failure because of unskilled operators or unanticipated conditions of use.

COMMAND REVIEW • АРНАНД НЕРСІП

Common Skills

Some activities can be performed even by the untrained. These are called *Common Skills*. Every character gets one Mark in these skills for free. Common Skills are marked here with an asterisk (*), and on the character sheet with one Mark filled.



Disguise

[SOCIAL: SUBTERFUGE]

A necessity for spies, Disguise Skill is used to lie to others, to pretend to be something else, or generally any protracted lie. Disguise is used for imposture as different social classes, positions, or even races. The Spot Skill is used to see through a Disguise; The Question Skill is used in conversation with a Disguised Target; and the Information Analysis is used to study the target's Deceitful behavior.

Forge

[MENTAL: SUBTERFUGE]

Although it's a crime with severe punishments, there are those who know the art of Forging documents. Characters in the EDF learn this Skill not because they are expected to fake credentials, histories, and information, but because this Skill also helps spot such fakery.

Freefall *

[PHYSICAL: ASTRONAUTICS]

A lot of time spend in outer-space is in microgravity or less. Freefall is used to steady oneself when spinning and to maneuver in zero-gravity environments.

G-Force *

[PHYSICAL: ASTRONAUTICS, VEHICLES]

When a vehicle changes direction, or accelerates, it inflicts force upon the crew. G-Force represents the physical conditioning and training to avoid losing consciousness and other injuries.

Gossip *

[SOCIAL: SOCIALIZATION]

In social situations, one can Gossip with other folks. This Skill allows one to host a successful party or other social event. It also allows one to glean information in a relaxed setting.

Heavy Weapons

[MENTAL: FIREARMS]

Tripod weapons, grenade-launchers, vehicular-weapons, and other long-distance field pieces are covered by the Heavy Weapons skill. Every infantry squad should have one Heavy-Weapons expert.

Hike *

[PHYSICAL: ATHLETICS]

Infantry spend a lot of time on foot, moving from place to place – especially where vehicles can't go. Hike Skill is used to cross greater distances in shorter time.

Hyperspace Sciences

[MENTAL: SCIENCE]

The mathematical convolutions needed to arrange for a hyperspace jump are something you want to get right, especially if lives are involved. Hyperspace Sciences is necessary to perform these calculations correctly, with or without a computer.

Impress *

[SOCIAL: SOCIALIZATION]

To properly show off to others, especially in a public setting, use the Impress skill. Most folks in *Albedo's* societies have difficulty speaking before a crowd. For one-on-one situations, use the Persuade skill.

Information Analysis***[MENTAL: ADMINISTRATION, OBSERVATION]**

Data comes from many sources, such as eyewitness reports, sensor data, satellite photos, historical records, etc. The Skill of Information Analysis is how to put it all together. Successful uses of this Skill can reveal patterns in collected data.

Information Analysis is for social and military information. For scientific data, use Research Analysis, instead.

Innuendo***[SOCIAL: SOCIALIZATION, SUBTERFUGE]**

The Innuendo Skill is used to slip a topic into conversation that only a close confidant will understand, or to pick up on an Innuendo that someone else let slip. In many cultures and places, citizens are under constant surveillance by cameras and microphones, making this Skill necessary to preserve privacy.

Jump***[PHYSICAL: ATHLETICS]**

Eventually, it happens – someone has to jump a gap or leap to grab something. Jump skill allows one to leap greater distances more reliably.

Lead***[SOCIAL: ADMINISTRATION, SOCIALIZATION]**

Every commanding officer knows the virtue of having a high Lead skill. Among other things, this Skill is necessary to Rally subordinates to motivate them.

Listen***[MENTAL: OBSERVATION]**

Hearing quiet noises, and distinguishing quiet noises almost drowned out by louder ones, is covered by the Listen Skill.

Longarms***[MENTAL: FIREARMS]**

Any gun designed to be fired in two hands, such as a shotgun, rifle, or sub-machinegun, is a Longarm. Firing one is covered by this Skill.

Medical Sciences**[MENTAL: SCIENCE]**

The races of Albedo, while quite diverse, all share similar medical makeup. Those with Medical Science skills can provide first aid and administer drugs to the sick.

Melee***[PHYSICAL: ATHLETICS]**

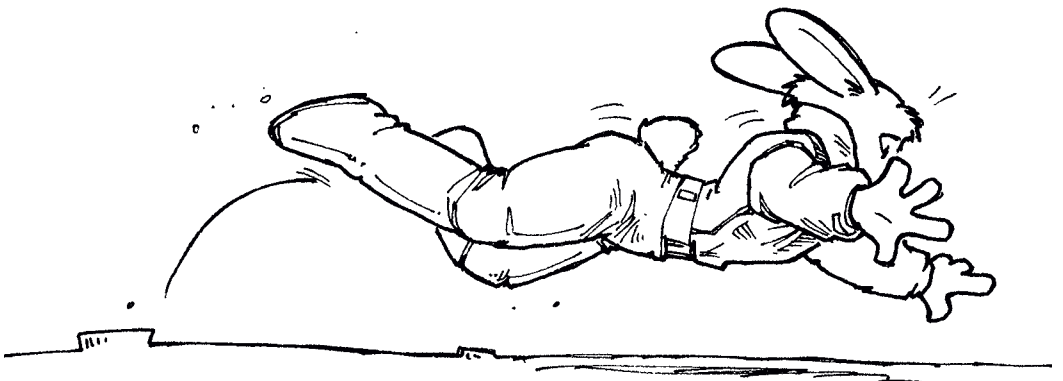
The EDF only recognizes two hand-to-hand weapons: the combat knife, and the quarter-staff. However, many troops train in how to fight with these, as well as improvised weapons such as shovels. Melee Skill covers any attack made with a hand-to-hand weapon.

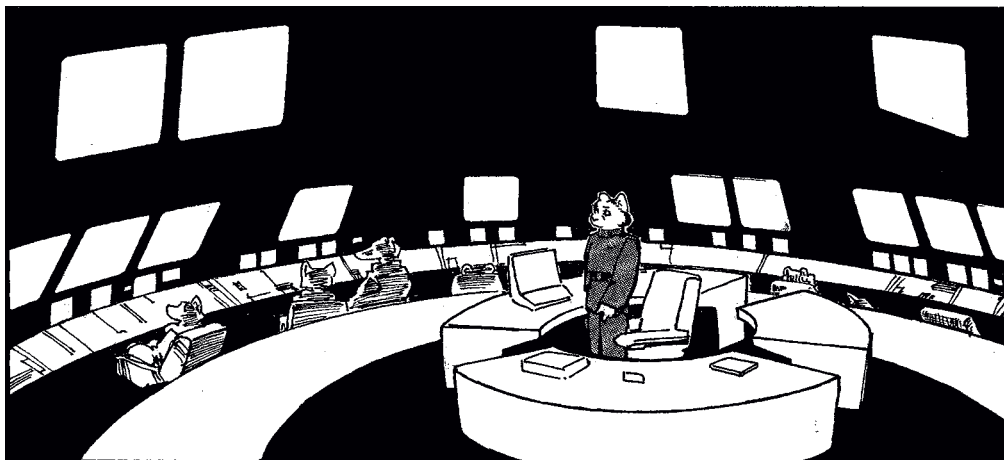
Navigate**[MENTAL: ASTRONAUTICS, VEHICLES]**

Vehicles in Albedo have sophisticated navigational systems, but sometimes a good old-fashioned map will suffice.

Persuade***[SOCIAL: SOCIALIZATION]**

The complement to Impress, Persuade Skill is used to convince characters to do things your way, or for you, or to bring them over to your point of view.





While Persuade may involve putting facts in the best light, it doesn't involve actually deceiving anyone – use the Deceive Skill for that. Persuade is also for one-on-one conversations; for addressing a group, use the Impress Skill.

Physical Sciences

[MENTAL: ASTRONAUTICS, SCIENCE]

Chemistry, Physics, and other observable phenomena – and the prickly math to describe them – are covered by the Physical Sciences skill.

Pistols *

[MENTAL: FIREARMS]

This Skill covers the use of one-handed firearms.

Plan

[MENTAL: ADMINISTRATION]

This Skill is the ability to draft an action-plan or battle-plan correctly and quickly – a necessity for high-ranking officers.

Planetary Sciences

[MENTAL: SCIENCE]

Planets and asteroids contain minerals that can be extracted for industrial application. Planetary Sciences is the skill for locating such items, knowing their quantity and quality, and even such geological phenomena as weather patterns and earthquakes. Despite the name, this Skill also covers moons, asteroids, and similar bodies.

Question *

[SOCIAL: SOCIALIZATION, SUBTERFUGE]

Using the Question Skill is blunt, and to the point; someone always knows that

they're being Questioned. In unsavory circumstances, Question can be combined with blackmail or torture for greater results.

Repair *

[MENTAL: ENGINEERING]

In any military situation, things break down. Repair Skill covers diagnosing what made something stop working in the first place, and it covers all the grunt work necessary to extract broken parts and replace them with new ones.

Research Analysis

[MENTAL: ADMINISTRATION, ENGINEERING]

Lab work isn't exciting, but it's necessary for scientific progress. Research Analysis Skill works as Information Analysis for scientific data.

Run *

[PHYSICAL: ATHLETICS]

Normally, a trooper can only move 10 meters in a six-second period. The Run skill can allow a trooper to cover a greater distance.

Scrounge

[MENTAL: ENGINEERING]

For almost any job, there's a right tool ... and another tool that can do the job, in a pinch. Use Scrounge Skill to scrape up spare parts or to improvise other materials for purposes other than their intended use. Anyone who's done a term on an outer-rim space-station knows what it's like to Scrounge for goods.

Search ***[MENTAL: OBSERVATION]**

Methodically going through someone's pockets, their room, or an area is covered by the Search Skill. A Search is always an active action that requires concentration.

Sensor Operations ***[MENTAL: OBSERVATION]**

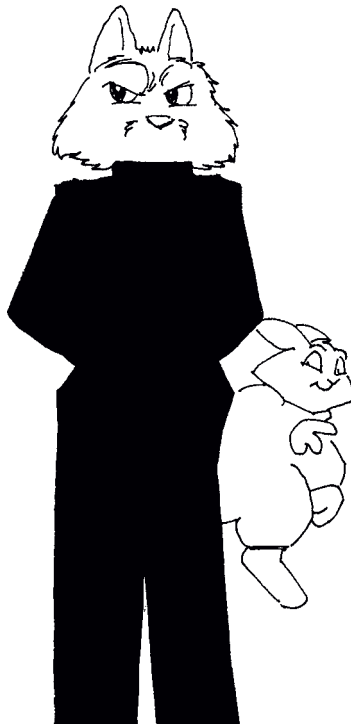
The skill of using sensing equipment. Most devices, such as light-enhancing goggles, are self-explanatory. Fancy devices, like electronic-countermeasure devices, eavesdropping microphones, and the like will require this Skill.

Sixth Sense**[MENTAL: OBSERVATION]**

Sometimes called "the skill of known unknowns," Sixth Sense is the Skill veterans pick up to know where their blind spots are. This skill can be used to be wary of avenues for ambush or locations for traps.

Smell ***[MENTAL: OBSERVATION]**

Some races have a keen sense of Smell, stronger than other races. The Smell Skill can be used to identify chemicals such as lubricants or bodily fluids.

**Sneak *****[PHYSICAL: SUBTERFUGE]**

This Skill is used to move from one position to another while avoiding detection, or to hide for long periods.

Spot ***[MENTAL: OBSERVATION]**

A popular Skill, Spot is the ability to see things. Combatants use this Skill to sight targets, among other things.

Spacesuit**[PHYSICAL: ASTRONAUTICS]**

The first thing any spacer learns is how to suit up quickly, in case of emergency. The second thing they learn is how to maneuver in a Spacesuit.

Swim ***[PHYSICAL: ATHLETICS]**

Most inhabited planets have large bodies of water, in which someone could flounder and drown. Many races have a natural affinity for Swimming, as well.

Throw ***[PHYSICAL: ATHLETICS]**

When it comes to explosives like grenades, it's handy to be able to place it where you want. Throw Skill covers both distance and accuracy.

Vehicle Operations**[MENTAL: VEHICLES]**

The ability to drive or pilot any vehicle, land-based or otherwise, is covered by this Skill. Trained military personnel will have Gifts that make them even better.

Vehicular Weapons**[MENTAL: ENGINEERING]**

This Skill covers the use of vehicular targeting systems and their linked weapons. (For weapons that use direct line-of-sight, such as pintle-mounted guns, use Heavy Weapons, instead.)

Weapons of Mass Destruction**[MENTAL: ENGINEERING]**

This Skill covers the use of autonomous-combat vehicles, nuclear weapons, and other high-yield devices, as well as counter-measures against them. This training is a necessary evil for military engineers.

GIFTS

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Gifts represent special abilities that separate a character from the rank and file. Gifts are often “rule-breakers” – they allow a character with the appropriate Gift to circumvent or work around a default rule.

Many Gifts require Points to work. For Main Characters, these are either Body, Clout, or Drive. For Supporting Characters, these points are Morale. If the character doesn't have the points to spend, they can't use the Gift.

Basic Gifts

Anyone can buy these. They have no extra requirements.

Ambidextrous

You can use either hand with no penalty. If you spend 1 Drive point, you can shoot two Pistols in one round; you can either claim two attack rolls, or you can Suppress the same area, etc. Without this Gift, you can only use one weapon per action.

Aristocratic Influence

You spend one less Clout when Influencing aristocrats, plutocrats, and other oligarchs.

Raise your SPI by 1.

Armored Vehicle Expert

You can maneuver any vehicle you Vehicle Operations to reduce exposure to vulnerable ears.

By spending 1 Drive Point, you can improve the Armor rating of your vehicle by 5.

By spending 1 Drive Point, you can negate the extra 1d20 for driving a Damaged Vehicle. (There is no effect if the vehicle is not damaged.)

Charismatic

You have a strong personality that makes it hard for folks to dislike you. You may ignore the first 3 Oversight on your Damage track for purposes of reducing your Clout Rating.

Raise your SPI by 1.

Congenial

You have +1 Clout Rating.

Coolness Under Fire

Each Round, the total Awe you suffer is reduced by 1 (down to zero).

Cosmopolitan

You never suffer any penalties for not knowing the local culture. If your Retry on a failed Social roll Succeeds or better, reduce any Clout loss by 1.

Increase your SPI by 1.

Doctor

You can perform advanced medical techniques. You can attempt to heal targets of Injury, using Medical Sciences Skill. Without this Gift, you can only perform basic first aid.

Economic Influence

You spend one less Clout when Influencing capitalists.

Raise your SPI by 1.

Energetic

You have +1 Drive Rating.

Factotum

You can help other folks get organized, and you can repair damage to reputations. You can attempt to heal other targets of Oversight, using Bureacracy Skill.

Fast

Your Running distance is 1.5x normal. If you are ever in a contest involving physical speed against someone else, they must spend 1 Body, or you automatically act first.



Following Fire Expert

You can claim Following-Fire on targets up to *Medium Range*. Likewise, you can Watch at ranges up to Medium and remain watching after the first shot. Without this Gift, you can only claim Following-Fire on targets at up to Short Range.

Grace Under Pressure

Your wit knows few bounds, and you thrive in hostile conditions. If your Retry on a failed Mental Roll *Succeeds* or better, reduce the Drive loss by 1.

Increase your SPI by 1.

Grit

When you suffer *Crippling*, you may spend 1 Drive point to act as if you were merely *Wounded*. You are still Crippled for purposes of Damage rolls.

When you immediately suffer *Incapacitation*, you may spend 1 Drive point to avoid passing out and to act normally in the Round, as if merely *Wounded*. Next Round, you must either spend 1 Drive point or immediately become Incapacitated. You are still Incapacitated for purposes of Damage rolls. You may continue to act until you run out of Drive points.

Healthy

You have +1 Body Rating.

Indefatigable

You have vast reserves of physical energy. If your Retry on a failed Physical roll *Succeeds* or better, reduce the Body loss by 1.

Increase your SPI by 1.

Instructor

You can give excellent verbal support to others, such as by radio. You can instruct anyone who has the *same number of Marks or lower in a Skill you have, yourself*.

As an action, you can spend one Clout, allowing the target to Push or Risk in the appropriate Skill, just as if they had spent a point themselves. Regardless of the kind of skill (Physical, Social, or Mental), you only spend Clout.

You cannot instruct a Panicked target.

Natural Leader

When Rallying a target that Trusts you, you may add up to *two* Morale instead of one.

Raise your SPI by 1.

Psychologist

You can treat mental illness and battle fatigue. You can attempt to heal other targets of Trauma, using Question Skill.

Quick Loading

If you spend 1 Drive point, you can reload a firearm and still take an action.

Without this Gift, you must spend your action reloading.

Semi-Automatic Expert

You know how to fire a burst of three bullets for effect. You must have a semi-automatic or fully-automatic weapon to claim the benefit of this Gift.

Whenever you *Tie* on a firearms roll, instead of missing, you can choose instead to fire *two more* bullets, and hit the target once with a regular hit.

You must have a semi-automatic weapon, and two more bullets in your magazine, to claim this Gift.

Sensor Expert

By spending 1 Drive, you can *double* the effective range of any sensor device that you hold. (Among other things, this will help with the Concealment-per-range when using vision-enhancing devices.) Without this gift, you must use the listed values.

Sniper Expert

Whenever you have Aimed at a target, and you successfully hit the target with a firearm attack, you may spend 1 Drive and add an extra 1d20 to the Damage Roll.

Spacer Influence

You spend one less Clout when Influencing belters, explorers, and other people who work in space.

Raise your SPI by 1.

Suppression Expert

With a fully-automatic weapon, you can Suppress a triangle up to Medium Range on each side. Without this Gift, you can only Suppress an area up to Small Range on each side.

Suspiciousness

If you spend a Drive point, a target suffers Panic when trying to Deceive you or

otherwise play you false. The target can spend one Drive point to negate the Panic

Tough

You are very hardy. Raise all your Damage Thresholds by 5.



Velocity Expert

You know how to fly to put less strain on your vehicle and its crew. Reduce all G-stress by 1.

VHALO Expert

You can operate a VHALO Parachute. Without this Gift, you cannot.

If you spend 1 Body, you can reduce any Falling Damage by 1d20.

Group Gifts

Some characters have a generalized aptitude for a variety of related activities.

Each Group Gift gives +1 Mark in Skills of the appropriate Group.

You can take a Group Gift multiple times. Each time you have a Group Gift, it adds +1 Mark to all appropriate Skills.

Administration +1

Each Gift gives +1 to Bureaucracy, Information Analysis, Lead, Plan, and Research Analysis.

Astronautics +1

Each Gift gives +1 to Freefall, G-Force, Navigate, Physical Sciences, and Spacesuit.

Athletics +1

Each Gift gives +1 to Brawl, Climb, Hike, Jump, Melee, Run, Swim, and Throw.

Engineering +1

Each Gift gives +1 to Build, Computer Sciences, Demolitions, Design, Repair, Research Analysis, Scrounge, and Weapons of Mass Destruction.

Firearms +1

Each Gift gives +1 to Heavy Weapons, Longarms, and Pistols.

Observation +1

Each Gift gives +1 to Information Analysis, Listen, Search, Sensor Operations, Sixth Sense, Smell, and Spot.

Sciences +1

Each Gift gives +1 to Hyperspace Sciences, Medical Sciences, Physical Sciences, and Planetary Sciences.

Socialization +1

Each Gift gives +1 to Bribe, Gossip, Impress, Innuendo, Lead, Persuade, and Question.

Subterfuge +1

Each Gift gives +1 to Disguise, Forge, Innuendo, Question, and Sneak.

Vehicles +1

Each Gift gives +1 to G-Force, Navigate, Vehicle Operations, and Vehicular Weapons.

Advanced Gifts

These Gifts have requirements which must be met before you can have them. For example, you can't have the Gift of "Very Strong" unless you already have the Gift of "Strong."

Fantastic Leader

(Requires: Natural Leader; Lead Marks 6+)

When Rallying a target that has Loyalty to you, you may add up to *five* Morale instead of the maximum of 3.

Raise your SPI by 1.

Following-Fire Master

(Requires: Following-Fire Expert)

When claiming Following Fire (q.v.), the second *and third* attacks do not cost any Drive. The fourth and later attacks do.

Hyperspace Expert

(Requires: 1+ Marks in Hyperspace Sciences)



You can plot Hyperspace Jumps longer than other folks can. You can increase the maximum range of a jump by the Score of your Hyperspace Sciences Skill (using either Rote or a Roll)

Or, instead, you can reduce the amount of time it takes to make the calculations. Reduce the time by 5% times your Score. (For example, if you have a 9, then it takes 45% less time.)

Improved Coolness Under Fire

(Requires: Coolness Under Fire)

Subtract two from any Awe you suffer, instead of subtracting one from Coolness Under Fire.

Inventions Expert

(Requires: 1+ Marks in Research Analysis)

You can use research to improve production. While under your supervision, a plant improves production by 5% times your Score in Research Analysis. (For example, if you have a 9, then a plant yields 45% greater production under your supervision.)

Knack: [of Choice]

(Requires: 3+ Marks in Skill of Choice)

When you buy this Gift, choose one Skill. If you ever *Overwhelmingly Succeed* with the resulting Skill Roll, you recover 1 spent point in the appropriate attribute (Body, Clout, or Drive), provided you spent the point to push the skill.

You may take this Gift multiple times. Each time, choose a different Skill.

Raise your SPI by 1 for each Knack.

Logistics Expert

(Requires: 1+ Ranks in Bureaucracy)

Under your administration, troops recover faster. See the *Recovery* chapter for more details.

Martial Arts

(Requires: Coolness Under Fire)

You have trained yourself to fight hand-to-hand. You can kick, head-butt, slam, or even bite your target, for improved damage.

At the start of your action, pick any one combatant. You may claim 25% Cover in Melee Only vs. that target, because of your ability to parry and to control space. If you spend 1 Body, you may reduce a target's Cover vs. your unarmed attack by 25% (except for 100% Cover).

If you hit with your unarmed attack, you may claim a following attack against other combatants, with your unarmed attack. Similar to Following Fire, you may strike a second time at no cost (and if that attack hits, you may strike a third time, spending 1 Body). Remember that any Close attack, even Following ones, provoke counter-attacks. This is not true "following-fire"; the gifts of Following-Fire Expert and Master do not apply.

Master Planner

(Requires: 1+ Marks in Plan Skill)

Before you enter a battle, if you have time to prepare, you may declare the fight to be a Planned Encounter. You may use Plan Skill to add Morale to folks, spending 1 Drive. This Morale represents presence of mind and keen forethought in dealing with the situation.

You cannot Rally folks with Plan Skill.

You still use Lead Skill to Rally folks. Among

other things, this means that you cannot remove Panic with Plan Skill.

You can only use the Master Planner Gift if you had time to plan the battle. If you are ambushed in an unlikely place, you cannot. The Game Host is the final arbiter of when your advanced planning is effective.

Melee Expert

(Requires: Coolness Under Fire)

You have trained yourself to fight with melee weapons.

At the start of your action, pick any one combatant. You may claim 50% Cover in Melee Only vs. that target, because of your ability to parry and to control space. If you spend 1 Body, you may reduce a target's Cover vs. your unarmed attack by 25% (except for 100% Cover).

If you hit with your melee attack, you may claim a following attack against other combatants, with your unarmed attack. Similar to Following Fire, you may strike a second time at no cost (and if that attack hits, you may strike a third time, spending 1 Body). Remember that any Close attack, even Following ones, provoke counter-attacks. This is not true "following-fire"; the gifts of Following-Fire Expert and Master do not apply.

Net Influence

(Requires: 1+ Marks in Computer Sciences)

You know how The Net "thinks." You spend 1 less Drive Point when trying to influence The Net and other artificial intelligences to do what you want.

Raise your SPI by 1.

Resolute

(Requires: Drive Rating 8+)

You rarely, if ever, give up. You may

ignore the first 3 Trauma on your Damage track for purposes of reducing your Drive Rating.

Robotics Expert

(Requires: 1+ Marks in Computer Sciences)

By spending 1 Drive Point, you can convince a robot under your control to Roll, Risk, Push, or Breeze. Without this gift, robots under your control can only do things by Rote.

Semi-Automatic Master

(Requires: Semi-Automatic Expert)

When using a semi-automatic weapon, and you *miss* a target at Medium Range or less, you can immediately Retry, spending Drive points and two bullets from your gun. Normally, you are not permitted a Retry with attack rolls.

Sniper Master

(Requires: Sniper Expert)

Whenever you have Aimed at a target, and you successfully hit the target with a firearm attack, you may spend 3 Drive and add an extra 2d20 to the Damage Roll.

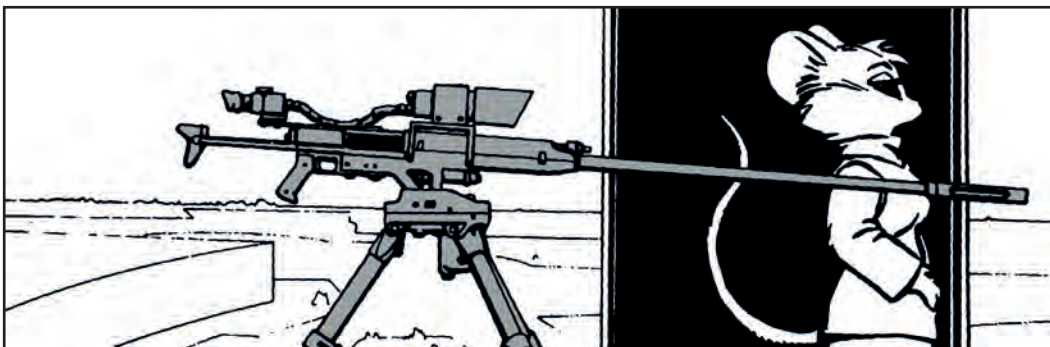
Strong

(Requires: Body Rating 8+)

You are stronger than average. Improve the Damage of all your hand-to-hand attacks by 5.

You can Carry 3 times your Body rating (not 2). You can Lift 8 times your Body rating (not 5).

When you engage in a contest of strength (such as grappling or wrestling) with someone who is *not* Strong, your opponent must spend 1 Body point before even rolling any dice, or automatically lose.



Very Fast

(Requires: Fast)

If you spend 1 Body Point, you can *double* your running movement. You can claim Cover or Concealment at a distance of 3 meters. Without this Gift, you can only claim Cover or Concealment from within 2 meters of your position.

Very Strong

(Requires: Body 10+; Strong)

You are a lot stronger than average. Improve the Shock damage of all your hand-to-hand attacks by 2 (not 1).

You can Carry 4 times your Body rating (not 2 or 3). You can Lift 10 times your Body rating (not 5 or 8).

When you engage in a contest of strength (such as grappling or wrestling) with someone who is not Very Strong, your opponent must spend 1 Body point before even rolling any dice, or automatically lose. This is cumulative – someone without Strong or Very Strong must spend two Body points.

Very Tough

(Requires: Tough)

You are remarkably hardy. Raise all your Damage Thresholds by 10 (instead of the 5 from Tough.)



Dubious Gifts

These Gifts are both a blessing and a curse. Note that a character can still be argumentative, impulsive, etc. without these Dubious Gifts – they just don't receive any benefit from being so.

In the sedate, conservative society of *Albedo*, many Dubious Gifts represent

personality traits frowned upon by the public at large. Remember that your final SPI rating is based on Clout, Drive, and Gifts – and Dubious Gifts that change an Attribute *and* SPI are cumulative.

Belligerent

You have a reputation for being argumentative and violent.

You have +2 Drive Rating.

Reduce your SPI by 5.

Cold-Hearted

You don't relate well to other people. Others describe you as withdrawn or argumentative, maybe even as sociopathic. You can distance yourself from the horrors around you.

You reduce Awe that you suffer by 1, down to zero. This reduction is cumulative with other Gifts.

You have -2 Clout Rating.

Reduce your SPI by 3.

Conformist

Your lifestyle and behavior are abnormally concurrent with positive marks on SPI tests. However, you lack self-motivation.

You have -2 Drive Rating.

Increase your SPI by 10.

Gadfly

You are sociable to a fault. While you are fun to get along with and can crack wise with the best of folks, officious types look down upon your lack of professionalism.

You have +2 Clout Rating.

Reduce your SPI by 5.

Impulsive

You have a reputation for acting without thinking.

You have +2 Body Rating.

Reduce your SPI by 3.

Large

You are unusually large, when compared to other folks.

You have +3 Body Rating.

You have -2 Drive Rating.

Old

You are forty years old, or more, and you can feel it. Even with advanced medicine and anagathics, time is taking its toll on you. However, your advanced age has granted you respect from others.

You have -2 Body Rating.

You have +3 Clout Rating.

When spending Clout to influence other Old characters, you can reminisce about the "good ol' days" and wax nostalgic, which reduces all costs by 1.

Overconfident

You often over-extend yourself and bite off more than you can chew.

You have +3 Drive Rating

You have -1 Clout Rating

Reduce your SPI by 6.

Righteous

You have a reputation for being opinionated and hard to get along with.

You have +2 Drive Rating.

Reduce your SPI by 5.

Small

You are smaller than most people you meet, but you make up for it with increased determination.

You have -2 Body Rating.

You have +3 Drive Rating.

Young

You are barely of age to be admitted into the EDF. You are often enthusiastic and naïve.

You have +1 Body Rating

You have -1 Clout Rating

You have +1 Drive Rating

Reduce your SPI by 2.

When spending Clout to influence other Young characters, you can speak a common vernacular and bond over how the older generations just "don't get it", which reduces all costs by 1.



BASIC RULES OF ENGAGEMENT

ΠΑΖΛΗ ΝΟΙΣ ΨΕ ΕΝΘΑΝΟΝΕΝ

Rules exist for fairness and consistency. By using the same role-playing game rules, all the Players and the Game Host will better understand how the story of the game is moving along. Many decisions will have fateful consequences – and when the military is involved, lives will often hang in the balance. To this end, *Albedo: Platinum Catalyst* has rules for moderating conflict.

Playing a Role

The essence of the game is to pretend to be someone else. There are various kinds of roles to be played in the game.

Moderating the Action: The Game Host

One participant takes the role of the *Game Host*. The Host is like the director of a play, responsible for keeping the action moving. In the game sequence, the Players describe what they want their characters to do; the Game Host decides what rules or other factors need be taken into account; dice are rolled, tables are consulted, and the Game Host describes what happens as a result; then the Players decide where to go from there.

The Game Host has the final say in what does and does not happen – up to and including changing or breaking the rules. No rule can handle every situation, and sometimes numbers and dice just get in the way. The goal of the game is for everyone to have fun, and the Game Host should know their Players and keep the enjoyment levels at maximum. However, a Game Host should always strive for maximum fairness and consistency – two qualities provided by rules. It's not an easy balance, and Game Hosting is not an easy role, but it can be very rewarding.

The Game Host plays the role of all Main Characters who are not Player-Characters. The Host also plays the role of all Supporting Characters not played by the Players – the “extras” in the script. When

the Players encounter store clerks, frightened civilians, obstinate businessmen, grizzled prospectors, armed criminals, and all other sorts, the Game Host controls and plays each one.

Players and Player-Characters

The rest of the participants are simply called *Players*. Each Player controls one *Main Character*, their starring role in the story-line, often called the *Player-Character*. Players will often control one or more *Supporting Characters* – their subordinates in the Extraplanetary Defense Force.





The Supporting Characters will have higher turnover than the Player-Characters. Some will be re-assigned, some will retire, others might meet unfortunate ends.

Dice Notation

Albedo: Platinum Catalyst uses polyhedral dice. The standard notation for dice is the letter d, followed by the number of sides on the die. For example, when the text indicates for you to roll a four-sided die, it will say "d4". When you are called to roll two ten-sided dice, the text will read "2d10."

In some cases, you'll roll different kinds of dice together. For "d8, 2d6", you would roll one eight-sided die and two six-sided dice.

The number of sides on a die is sometimes called its *size*. The more sides a die has, the bigger it is said to be – a d12 is bigger than a d10, for example.

Albedo uses four-sided, six-sided, eight-sided, ten-sided, and twelve-sided dice for Skill rolls and for Difficulty. Twenty-sided dice are used for Damage.

Basic Rolling

To accomplish a task, you roll a die proportional to the number of Marks you have. For one Mark, roll a d4. For two Marks, roll a

d6; for three, d8; for four, d10; and for five or more, d12. This is a Basic Roll.

EXAMPLE *Example:* Toki has 4 Marks in Repair Skill. When she is called upon to make a Repair Skill Roll, her Player rolls a ten-sided die and reads the number.

Doing Things Better: Pushing

Except in unusual circumstances, you can *Push* your roll. Pushing allows you to go beyond your normal skill capacity, basically doubling the size of the die you're permitted to roll.

Major Characters spend a point from the appropriate Attribute (Body for Physical, Clout for Social, Drive for Mental). Supporting Characters spend Morale.

EXAMPLE *Example:* Toki has 4 marks in Repair, a Mental Skill. Normally, this entitles her to roll a d10. If Toki spends 1 Drive Point, she can Push her Mental skill and roll two d10s instead of one.

Reaching Beyond: Risking

Sometimes, regular dice aren't enough, and you have to reach beyond your normal capacity. You can spend 1 Point to *Risk*, and roll larger dice than you normally do.

Risking a Roll is only necessary if you have 4 Marks or less. With 5 Marks or more, you're already rolling a d12, the largest die you can, so there's no need to Risk.

Major Characters spend a point from the appropriate Attribute (Body for Physical, Clout for Social, Drive for Mental). Supporting Characters spend Morale.

You cannot Risk and Push on the same roll.

EXAMPLE *Example:* If Toki were to need to roll an 11 or 12, Toki could spend 1 Drive Point to Risk her Skill, and roll a d12 for Repair instead of d10.

Business as Usual: Rote

In most cases, the activity you're performing is second nature. Characters in *Albedo* perform the same daily chores over and over again. Instead of rolling dice, a character who is in a typical situation, doing a typical thing, can just go by *Rote*, not

COMMAND REVIEW • АРНАНД НЕГЕУП

Dice Are Rarely Added Together

When rolling multiple dice, such as Risking or Breezing, only the highest-showing die matters. *Don't add them together.* Likewise, when a combatant shoots at a target, the Cover, Concealment, and Range dice are not added together. Most rolls in *Albedo* are pushing near the limit of 12; do not add the dice together unless specifically instructed to do so.

rolling any dice. Instead, the character claims they rolled one plus their Marks.

EXAMPLE: Toki has repaired engines before, and she's in the shop, so she just goes by Rote. With four Marks, she doesn't have to roll, she can just claim a 5.

Rote is claimed instead of rolling. Do not roll dice *and* claim the Rote.

Robots and AI can *only* take Rotes. They can never Push, Risk, or Breeze, unless directed by someone with the Robotics Expert gift. Characters who have Panic cannot claim Rotes.

Overqualified: Breezing

The opposite of Pushing, Breezing is when a character knows enough to try to score an Overwhelming Success. A character with two or more Marks can often push themselves where others would think twice. Characters with 2 Marks or more in a Skill can *Breeze*, effectively halving their Marks to claim twice as many dice.

Since you can only Overwhelm when two or more dice roll higher than the target, Breezing is way to get more dice without spending points.

Panicked Characters cannot Breeze.

EXAMPLE: If Toki wanted to get an Overwhelming Success on a relatively simple fix, she might choose to Breeze, rolling 2d6 instead of 1d10.

Summary of Die Rolls

Marks	Basic	Pushing	Risk	Breeze	Rote
zero	none	—	—	—	1
1	d4	2d4	d6	—	2
2	d6	2d6	d10	2d4	3
3	d8	2d8	d12	2d4	4
4	d10	2d10	d12	2d6	5
5	d12	2d12	—	2d6	6
6	d12	2d12	—	2d8	7
7	d12	2d12	—	2d8	8
8 or more	d12	2d12	—	2d10	9
Point Cost	zero	1	1	zero	zero

Difficulty

The measure of how much ability is required to do something, as well as how chancy it might be to get it work, is called *Difficulty*.

The Game Host should choose a difficulty based on how hard the activity is. Some suggestions:

Kind of Task	Target
Trivial: anyone could do this	1
Routine: Anyone with one Mark could get this after a few tries	2, or d4
Intermediate: Experts can do this easily, but other folks have a hard time	4, or d8
Advanced: Even trained personnel find this a chore	6, or d12
Experts Only: Only highly-trained personnel can perform this task, and often only after repeated tries	9, or 2d12
High-Impossible: Tasks this difficult can only be performed by masters.	11, or 3d12

Simple Rolling: Target

In most cases, you're trying to beat a *Target*. Targets are for most solo activities, like fixing an engine, researching a project, looking around, etc.

Roll the Target Dice. If there is only one die, then whatever that die is showing is the *Target*. If multiple dice are called for, then only the highest-showing die is the *Target*.

Complex Rolling: Opposed Rolls

Sometimes, someone else will oppose what you do. For example, you may want to Sneak, while someone wants to Spot you. The Game Host may call for *Opposed Rolls*. In an Opposed Roll, whoever rolls the highest is the winner, and scores a Success, and whoever rolls the lowest is the loser, and scores a Failure. In the case of Ties, both parties may be partially successful.

In many cases, it's easiest for one party to roll, using the opposed party's Rote as the target.

Results of Rolls

<i>Dice Result</i>	<i>Outcome</i>	<i>Cost to Retry?</i>
All of your dice are showing ones (the worst possible roll).	Botch – the worst possible result (see below).	+2
None of your dice beat the target number, or your Rote was not high enough	Failure – your activity simply fails.	+1
The highest number you rolled is equal to the target, or your Rote is equal to the target	Tie – a marginal failure, or a partial success.	Zero
<i>One</i> of your dice rolled higher than the target, or your Rote exceeds the target	Success – your activity is clearly successful.	n/a
<i>Two</i> or more of your dice rolled higher than the target	Overwhelming Success -- your activity is remarkably successful	n/a

For most activities, a simple Success is enough to get things done. An Overwhelming Success is even better – a spectacular landing, a rousing speech, a fantastic design, etc. Many Gifts have special modifiers that only work on Overwhelming Successes.

Botching

A roll of all ones is the worst a character can ever do. Such a result can indicate a minor cut or bruise, exhaustion, frustration, a misspoken statement, or anything the Game Host and the Players can think of.

All Botches result in the loss of 1 Point in the relevant Attribute (Body for Physical, Clout for Social, Drive for Mental). Supporting Characters lose Morale, instead. If the character doesn't have the point to lose, then the character either suffers Damage (Injury, Oversight, or Trauma) or Panic (for supporting characters).

At the Game Host, Botches on a roll might have some other consequences. For



example, a Botch on trying to Jump across a gap might send the character falling.

Adding or Subtracting Marks: Bonuses and Penalties

Your Game Host may rule that something is easier to do. You may gain one or more Marks in your Ability to do something. *Bonus* Marks raise the size of the dice you can use, and they may allow you to claim some extras.

Your Game Host may rule that something is harder to do. You may lose one or more Marks in your Ability to do something, as a *Penalty*.

Retries

When a task fails, a character might want to try again. In most circumstances, this won't be an issue. Attacking with a weapon, leaping across a gap, enduring G-forces, or piloting a vehicle are all activities that are short, fateful, and measurable. A Failure either has immediate consequences, or it will be forgotten in the next moment.

Some activities, however, require special training, social interaction, or unusual insight. Fixing a broken vehicle, convincing the chancellor to see things your way, scanning a sector for signs of activity... Using a Skill to try something a second time is a *Retry*.

The first *Retry from a Failure* costs 1 Point from the relevant Attribute (Body for Physical, Clout for Social, Drive for Mental). The first *Retry from a Botch* costs 2 Points from the relevant attribute. (Since the Botch in the first place cost 1 Point, that brings the total spent up to 3.) Supporting Characters use their Morale.

What's the Total Point Cost for an Action?

If you have a Gift or other circumstance that reduces the points spent, the reduction is applied once on the *entire action sequence*, not on each cost.

EXAMPLE: Auitzotl Pushes his Longarms Skill [1 Drive], uses Following Fire to shoot a second and third target [+2 Drive], then Botches the last to-hit roll [+1 Drive]. The total cost for the action is 4 Drive. If Auitzotl had a Gift that reduced the cost, it would drop to 3.

Labor

Some uses of Skills take place over a long period of time. For example, assembling a tank might require thousands of hours of skilled work. In game-terms, a long-term activity is called *Labor*.

Labor is a large number, representing Difficulty times hours of labor. Following the above example, assembling the tank might be a Labor of 4,000 Quality-Hours.

Most Labor will be performed by Rote. Add together the Rotes of all the characters assigned to the tasks, and divide that number into the Labor, to determine how

long a Labor takes to perform.

EXAMPLE: Auitzotl and his crew have to set up a radar array, a labor requiring 800 Quality-Hours of Sensor Operations. Auitzotl's team has one specialist with Skill 5, he himself has Skill 3, and four more in his crew has the standard Skill 1.

In his labor pool, the specialist has Rote 6, Auitzotl has Rote 4, and the last four have Rote 2. That adds up to $(6 + 4 + 4 \times 2 =) 18$. Dividing 800 by 18 gives a little more than 45 hours. Working 8 hours a day, the activity will be done in a little less than 6 days.

Much of the work of the Extraterrestrial Defense Force will involve building fortifications, preparing vehicles, moving into position, gathering intelligence, etc. Some Labors may even require mixed pools of Skills!

The Players will have to divide their resources to perform various Labors. Keep in mind how long the character can work per day, and that some folks might need to be defended from hostiles while they work.



COMMAND REVIEW • APYKANA NEFEUP

Use Rote Whenever Possible

Characters, especially Supporting ones, should perform their tasks by Rote unless they have strong reason not to. It makes game play go faster; it suits the "military theme", where folks obey orders and do things by the book; and it reduces the odds of botches or other errors.

COMMAND

HINNANA

Albedo: Platinum Catalyst is a game about strong personalities. Main Characters are a narrative device – they allow the Players to identify with the people and the issues. The Game Host is encouraged to role-play the opposing Main Characters as more than mindless monsters or robots – anyone who has Body, Clout, and Drive points is someone to be reckoned with.

Player-Character

Each Player begins the game with one *Main Character*, usually called their *Player-Character*. The Player will spend most of their time in this role, as a commanding officer.

Retinue

Every Player-Character starts with a *Retinue* of Supporting Characters, usually four. All of these characters start with *Trust* towards their commanding officer.

Supporting Characters have the starting Attributes based on their Species, and all the Skills and Gifts granted

Trust

The backbone of any military organization is when soldiers are ready to lay down their lives to protect one another. In game terms, two characters who can work together in dire situations are said to *Trust* one another.

All Player-Characters are assumed to Trust one another, at least for purposes of Rallying.

All Supporting Characters in a Player-Character's starting Retinue begin with Trust in their Player-Character commanding officer.

Two Supporting Characters who have Trust in the same Main Character are assumed to Trust each other, as well, unless the Game Host rules otherwise. Two Supporting Characters "on the same team" can trade Morale in this way, with one spending Morale to Rally the other.

A Supporting Character maintains Trust in the Main Character as long as nothing during the game violates that Trust.

Military personnel are trained to obey orders and to not question

Loyalty

An improved version of Trust, a Supporting Character automatically develops *Loyalty* after three successful adventures with the same character.

Loyalty is an improved version of Trust. Normally, a Supporting Character can be boosted to a maximum of 1 Morale from a successful Rally. If the Supporting Character is Loyal to the Rallying Character, they can be boosted to a maximum of 3 Morale.

While Loyalty is better than Trust, Supporting Characters only have Loyalty to one Main Character at a time.

Loyalty should be earned in play, as a dramatic device in the narrative. Players should derive satisfaction that their superior planning was rewarded with increased capacity in their subordinates.

Neutrality

During play, Supporting Characters will come and go. Some may be transferred to new duty assignments. Others might become too injured, or they might even be killed.

When a new Supporting Character enters a Player-Character's Retinue, the Supporting Character is only *Neutral* towards their new commander. Only after three successful adventures will the character gain *Trust*. (And three adventures after that, the character can become Loyal, as above.)

Most characters in the game will be fellow officers in the Extraplanetary Defense Force, who do not report directly to any of the Player-Characters, but their own superiors. Should combat occur spontaneously, all of these combatants would be Neutral towards the Player-Characters and their retinue; while they're all on the same side, they lack the camaraderie to truly work together at maximum effectiveness.



COMBAT

HPN7AZ

Beginning the Battle

Time in a role-playing game like *Albedo* can vary. When weeks or months go by without an incident, the Game Host may call for *narrative time* – glossing over long periods with but a few sentences. For example: “You spend two weeks accelerating out of your own system, then you jump and spend another two moving into position to land.” If all the players agree that nothing important was going on, then

it's time to move on and get to the next plot point.

Combat situations, however, are likely to be heated. Everyone's going to want to attack as often as they can. When the Game Host declares that *Combat* has started, the flow of time and participation becomes very orderly and organized.

Readiness

In most military engagements, there will be two sides to a battle. The side that

you are on is the *friendly side*, and the side your foes are on is the *hostile side*. Civilians or other characters may be present who are non-combatants or otherwise not involved; such characters are usually called *neutrals*.

Unless stated otherwise by the Game Host, all Main Characters begin a battle fully rested, with their full totals of Body, Clout, and Drive, as permitted by their Ratings. Injuries, Oversight, and Trauma from previous battles will carry over, reducing Ratings. Main Characters who have had ratings reduced to zero should not be sent into combat ... but war is full of unfortunate circumstances.

Unless stated otherwise by the Game Host, all Supporting Characters begin a battle with 1 Point of Morale. If a Main Character is on the same side as a Supporting Character, and the Supporting Character has Loyalty, then the Supporting Character starts with 3 Morale instead of 1.

Who Goes First:
Initiative

In combat, someone usually goes first. In a military situation, that's the highest ranking officer, followed by the subordinates, followed by civilians.

The Game Host orders the supporting characters on the other side. For convenience, it's best that the Player-Characters act first in the Round.

The "End of the Round" is used for maintenance. Remove machinery, assess environment effects, and explode grenades.

Alternative Initiative

Not all combat engagements are military ones. Players might be on shore leave, or there might not be any clear chain-of-command. In such a case, the Game Host can decide on a different combat order. One suggestion is to call for Sixth Sense Rolls for all combatants, acting from highest number to lowest. (Rotes might prove easier for this.)

Round

A unit of time, representing when everyone gets one attempt to do something. A Round is assumed to be six seconds long.

Action

In each round, every combatant can take one *Action*. Piloting a vehicle, shooting a gun, aiding comrades, restraining a prisoner – each of these are Actions.

Since a Round is 6 seconds long, then an Action is anything that can reasonably be done in six seconds.

Many Actions might require certain Skills. The Game Host is the final arbiter of what can be done in a single Action.

In general, a combatant can only make one attack per Round, since they can only take one Action.

Some activities are considered "free", such as talking to one another via helmet radios. As usual, the Game Host has the final say on what a combatant can do.

Cover

If there is any material between the attacker and the target, then the target has *Cover*. The target will roll extra dice to defend against attacks.

Cover	Dice
0% - No Cover: Standing out in the open.	None
25% - Minimal Cover: A low barrier, covering only the knees. Collapsed building debris.	d8
50% - Half Cover: Bushes and hedges from head to toe. A typical window. Behind another combatant of the same Body.	d10
75% - Partial Cover: Head and shoulders exposed, only. Behind a vehicle. Behind another combatant of twice one's Body.	d12
100% Total Cover: A solid wall. A full-sized window.	Automatic 13

If the Cover Die is the highest die showing, and the shooter has tied or worse, then the Cover has been struck by the attack. Attackers firing at targets behind 100% Cover will automatically hit the cover, since they can't roll any higher than 12 – but they may have weapons powerful enough to penetrate. (See "Penetrating Cover", page 127.)

Concealment

Targets can be hard to see ... and defending targets will do their best not to be seen. Most Cover can't be seen through, so most targets will have the same Concealment as they have Cover. Exceptions include using figures obscured by smoke, or figures behind glass.

Concealment	Dice
0% - No Concealment: Well-lit area on a clear day with excellent weather.	none
25% - Minimal Concealment: Poor lighting. Thick rain. Dusky light. Third-person viewing, such as a camera. Low-light vision in complete darkness. Opaque 25% cover.	d8
50% - Half Concealment: Infrared vision. Full moonlight. Light smoke. Opaque 50% cover.	d10
75% - Partial Concealment: The darkest night allowed by light-pollution over industrial cities. Only silhouettes of targets are visible. Thick smoke. Opaque 75% Cover.	d12
100% Total Concealment: Completely unseen target. Blind shooting.	2d12

Active Combatants Are Not Statues:
Claiming Cover and Concealment within 2m

When using miniatures, there's a tendency to assume that combatants are right where their figure is, and to draw line of sight to that. The problem is that combatants are often moving around a lot, during a combat Round.

A combatant has a 2-meter position un-

certainty. An active, aware target can claim the best Cover and Concealment they can, minus 25%, within 2 meters of their position.

For example, if a combatant's figure is out in the open, but within 2 meters of being behind a solid wall (100% cover), then they can claim the solid wall as 75% cover and 75% concealment.

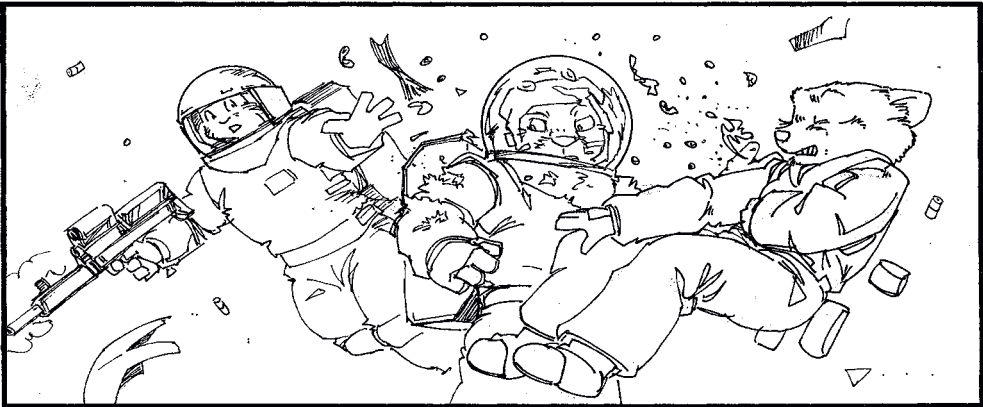
Active combatants don't have to claim Cover or Concealment that they don't want to. For example, a combatant might not want to claim a comrade as 50% Cover.

Surprised Targets and Helpless Targets can only claim cover based on line of sight. Panicked targets are still active and will do anything they can to reduce the odds of being attacked.

Range

For simplicity, *Albedo* treats each weapon as having up to five ranges. The longer the range to the target, the larger Defense Dice the target rolls to avoid being hit.

Range	Dice
Close: Sometimes called "Point-Blank". Close-Range Attacks can provoke counter-attacks. Many rifles and heavy weapons have no Close range.	d4
Short: Typical proximity for urban fighting. Following Fire and Suppression Fire is possible. Optimal range for Pistols.	d6
Medium: Typical proximity for forest or jungle fighting. Optimal range for Carbines.	d8
Long: Typical proximity for plains or open spaces. Optimal range for Rifles.	d10
eXtreme: Beyond the effective range of most weapons, more blind luck than aimed combat.	d12



Attacking a Target

When launching an attack against a target, use the following steps.

Determine Range

Each gun has a rating for Close, Short, Medium, Long, and eXtreme. The farther away the target is, the larger the dice used to defend the target.

Determine Cover

The more obstructions to line-of-sight to the target, the harder it will be to hit the target. Remember than an active, aware target can claim Cover that's 25% worse, within 2 meters of their position.

Determine Concealment

Remember than an active, aware target can claim Concealment that's 25% worse, within 2 meters of their position.

Attacker rolls Firearms dice vs. the difficulty to hit the target

The shooter can claim any sort of roll they can to hit the target: Basic, Push, Risk, Breeze, or Rote.

In most cases, a shooter will use their Rote when attacking. Rotes eliminate the possibility of Botching.

Table of Attack Results

<i>Result</i>	<i>Outcome</i>
Botch (Highest die is 1)	Something bad happens.
Failure (short-fall by 1 or more)	<i>Miss.</i> You closely miss your target.
Tie (attacker's highest score ties target's highest)	<i>Miss.</i> You barely miss your target. (Gifts such as Semi-Automatic Expert can make this a hit.)
Success (one of attacker's dice exceeds defender's highest score by 1 or more)	<i>Hit.</i> You hit the target – Roll Damage Dice.
Overwhelming Success (two of attacker's dice exceeds defender's highest score by 1 or more)	<i>Critical Hit.</i> You may roll increased Damage Dice. You can only score a Critical Hit if you have multiple dice, such as from Pushing or Breezing.

EXAMPLE

Example: Auitzotl sights a dissident with a man-portable rocket behind a wall, several meters away.

The target has half their body behind a solid, opaque wall, giving both 50% Cover and 50% Concealment. With Auitzotl's rifle, the target is at Medium Range.

Auitzotl has to shoot against a Range Die of d8, a Cover Die of d10, and a Concealment Die of d10.

Auitzotl has 5 Marks in Longarm. He chooses his Rote of 6. The target rolls the 2d10 and the d8, and gets 5, 4, and 1. The highest-showing die is 5, less than Auitzotl's 6. Auitzotl has hit the target.

Actions

Each Round, a combatant can perform one Action. Players may order their Main Character first, then their subordinate Supporting Characters.

Aim

You can move 2 meters to a better position. Then choose a target with 75% or less Concealment. (If you can't see a target, but you know where they might come out, the best you can do is Guard.)

Next Round, you can shoot at the target as if it was one Range Band closer, and as if it had 25% less Cover and 25% less Concealment.

If you move from your position, or if you suffer Awe, then your Aim is ruined. Characters with Panic cannot Aim.

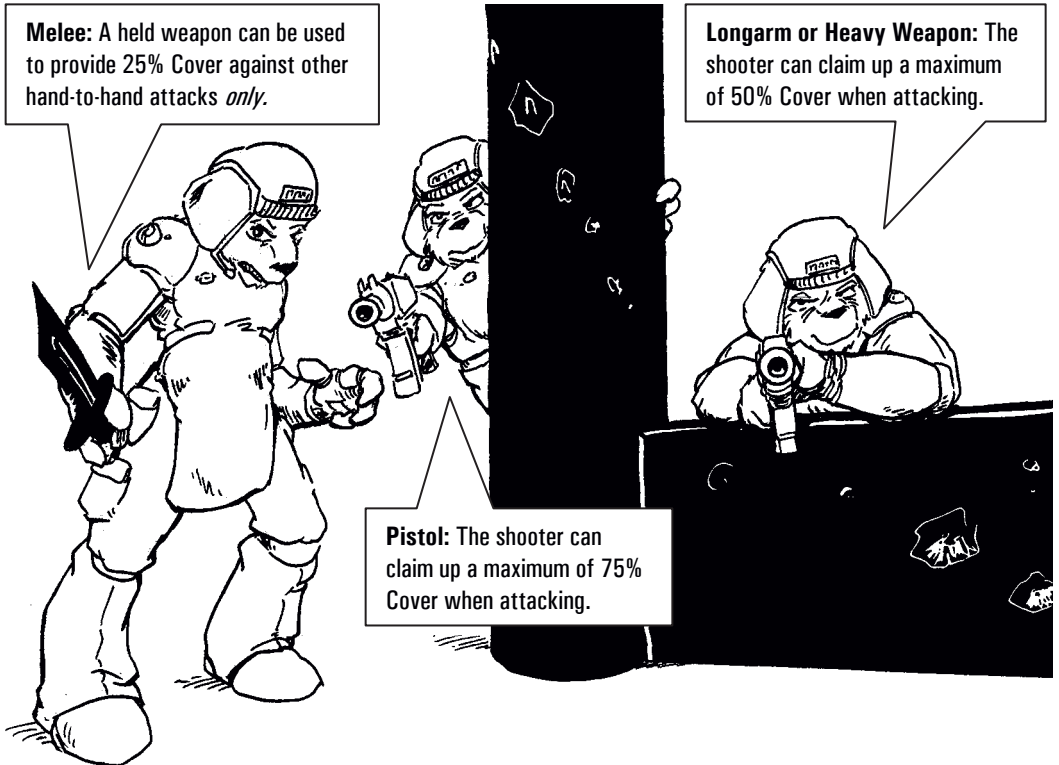
If you are using miniatures, place a heads-up penny next to an Aiming figure, and place a tails-up penny next to their target.

Attack at Range

You can designate any target and shoot at them. Roll to hit, using the appropriate skill for your weapon (Pistol, Longarm, Heavy Weapon, etc.). The Difficulty is based on the Range to the target, the Cover the target has, and the Concealment.

Roll to hit. On a *Success*, you claim one Normal Hit. On an *Overwhelming Success*, you claim a *Critical Hit*, rolling an extra Damage Die.

On a *Tie*, you can still hit the target if you have a semi-automatic or fully-



automatic weapon and you spend additional bullets. For single-shot weapons, you simply miss.

On a *Failure*, you spend one bullet and miss your target.

On a *Botch*, something bad happens. The Game Host can suggest something appropriate; the default is that the target loses 1 Drive (or Morale).

In most cases, Game Host may rule that the attacker can fire by Rote – simply roll the target's Cover and Concealment dice, if any. Remember that Rotes can never score Critical Hits.

A Panicked combatant cannot Attack at Range if they could instead choose a maneuver that improves their Cover or Concealment against known attackers.

COMMAND REVIEW • HPN7AZ REFEUP

“Rolling Only To Miss”: Rote Attacks

To speed play, and to prevent mishaps, most attackers will take their Rotes (1+Marks) whenever possible. This can sometimes lead to *lock-out* – when a shooter's Rote is greater than whatever the target dice can roll. In such cases, the Game Host should only force the player to use a Basic roll if the shot is questionable.

Attacker's Cover

When you attack, you must expose yourself. Thus you can only claim a maximum amount of Cover.

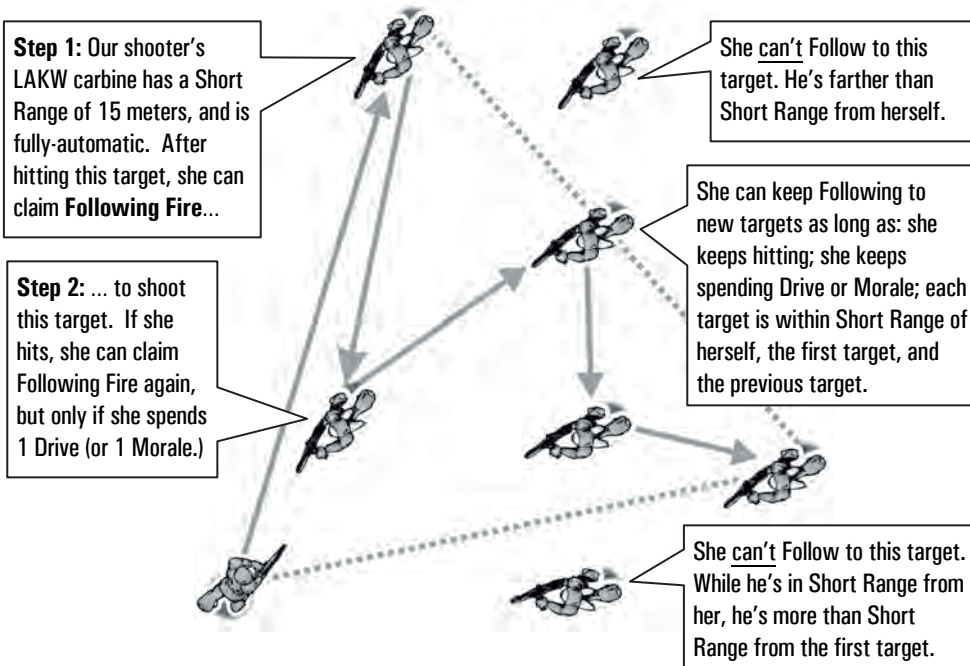
- **Pistol** – maximum 75% Cover (head, arm, and hand exposed)
- **Longarm or Heavy Weapon** – maximum 50% Cover (head, shoulders, both arms and both hands exposed)

The Game Host may make exceptions to this rule, such as with gun-ports on armored vehicles.

Following Fire at Short Range

If you fire at a target at Short Range and hit, and your weapon is fully automatic, you may engage in Following Fire. Choose another target within Short Range of the target you just fired upon *and* within Short Range of yourself. (You may even choose the same target.) You may fire upon that target as if it was Short Range, as well. You may continue to engage in Following Fire as long as you have bullets in your gun.

(If you have the Gift of Following-Fire Expert, you may use Following Fire at up to *Medium Range*.)



Attack Hand-to-Hand

Most folks in *Albedo* have difficulty with physical contact, especially violent contact.

A combatant with a Melee weapon can claim 25% cover against another Melee or Brawl attacker, by using their weapon to deny space and avenues of attack. (Melee weapons cannot be used for Cover against ranged attacks, such as bullets.)

By definition, all hand-to-hand attacks are Close-Range Attacks, and thus provoke counter-attacks. See *Close-Range Attacks*, p. 120.

Hide

You can choose to "go to ground", drop to prone, and otherwise conceal yourself. You can move 2 meters before Hiding.

A Hiding character improves their effective Cover by 25% and their effective Concealment by 25%. This improvement *does* combine with the reduced Cover and Concealment claimed within 2 meters (effectively raising claimed Cover & Concealment within 2m to full values).

Hiding combatants are harder to detect. Any combatant moving into an area where a target hides with at least 50% effective Concealment must win an opposed roll of their Spot vs. the target's Sneak, or remain unaware of the target's position.

Naturally, a target can't just "vanish into thin air" if the attacker saw them before-hand. A common tactic to use against a Hiding target is to Suppress the area they could be hiding in – see page 114. The Game Host should rule on unusual cases.

Hiding is a two-way street – they can't see you, and you usually can't see them. If a Hiding combatant wants to see anyone, they must make Spot rolls themselves.

Panicked combatants will often Hide.

If you are using miniatures, tip a Hidden combatant miniature onto its face, to simulate being "hunkered down."

Medical Help

You can provide medical attention to another target. You must start your turn next to the target, and you must have something to use.

Stabilizing an Incapacitated Target is of Intermediate difficulty (4 or d8). If you have no Medical Sciences skill, then you can only use your Rote of 1.

Rally

As a commanding officer, you will often give moral support to your troops. You can move 2 meters and then attempt to Rally. You can Rally any target that you can communicate with, such as by radio.

Panicked characters themselves cannot Rally others.

Rallying can do one of two things: remove Panic, or boost Morale.

Removing Panic

You can Rally any Main Character or Supporting Character. You must make a roll of your Lead Skill.

Rallying to remove Panic costs 1 Clout. (You may spend additional Clout to Risk or to Push your roll.) If you don't have the point to spend, you cannot Rally. Supporting Characters can remove Panic, spending Morale instead of Clout.

For combatants on your side, who actively support you (such as your fellow Player-Characters), the difficulty is Trivial (1). For neutral combatants (such as hysterical civilians), the Difficulty is Intermediate (4 or d8). For opposition forces (that you need to calm down so you can take them prisoner), the difficulty is Expert (9 or 2d12).

If you *Tie* or better, you remove the target's Panic. If you *Fail*, you can Retry next round, with the usual penalties.

Supporting Characters can attempt to remove Panic, as well. They must spend Morale instead of Clout.

If you are using miniatures, place a yellow counter next to a Panicked figure.

Boosting Morale

You can boost the Morale of any Supporting Character with whom you share *Trust* or *Loyalty*. *You cannot boost Morale in a Panicked Combatant.*

Rallying to boost Morale costs at least 1 Clout. Only Main Characters can boost Morale.

The Difficulty is Routine (2 or 1d4), unless the Game Host rules that the situation is worse. If you *Tie* or better, the target gains 1 Morale. If you *Fail*, there is no penalty for Retrying (though there is still a loss for Botches).

If your boosting Morale was successful, and the target has *Loyalty* to you, you may spend 1 or 2 extra Clout to add 1 or 2 more Morale, up to the maximum of 3.

Since you cannot add Morale to a Panicked combatant, boosting their Morale

takes at least *two* Actions: one to remove the Panic, the second to boost the Morale.

If you are using miniatures, place 1 green counter next to a figure for each point of Morale granted.

Run

Sometimes, you just have to move quickly from one spot to the next. *Running* is any movement over 2 meters, and such movement counts as the character's Action.

Any combatant can run 12 meters, no questions asked. A combatant may also choose to *sprint*, to cover more distance. The combatant can cover 10 meters plus a roll of their Run Skill dice. (Yes, the usual run is the same as moving 10 Meters plus a Rote movement of 2.)

When moving from 100% Cover to 100% Cover, across a space that is 5 meters or more that has no Cover, you can claim 50% Cover – even against attackers Guarding that space – vs. attacks made at Short Range or longer. (Close-Range Attacks are not effected.)

A combatant can run for ten Rounds. After that, they must either spend 1 Body to run for 10 more Rounds, or stop Running until they have rested for 20 Rounds.

Spacesuits, with their insulation, are bulky and impeding. Characters in Spacesuits run slower – use 5+Spacesuit Skill instead.

Charge

A special kind of Run is the *Charge* – moving towards a combatant into Close Range. At the end of your move, you engage your target in a Close-Range Attack, with appropriate counter-attacks.

Panicked characters cannot Charge.

Sneak

Combatants may try to move quickly from one area to another while avoiding detection.

Sneaking is impossible unless you have at least 25% Concealment for the entire distance you plan to Sneak through. Since you can claim reduced Concealment within 2 meters, a Sneaking combatant can cross through 4-meter wide gaps, but no larger.

The maximum distance you can move is your Sneak score. Yes, Sneaking can be done by Rote. Sneaking is your only

Action – you cannot shoot, and Sneak, for example.

Sneaking is the only way to move through a Watched area without provoking an automatic attack.

Suppression

One function of the fully-automatic weapon is area denial – filling a zone with bullets so that any target that moves through that area might be struck down. Belt-fed weapons are ideal for this purpose, but in a pinch any fully-automatic weapon will do. In game terms, *Suppression Fire* is when an attacker fills a designated zone with bullets.

Only fully-automatic weapons can suppress. Semi-automatic weapons do not fire bullets fast enough.

First, the attacker may move up to 2 meters, then declares an area no longer than Short Range on all sides. This is the Suppressed Area, also known as the “beaten zone.”

All targets in the Suppression Zone are attacked, regardless of whether they are friend or foe.

Anyone who enters a Suppression Zone

suffers +1 Awe, cumulative with other losses, even if they are not hit. The hail of bullets is frightening to all but veterans of combat.

During their turn in the sequence, a combatant that moves out of, or remains in a Suppressed Area, is immediately attacked. And the attack has +1 Awe, as mentioned earlier.

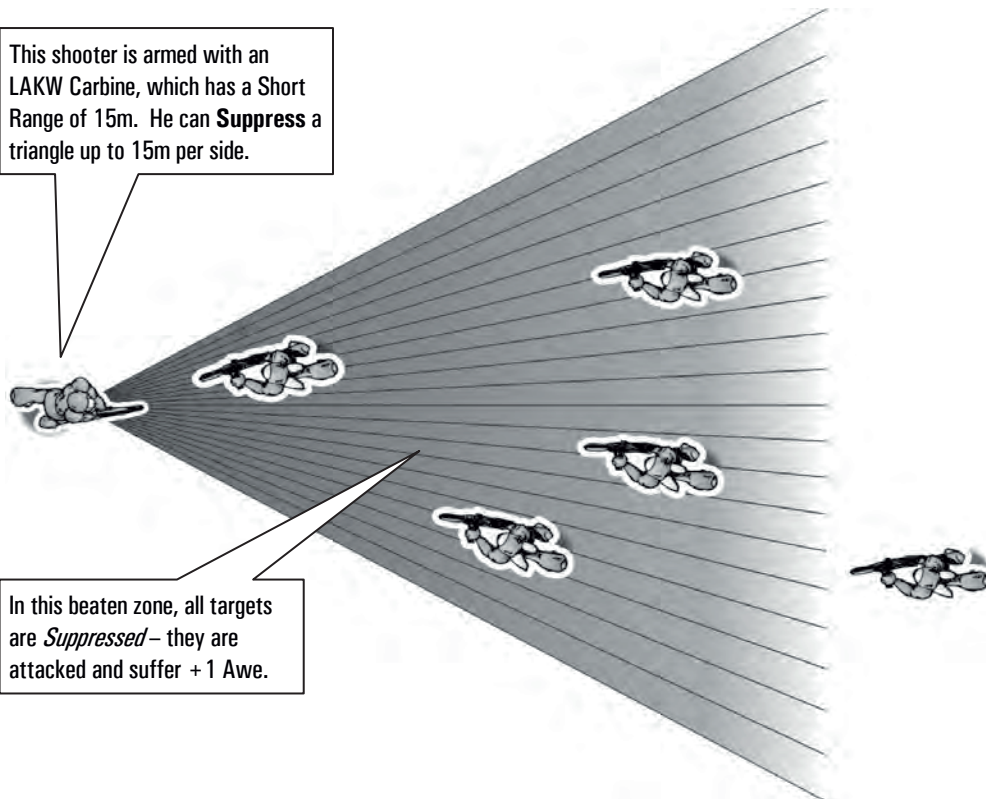
Use only Cover and Range modifiers for targets; Concealment does not apply for attack rolls. Suppression is sometimes used to fire on unseen targets, such as in smoke.

All targets in the Suppression Zone are subject to Selective Fire. In other words, they are hit on Ties.

All targets in the Suppression Zone are subject to Following Fire. Since the attacker gets multiple attack rolls, there is the possibility that one attack might miss, but another one might Succeed, allowing for Following Fire. Following Fire attacks are resolved normally, including Concealment with Cover and Range. Also, point costs must be paid for the third and later attacks. Following Fire represents that the attacker has limited control over the dispersal of bullets and can choose to “hose down” visible targets.

This shooter is armed with an LAKW Carbine, which has a Short Range of 15m. He can **Suppress** a triangle up to 15m per side.

In this beaten zone, all targets are *Suppressed* – they are attacked and suffer +1 Awe.



The Suppression lasts a full Round, until the target's next action in the sequence. Any target that enters that area is attacked. If a target leaves the area, and then enters it again, they are attacked again.

At the beginning of the attacker's next round, their weapon is depleted of ammunition (unless it is a belt-fed weapon). The attacker should either reload or should move to a place of safety.

Panicked combatants can still Suppress, and often do, to clear an area of hostiles so they might flee next Round.

If you have the Gift of Suppression Expert, you can declare a larger triangle, with sides up to Medium Range in length. (If any side of your triangle is over Small Range, then *all* targets are fired at if at Medium Range.)

If you are using miniatures, place three black counters on the table – one next to the Suppressing attacker, and the other two at the points of the Suppressed triangle.

Throw

You can throw an object, most likely a grenade. Your throwing distance is your Lift divided by the weight of the object. Remember that dividing by a fraction is the same as multiplying by the denominator – since grenades weigh $\frac{1}{2}$ kg, you can throw a grenade twice your Lift, in meters.

A thrown object deviates 70% the total distance thrown, minus 10% times your Throw Score. For rolls of 8 or better, your Throw lands exactly where you want it to.

Example: Toki wants to throw a grenade to a spot 14 meters away. She rolls a 4. Her grenade lands $(70 - 40 =)$ 30% off target, or about 4 meters off.

The deviation direction is up to the Game Host. When in doubt, assign 12' o clock to long, and roll a 12-sided die.

Watch

A combatant can watch over an area. You can move 2 meters before Watching. Then you may declare a triangle on the board.

If any target enters this area, you may shoot them. Treat the range as the longest side of the triangle you have chosen to guard.

If you have mechanical assistance (such as remote cameras) you can claim up to

100% Cover. Otherwise, the most you can have is the minimum to attack (75% for pistols, 50% for long-arms.)

Example: Auitzotl positions himself to cover a street. He declares a Watched triangle that extends 80 meters from his left, 30 meters from his right, and is 8 meters wide at the end.

If a combatant enters this triangle before Auitzotl's next action, he may shoot them. The longest range in his triangle is 80 meters, which is Long Range for his rifle. No matter what range a target first enters his triangle, Auitzotl treats the target as being at Long Range.

Watching with Following-Fire Weapons

If you have a fully-automatic weapon, you can usually only claim Following Fire at Short Range. If you declare a Watched triangle for Short Ranges only, you don't have to immediately shoot a second target if you don't want to. Instead, you can use your Following Fire to "remain watching" and to shoot another target should one enter your triangle. You can even shoot a third time, if you have Drive (or Morale) to spend.

A Panicked combatant cannot Watch if they could instead choose a maneuver that improves their Cover or Concealment against known attackers. In fact, Panicked characters will first get the best Cover and Concealment they can; second, they will Watch a triangle where attackers might come from to reduce effective Cover or Concealment.

If you are using miniatures, place one blue counter at the base of the Watching figure, and two blue counters at the corners of the Watched triangle.

Watching and Waiting

Sometimes, a combatant will Watch one zone to do something else. For example, a combatant might shoot a helpless, bound hostage if anyone moves into their room, or a commander might signal for help if they see anyone advance over a certain line.

The Game Host should use their discretion as to what a combatant can Watch for. If a combatant is Watching a zone, but not to attack what's in that zone, then essen-



tially the only limit is a 180° field of vision, vs. targets without full, 100% Concealment. If you are using miniatures, mark a line through such a Watcher using two blue counters, on either side of the figure.

Other Actions

Characters will want to open doors, work consoles, use sensor equipment, etc.

As a general rule, a character can move 2 meters or less and still perform a simple action, such as reload a gun or open a door. Actions that require complex concentration, such as using a GPS device to call for an artillery strike or as defusing a bomb, will take more.

A combatant can Hide in one Round, then remain hidden and perform actions the next Round, still claiming the benefits of Hiding, as long as they do not move from their position.

Effects of Attacks: Damage and Awe

When targets are put under attack, they can suffer demoralization, injury, and death.

Damage

Attacks that hit a target have a chance to injure the target; this possibility is called *Damage*.

Base+Penetration

Damage is measured as two numbers: the *Base*, and the *Penetration*, written as two numbers, such as 8+3. The Base

represents the general likelihood of an attack to cause damage; the *Penetration* represents improved odds by cleaner hits, or hits against more vulnerable points.

Targets resist damage with two numbers: their *Deflection* (how unlikely Penetrations are) and their *Thresholds* (how great the Damage must be for the target to suffer ill effects.)

When a target is hit by an attack, one or more twenty-sided dice (d20s) are rolled; these are called *Penetration Dice*. Roll the d20s, and compare each one separately against the Deflection of the target – each one that equals or exceeds the Deflection is a Penetration; for each one, add the Penetration Value to the Damage.

Then, *find the highest-rolled d20, and add that result to the Damage, as well.*

EXAMPLE

Example: Auitzotl is critically hit by an attack of 10+10 damage. Two d20s are rolled against his Armor's Deflection of 13. One scores 17, the other 5.

The 17 is greater than his Deflection rating, so an extra 10 points of damage are scored.

The highest-showing d20 is 17. The Base of the weapon is 10, and one Penetration adds 10. The Damage Score against Auitzotl is $17+10+10=37$.

Penetration Dice

The number of Penetration Dice is dependent first on how injured the target is, then other modifiers like awareness.

Circumstance	Penetration Dice
Target is not injured	1d20
Target is Wounded	2d20
Target is Crippled	3d20
Target is Incapacitated	4d20
Target is Helpless	+ 1d20
Target was Critically Hit	+ 1d20

Thresholds

After adding all Penetrations to the Base, the final number is the *Damage*. Compare the Damage number to the target's *Thresholds*.

Damage is...	Default Value	Result
No Threshold (less than 1 st)	n/a	Target suffers 1 Awe
Wounding (1 st but less than 2 nd)	Body×2	Target suffers 1 Injury and 2 Awe; change status to <i>Wounded</i>
Crippling (2 nd but less than 3 rd)	Body×2 + 10	Target suffers 3 Injuries and 3 Awe; change status to <i>Crippled</i>
Incapacitating (greater than 3 rd but less than 4 th)	Body×2 + 20	Target suffers 5 Injuries and is out of combat; change status to <i>Incapacitated</i>
Devastating (4 th or greater)	Body×2 + 40	Target is mortally wounded or killed instantly

EXAMPLE *Example:* Auitzotl's Thresholds are 23/33/43/63. With a Damage Score of 37, Auitzotl is *Crippled*.

No Threshold

If an attack fails to score enough damage to pass the lowest Threshold, the target suffers no damage. However, being attacked is still disturbing, so the attack still inflicts 1 Awe. (Combatants with the

Gift of Coolness Under Fire will be able to shrug this off.)

Wounded

A Main Character that is Wounded suffers 1 Injury. If this Injury would reduce the Body Rating below zero, the character becomes Incapacitated, instead.

A Supporting Character that is Wounded has no Body Points to lose. For simplicity, multiple injuries are not measured against Supporting Characters, although the Game Host may rule that multiple Woundings may have long-term effects.

Future attacks against a Wounded character roll two d20s instead of one. While both d20s are rolled for Penetrations, only the *highest* one is added in.

If you are using miniatures, place one red counter next to a Wounded figure.

Crippled

A Main Character that is Wounded suffers 3 Injuries. If these Injuries would reduce the Body Rating below zero, ignore the excess; the character becomes Incapacitated, instead.

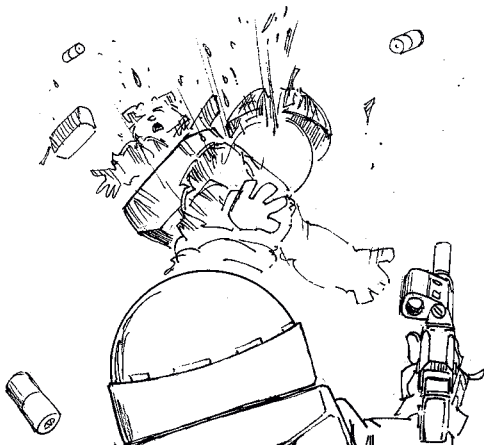
A Supporting Character that is Crippled has no Body Points to lose. For simplicity, multiple injuries are not measured against Supporting Characters, although the Game Host may rule that multiple Cripplings may have long-term effects.

Crippled characters cannot act unless they spend 1 Body (or 1 Morale).

COMMAND REVIEW • HPN7AZ DEFEUP

Where Are The "Hit Points"?

In most hostile situations, there will be a *lot* of characters involved. Each Player controls one Main and four Supporting Characters; the Game Host may be in charge of a dozen combatants or more. If each of these combatants had double-digit numbers, the record-keeping becomes complex very quickly. Instead, *Albedo* opts for a "narrative-driven" system, where only Main Characters have reserves of points to spend. Supporting Characters are dealt with quickly and simply – and they often need a Main Character to give them guidance and support. Players are encouraged to think about the tactics of their *groups*, rather than of their individuals.



If you are using miniatures, place two red counters next to a Crippled figure.

Incapacitated

A Main Character that is Wounded suffers 5 Injuries. If these Injuries would reduce the Body Rating below zero, ignore the excess. At their turn in the action sequence, an Incapacitated character must spend 1 Body or fall unconscious. They must spend another 1 Body if they want to act in the turn sequence.

After that, the character suffers 1 Injury at the end of every Round until their Body Rating drops to zero; then, they *Bleed*, as described below.

A Supporting Character that becomes Incapacitated falls unconscious, and Bleeds, as below.

If you are using miniatures, lay an Bleeding, Incapacitated figure on its back, face up, and place three red counters next to the figure.

BLEEDING

At the end of the Round, for each Bleeding, Incapacitated character, roll a d20 – on a 1, the character has expired due to blood loss or other injuries; on a 20, the character stabilizes.

Staunching blood loss requires the Medical Help action (p. 112).

If you are using miniatures, if the bleeding stops, remove one red counter, leaving two next to the face-up, lying figure.

Devastated

Main and Supporting Characters that suffer a Devastating attack are killed instantly and violently. Onlookers who

witness a Devastating attack suffer Awe: +2 if the victim was on the same side, +1 if the victim was neutral or hostile.

Awe

Life-threatening situations take their toll on a combatant. In game terms, Awe represents loss of fighting spirit, battle fatigue, and frustration with the feeling of powerlessness experienced during war.

Note that even an attack that fails to cause injury, or even one that misses, can still inflict Awe on a target.

In game sequence, Awe is figured after Damage, because if the target was Incapacitated by the attack, then Awe is irrelevant.

After an attack is resolved, a combatant suffers Awe as follows:

<i>Circumstance of Attack</i>	<i>Awe</i>
Ready target	Zero
Surprised or Helpless target	+1
was Suppression Fire	+1
At Close Range	+1
Missed target	Zero
Hit target	+1
was Wounding	+1
was Crippling	+2
was Incapacitating	+3
was Explosive	+1 per d20

EXAMPLE

Example: Auitzotl is shot at Medium Range and suffers a Crippling Injury. The Awe is +1 for being hit, and +2 for the Crippling Injury, for a total of 3. Auitzotl has the Gift of Coolness Under Fire, and reduces the loss to 2.

The target loses Drive (or Morale Points) equal to the Awe. If the target does not have enough points to weather the loss, they suffer *Panic*.

If the target is a Main Character, they also suffer 1 Trauma for each point of Awe they can't cover by spending Drive. Each point of Trauma reduces Drive Rating by 1; if Drive is reduced to zero, the target is in permanent Panic and requires psychiatric assistance.

If the target is a Supporting Character, they only lose Morale. If the target doesn't have enough Morale to cover the Awe, then the target suffers Panic. While in game terms, Supporting Characters don't suffer

Trauma, the Game Host may rule that repeated, severe mental stress can have permanent effects.

Panic

Characters that suffer Panic have reduced capacity to fight. Panicked characters cannot spend Drive or Morale, so they cannot Push or Risk on rolls, nor can they use Gifts or other abilities that require such points to be spent.

Panicked characters have a crisis of confidence. While they may act rashly, they are not assumed to be reckless or insane. Panic might not be fear – botched rolls and other mishaps can cause loss of Morale, and thus cause Panic.

What Causes Panic

A Main Character suffers Panic if they run out of Drive Points *and* if they have one or more Trauma. A Main Character that runs out of Drive and has zero Trauma may be mentally exhausted, but they do not automatically suffer Panic. (Note that if a Main Character is forced to lose Drive they can't spend, they suffer Trauma for each point of short-fall.)

A Supporting Character suffers Panic if they run out of Morale Points, and they suffer some condition that forces loss of Morale points that they can't cover. Do not

track "negative Morale" for Supporting Characters – simply mark the character as Panicked.

Rare circumstances, such as overwhelming fear or frustration, can also cause Panic. The Game Host may rule that dire situations such as explosive decompression, poisoning, impending nuclear holocaust, and other events causes Panic in certain characters.

What Panic Does

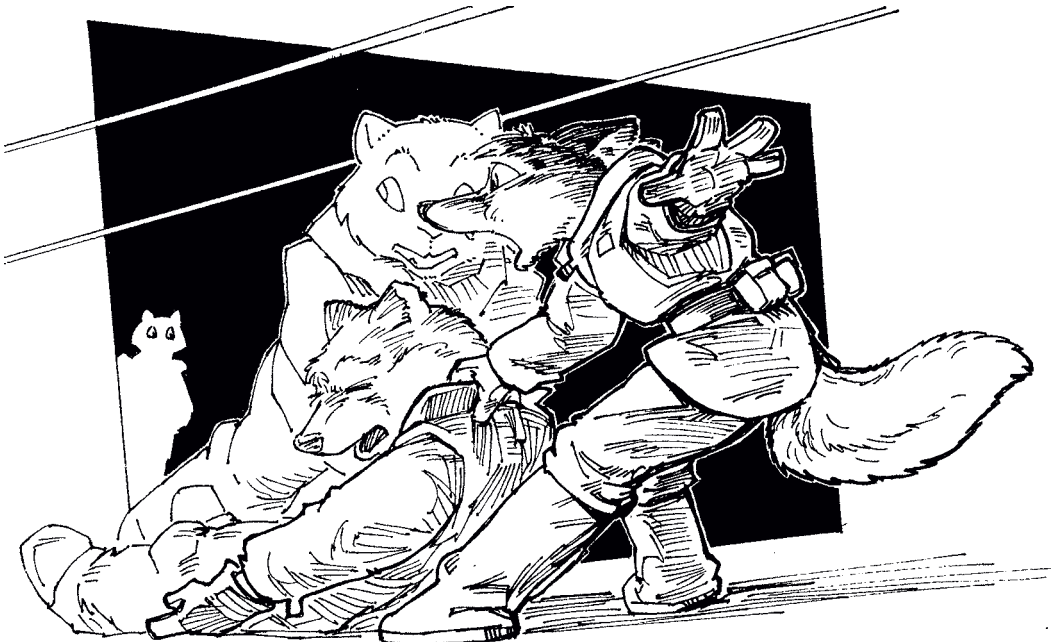
As a general rule, a Panicked character is frustrated and confused.

Each Action lists whether a Panicked character can perform it, and in what capacity. As a general rule, if a Panicked combatant *could* choose an Action that would make it harder to be hit – any action that increases Cover, Concealment, or Range against known hostiles – they will choose that Action over any other.

If you are using miniatures, place a yellow counter next to a Panicked combatant.

Special Circumstances

The standard attack assumes a careful attacker shooting at a ready opponent. However, there are some exceptions to typical attacks.





Close-Range Attacks

Being shot at is one thing – most attacks come from far away, from impersonal sources. There's something more frightening about someone in your face, trying to kill you. *Close-Range Attacks* use special rules, and such exchanges can be brutal.

+1 Awe at Close Range

Close-Range Attacks inflict +1 Awe on a target, whether they are successful or not. Thus any attack at your weapon's Close Range, even one that misses, can still spook a target. Gifts such as Coolness Under Fire will reduce this Awe, as usual.

Provocation

Anyone moving or acting within an attacker's Close Range provokes one free Close-Range Attack. Any combatant with a weapon that has a Close Range can use this attack. This attack can happen "out of sequence", before or after a combatant's action in the Round.

Note that some Longarms, like rifles, do not have a Close Range – for tight spaces in urban settings, carbines and pistols are preferred. All combatants can strike at a range of 1 meter with their bare-hands or with an improvised Melee weapon such as a rifle-butt.

Counter-Attacks

If both the attacker and the target have Close-Range weapons, and both of them are within Close-Range of each other, then the target may elect to *counter-attack*.

When Counter-Attacking, do not use the Range or Cover Dice. Instead, both attacker and target make *Close-Range Attack* rolls against each other, including their *Concealment Dice*. Whichever combatant rolls higher hits the other one. If there is a *Tie*, both targets hit each other.

Remember that a combatant doesn't have to counter-attack if they don't want to.

Remember that, when counter-attacking, *someone* gets hit ... whereas on a regular attack, Range, Cover, and Concealment dice still apply, so they might be missed.

Hand-to-hand attacks, by definition, are Close-Range Attacks – they provoke counter-attacks like anything else. If someone tries to run past a combatant, within the 1-meter reach of bare-handed fists, they may get sluggish for their trouble.

There is no limit to the number of times a target may counter-attack. Counter-attacking does not use up the one provoked-attack during the sequence. Any Close-Range Attack can be counter-attacked – even a provoked one.

EXAMPLE

Example: Toki is rushed by an insurgent armed with a pistol. As soon as the insurgent moves within 1 meter, Toki may make a Close-Range Attack with her bare hands. She elects to strike; this provokes a counter-attack from the target.

Toki elects to Push, spending 1 Body. She rolls her Brawl of 2d6. Her dice come up 5 and 3; her highest die is a 5.

Her attacker has a weapon with a Close Range – a pistol. As Toki swings at him, he shoots at her. He rolls his Pistol Dice of d8, scoring a 6.

Since the insurgent rolled the highest, he has won the opposed rolls. He has shot Toki at Close Range. Toki will suffer 1 Awe, plus the Awe from any injury she might suffer.

The insurgent also suffers 1 Awe, because he was attacked at Close Range, even though Toki's punch missed.

Surprised Targets

A target that is aware they're in danger, but doesn't know where the attacker is, is *Surprised*. Surprised targets cannot claim Cover or Concealment within 2 meters of their position, like ready targets can.

Attacks on Surprised targets inflict +1 Awe.

A Panicked target is *not* automatically a Surprised target. In fact, most Panicked targets are highly sensitive to danger.

Helpless Target

Characters can be unconscious, tied up, restrained in crash harnesses, floating in zero-gravity, or otherwise unable to move

and to defend themselves – in other words, they are *Helpless targets*.

Being Helpless is like being Surprised, only worse. A Helpless target cannot claim Cover or Concealment within 2 meters of their position. If it matters, any attacks on a Helpless target inflict +1 Awe. Also, attacks against a Helpless Target roll an extra d20 Damage Die.

An inanimate, unattended object, such as a door or a wall, is considered Helpless for this rule. A moving object (such as a vehicle) or an attended object (such as a rifle in an opponent's hands) is not.



Explosions

Volatiles such as grenades, can send sharp debris flying into the air. Such attacks are called *Explosions*.

An Explosion does not use a to-hit roll. Instead, all targets are attacked. Find the center of the attack, and measure the range to other targets. An Explosion has a *blast radius* in meters. A target within the blast radius suffers a 4d20 Damage Roll; a target within 2x the blast radius suffers 3d20; within 3x, 2d20; and within 4x, 1d20. An explosive that goes off when touching the target inflicts 5d20.

Each 25% Cover reduces the Damage by 1d20. A Hiding character improves effective Cover by 25%, even if out in the open. A combatant expecting an Explosion can "hunker down", using the Hide Action to reduce damage.

If an Explosion's d20s are reduced to none, the target suffers no Damage and no Awe. Thus the farther away a target is from the center, and the more cover they have, the less effective the Explosion will be.

Explosions cause +1 Awe per d20 of Damage Dice rolled. The large area of effect and violent concussion of the wave of air are quite unnerving. Thrown grenades are often

called "defensive grenades" because while they might not cause actual injury, they can reduce enemy morale and can encourage their blast areas to be empty of hostiles.

Remember to figure effective Cover from the center of the explosion! Thrown grenades will explode on the ground, but airborne explosives burst overhead, reducing effective Cover for deadly effect.

<i>Distance from Blast Radius</i>	<i>Damage Dice</i>
Physically touching explosive	5d20
Up to 1×	4d20
More than 1×, Up to 2×	3d20
More than 2×, Up to 3×	2d20
More than 3×, Up to 4×	1d20
More than 4×	None
Each 25% of Cover	Less 1d20

EXAMPLE: Auitzotl is taking fire, pinned down in a cafeteria. A hostile throws a grenade, which lands in the center of the room. A veteran of many skirmishes, Auitzotl had tipped over a table in a previous Round; now, he moves to Hide behind it. Next Round, when the grenade explodes, Auitzotl has 100% Cover from the table. He suffers no Damage and (with zero d20s rolled for damage) no Awe.

The following Round, Auitzotl takes an act of desperation. He stands up and fires his GAKW under-rifle grenade at the ceiling behind the hostiles. Since the center of the explosion is behind and above the targets, they will gain no Cover (as they, too, were using overturned tables, which are facing Auitzotl's door.)

The hostiles are each 3 meters away from the center of the Explosion; with a blast radius of 2m, this is more than 1× but not more than 2×; Damage is 3d20, and the Awe is +3.

Auitzotl himself is 5m away from the explosion, so he suffers damage for being within 3xblast radius, or 2d20; Auitzotl has also positioned the explosion so that a standing hostile can provide reduced Cover (a reduction from half-cover, to 25%) – this reduces the damage to 1d20. Auitzotl himself suffers 1d20 and +1 Awe from his own Explosion.

Some explosions might use *shaped charges*, only exploding in a cone, or hemisphere. The world of *Albedo* is filled with all kinds of explosive devices; the Demolitions Skill (p. 89) is used to prepare and to disarm them.

Shotguns

A special kind of explosion, *Shotguns* are smooth-bore projectile weapons. Instead of a single, solid bullet, shotguns project a spray of plastic darts (flechettes) or metal balls (buckshot). Shotguns are preferred for urban fighting: they are most effective at Close Range; they can blast open doors and weak barriers; and the projectiles are relatively short-ranged and thus less likely to cause friendly-fire casualties.

Shotguns roll special damage dice, based on the range to the target:

Shotgun Range	Damage Dice
Close	4d20
Short	3d20
Medium	2d20
Long	1d20
eXtreme	None

Since Shotguns roll no damage dice at eXtreme range, only the Base applies ... unless a Critical hit or something else adds another d20.

Armor

Armor serves two purposes: it gives the target increased *Deflection* (to reduce the likelihood of Penetration), and it raises the target's *Thresholds* for damage by a fixed amount. Note that even an unarmored target has a Deflection of 3.

Name	Deflection	Threshold
None	3	0
Battle Armor, Full Dress	11	+5
Battle Armor, Vest Only	7	+5
Concealed Armor	11	0
Spacesuit, Armored	13	+5
Spacesuit, Typical	11	0

Hand Weapons

The people of *Albedo* do not know much about physical combat. The few that do can be quite intimidating. Sometimes, a desperate combatant will use an improvised object, such as a rifle-butt, chair, or entrenching tool, to strike at another.

Weapon	Ranges	Damage
Fist	C1	0+ Attacker's Body
Martial Arts	C1	2+ Attacker's Body
Improvised, 1-hand	C1	2+ Attacker's Body
Improvised, 2-hand	C1	5+ Attacker's Body
Knife	C1	5+ Attacker's Body
Combat Staff	C2	8+ Attacker's Body



Firearms

The most common attacks in *Albedo* will be from guns. The common firearms that players will encounter have the following statistics.

Weapon is the name; you can find more information in the Equipment chapter, p. 136. *Type* is the Skill used when attacking with the weapon. *Ammo* refers to the ordnance deployed. *Mag(azine)* is the number of bullets held in a clip, if the weapon uses clips. (Note: the basic rules do not track every bullet, but a Variant Rule does; see page 160) *Action* is the weapon's rate of fire: "Semi-" weapons can use Semi-Automatic Fire; "Full" can use Semi-Automatic Fire, Following Fire, and Suppression Fire. *Ranges* are the weapon's attack ranges, in meters – note that not all weapons have a Close Range. *Damage* is two numbers: the Base (that always applies) and the Penetration (that is added only if a d20 roll scores equal to or higher



than the target's Deflection). *Notes* refers to any special rules of the weapon, such as Explosions.

Extraterrestrial Defense Force

<i>Weapon</i>	<i>Type</i>	<i>Ammo</i>	<i>Mag.</i>	<i>Action</i>	<i>Ranges</i>	<i>Damage Notes</i>
CKW Precision	Longarm	8x56	24	Semi-	S15, M70, L560, X4600	10+10
GLKW 32	Longarm	32 EX	1	Single	S5, M20, L80, X400	10+5 Explosion 2m
LRCKW	Longarm	10x56	8	Semi-	S15, M50, L330, X2300	24+12
GAKW	Heavy	32 EX	12	Semi-	S5, M20, L80, X400	0+10 Explosion 2m
PRLW	Heavy	--	1	Single	S15, M60, L470, X3700	0+10
Variable Grenade	Thrown	--	1	Thrown	Thrown Object	0+10 Explosion 2m
LAKW 1-56	Longarm	8x56	24	Full	S15, M60, L470, X3700	10+10
MAKW 3-60	Heavy	8x64	belt	Full	S15, M50, L360, X2600	11+10
LAKW 1-30	Longarm	8x56	24	Full	C5, S15, M50, L330, X2300	10+9
MAKW 2-18	Pistol	8x24	24	Full-	C5, S10, M30, L190, X1100	8+7
PAKW 4-12	Pistol	8x24	16	Semi-	C5, S10, M40, L230, X1400	8+7
SBKW 10	Longarm	10mm	9	Single	C5, S10, M20, L40, X60	5+5 Shotgun

Independent Lapine Republic

<i>Weapon</i>	<i>Type</i>	<i>Ammo</i>	<i>Mag.</i>	<i>Action</i>	<i>Ranges</i>	<i>Damage Notes</i>
AW 191 carbine	Longarm	6x40	48	Full	S15, M50, L410, X3000	8+9
ML 199 SMG	Longarm	6x30	32	Full	C5, S10, M40, L230, X1400	7+7
MP 197 Special	Pistol	6x30	32	Full	C5, S10, M30, L150, X800	7+6
MS 195 Shotgun	Longarm	8mm	12	Single	C5, S10, M20, L40, X60	4+4 Shotgun

SPOT RULES

247Z RVIZ

Role-playing games are full of all kinds of scenarios and circumstances. The Game Host will have to make "ad hoc" judgments on the spot of what a character can and cannot do. This chapter has a listing of many of the rules

Don't let all the rules bog you down. Rather, rules should add new wrinkles to old situations, or be a plot point for the story. Any military force will seek to take advantage of a situation as well as they can. Outnumbered troops will prefer to fight in fog or thick forest, where they can take advantage of improved cover and concealment. A highly-trained force might choose to invade a space-station, where they can use their superior zero-gravity training against ill-equipped foes.

Rules are to be fair and consistent. Players should be able to make informed choices about what their Characters do, so they know what they're getting into. Clever tacticians will seek out every advantage they can, so the Game Host should encourage his players to exploit new and unusual situations in the game.

Atmosphere

Characters in poor oxygen environments, such as high-altitude or a leaking spacesuit, must spend 1 Body to move or exert themselves, at all. If their oxygen runs out, they will suffocate.

Suffocation

Characters that are denied air can hold their breath for two minutes if they don't move or exert themselves. After two minutes, the target must spend 1 Body

regardless of what they do, or be rendered unconscious (and Helpless). If denied air for four more minutes, they will die.

A cubic meter holds enough air for a character to breathe for 15 minutes. A 3m x 3m room would thus hold enough air for one character to breathe for about six hours. More characters consume proportionally more air.

Vacuum

Without air pressure, ears will pop, eyes will bleed, lungs will rupture, and the very liquids of the body will boil away. Unprotected combatants exposed to 0 atmospheres (pure vacuum) become Wounded at the end of the first Round, Crippled at the end of the second Round, Incapacitated at the end of the third Round, and Devastated at the end of ten Rounds.

Lack of air resistance will multiply a bullet's Long and eXtreme ranges by 5. Close, Medium, and Long ranges are unaffected – these ranges are determined by make, manufacture, recoil, and other factors. This multiplier combines with the multiplier from gravity.

Atmosphere exerts a great degree of force on the walls of a spaceship; a single bullet-sized hole can lead to a rapid escape of air into space, called explosive decompression.

A combatant that suffers *any* attack that successfully Penetrates their spacesuit, while in vacuum, is leaking air. Someone must take an Action of Spacesuit vs. Intermediate Difficulty (d8 or 4) to patch the hole, using a kit that comes with all vacuum-suits. Otherwise, at the end of each Round that the suit remains unpatched, roll 1d20: on a 1, the suit has run out of air and the combatant inside is suffocating and exposed to vacuum.

Distance

With proper communications, even a simple man-to-man guerilla battle can involve resources kilometers away, or even in space.

COMMAND REVIEW • 247Z RVIZ

Spot Rules vs. Variant Rules

A Spot Rule is "if anyone asks, this is what we do" – a rule that rarely comes up, but when it does, it has significant effects. A Variant Rule (p. 126) is a change that changes the dynamic of play. Assume that all Spot Rules are in play, but only those Variant Rules that the Game Host specifically declares.

Horizon

The maximum distance a spotter can see, before the curvature of the planet drops off, is called the *horizon*. The higher the vantage point, the greater the distance that can be seen. For a standard 1-diameter world:

<i>Altitude</i>	<i>Horizon</i>
Ground level	11,000m
On a roof (4m up)	14,000m
On the 10 th story (40m up)	28,000m
High altitude (10,000m up)	72,000m

For smaller or larger worlds, multiply the horizon by the diameter. (For example, on a 0.5-diameter world, someone at ground level can only see 5,500m away.)

Emplaced Snipers

Tall buildings and mountains offer places to strategically place long-range weapons. Many commanders will have at least one sniper to take advantage of large weapons, used from a safe distance.

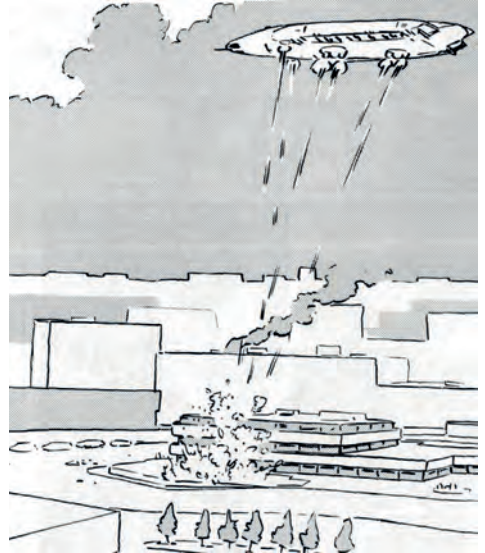
Snipers will often be issued cameras that can receive input from cameras carried by their fellow infantry. Thus, snipers can be ordered to fire on hostile forces that would normally have 100% Cover and 100% Concealment. Snipers will often have to shot through barriers – the target will be afforded increased Thresholds due to Cover.

Artillery Support

In large-scale battles, commanders may be authorized to call for support weapons. Artillery can be called from kilometers away, using indirect-fire weapons such as missiles and exploding canisters. Sophisticated computers can allow for grenade-sized explosives to be dropped almost anywhere on the battlefield, using a portable computer to designate the target, or even remote-viewing from an emplaced camera combined with telemetry from a personal positioning system. A commander issued support can use an action to call for artillery strike, which will arrive 1 or more Rounds later, depending on how far away the artillery is.

Air Support

Similar to artillery, air support involves calling for an aerodyne to deploy its weapons against the ground. The most common call for air support is to Suppress an area with



machine-gun fire, to clear it of hostiles before landing for troop deployment or extraction.

As a general rule, a personnel-carrier aerodyne carries VRF (Very Rapid Fire) Chain Guns capable of Suppressing zones 500m wide as Long Range or 1,000m wide as eXtreme Range. Use the usual rules for Suppression Fire, except on a very grand scale, using a typical Vehicular Weapons Rote of 5, and that the suppressed zone can be any simple geometric shape in size – circle, square, etc. – as guided by sophisticated computers.

Weapons of Mass Destruction

Autonomous Combat Vehicles can be ordered to descend from orbit to a planetary surface at extreme speeds, striking a planetary surface with a kinetic impact with a destructive yield measured in megatons. Micrograms of weapons-grade fissionables can create man-portable nuclear explosives. The ILR is known to fund research and development of new weapon systems; no one is really sure what the Enchawah Group does with "shadow budget" operations.

For the most part, Weapons of Mass Destruction (WMDs) will be plot devices – things to avoid. Engineers will be consulted for counter-intelligence, to find out where such weapons would be deployed for maximum effect and what safeguards could be employed against them to reduce or to nullify their effects.

A successful deployment of a WMD will result in a large area of collapsed buildings and uneven ground. Dust will hang in the air for days or weeks, limiting visibility. Untended corpses and decaying plant matter will pose a serious health hazard, not to mention radioactive fallout that can linger for days, weeks, years, or even centuries. Any survivors may become desperate and violent, attacking even those who offer disaster relief. EDF troops will likely be deployed to first pacify the WMD's area of devastation, then either to rebuild or to assist in clean-up.

Gravity

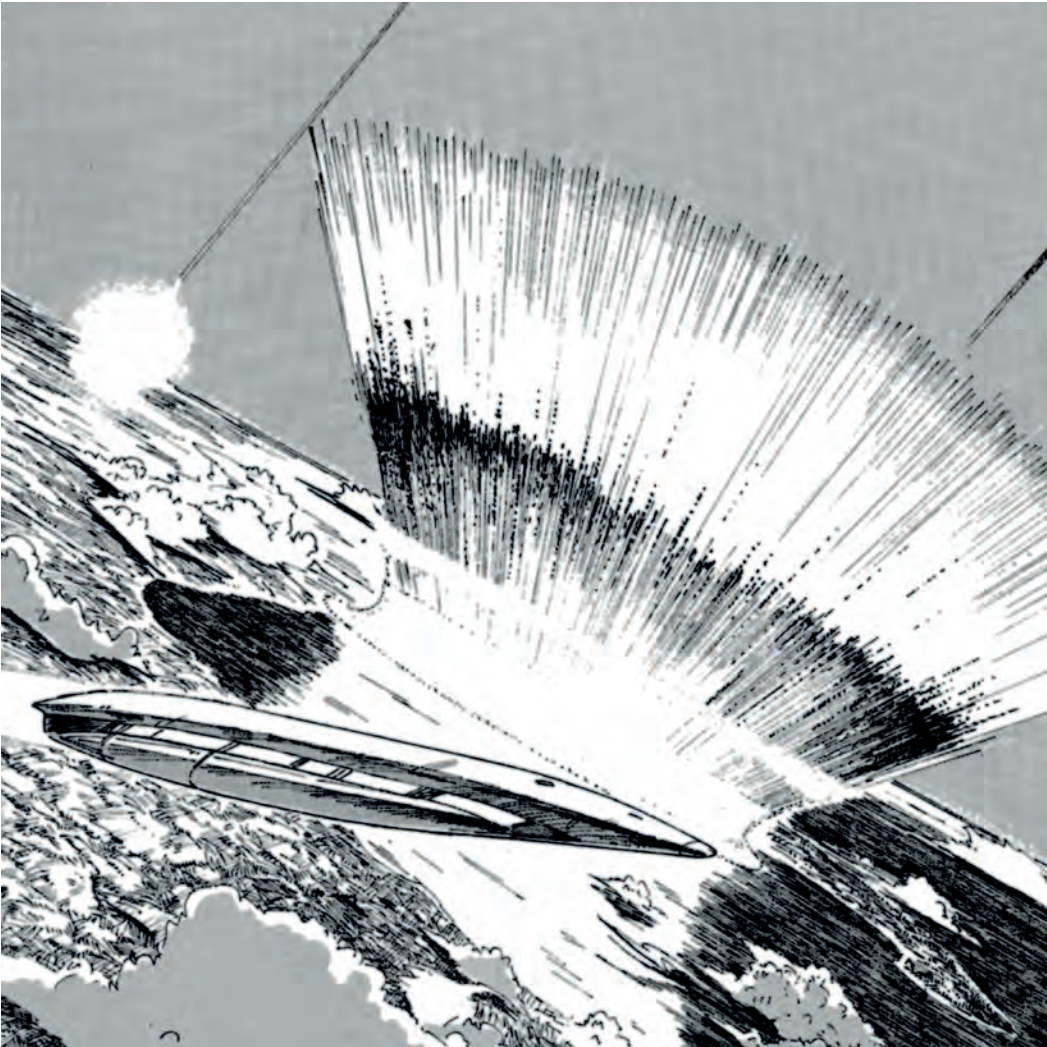
Space explorers will encounter all kinds of hazards related to both too much gravity, and too little.

Falling

Falling damage does not use the Armor's Deflection value. Instead, use the target's G-Forces Skill (p. 90) as the Deflection number. (Most characters should take Rote on this roll).

<i>Distance (1 G)</i>	<i>Damage</i>
2m	0+0
5m	0+1
10m	0+2
15m	0+3
20m	0+4
30m	0+6
40m	0+8
50m	0+10
100m	0+20
200m or more	0+40

If the target hits hard ground, roll 5d20.
If the target lands in water, roll 3d20.



On a standard world (with 1 G gravity), a combatant will fall 175 meters in one Round, and 500 meters in two Rounds.

Wind resistance (on a standard atmosphere world) will slow the fall of a man-sized object to 55m/s, known as the *terminal velocity*. Terminal velocity is reached after falling for about 200m. In a vacuum, there is no maximum falling speed.

Multiply the damage by the world's gravity, rounded down. For example, someone on a 1.5 G world who falls 20m suffers 0+6 damage instead of 0+4.

Freefall

Combat in zero-gravity is heavily dependent on the Freefall Skill (p. 90).

In freefall, combatants cannot freely move, so they cannot claim reduced Cover or Concealment within 2m of their position. Instead of the Run action, a combatant can take the "Freefall" action, launching into the air and moving their Freefall skill, in meters. Once a combatant begins floating, they may take other actions, maintaining their constant floating movement until they hit something. Freefall combat can easily be in three dimensions, which can get very confusing for all parties involved.

Spacesuits have magnetic boots that can lock on to hulls, allowing the combatant awkward movement as if they were on Uneven Ground. "Running" is still impossible – a target uses 5+Spacesuit, instead.

Lack of bullet declination over distance will multiply a bullet's Long and eXtreme ranges by 5. Close, Medium, and Long ranges are unaffected – these ranges are determined by make, manufacture, recoil, and other factors. This multiplier combines with the one from lack of atmosphere.

Property Damage

During a battle, inanimate objects will get struck by stray bullets and blown up by explosions.

Unattended, inanimate objects are *Helpless* – attacks against them receive an extra 1d20. Objects on moving vehicles or held by combatants are not helpless for this purpose.

<i>Material</i>	<i>Deflection</i>	<i>Thresholds</i>
Airlock	15	60/70/80/100
Armored Hatch	13	50/60/70/90
Armored Vehicle	16	50/60/70/90
Concrete	11	30/40/50/70
Exterior Door	8	30/40/50/70
Exterior Wall	11	30/40/50/70
Heavy Plastic	7	15/25/35/55
Interior Door	6	20/30/40/60
Interior Wall	9	20/30/40/60
Light Plastic	5	10/20/30/50
Spaceship Hull	18	60/70/80/100
Steel	12	40/50/60/80
Wooden Tree	7	20/30/40/60

Damage results have different meanings for inanimate objects. A "Wounded" object is physically damaged – civilian-grade electronics or complex devices will break. A "Crippled" object is broken, regardless of quality. An "Incapacitated" object is destroyed, and a "Devastated" object is pulverized into fragments.

To make a hole in a wall of any size larger than a single bullet requires a Suppression, an explosion, or a shotgun blast.

Penetrating Cover

In many cases, it won't be worth bothering to see if bullets pass through an inanimate object to what's beyond it. Sometimes, however, high-powered weapons can defeat weak cover.

If the attack would have struck the target if not for the Cover, then there is still a chance the target beyond it might have been hit. In other words, if it were not for the Cover, the target might have been hit.

Reduce the base Damage of the attack by the Deflection of the Covering object. This might result in a negative number! Then apply damage normally to the target.

COMMAND REVIEW • АРМАНД РЕГЕР

Explosives and Tactics

If explosives are so effective, why isn't explosive ordnance issued to more troops? Explosives aren't discriminatory – they can hit friendly and hostile forces alike. Guerrillas will use rapid mobility and secrecy to disperse, to keep "one bomb from taking them all out." Ruthless defenders will embed hostages in places where they don't want explosives deployed.

Size

Combat assumes fighting against man-sized targets.

A *small target* (less than 0.5 meters in the longest dimension) is treated as being one Range farther away for all attacks *except* Close. A *very small target* (less than 0.2 meters in the longest dimension) is treated as being *two* Ranges farther away for all attacks *except* Close. An *extremely small target* (less than 5 cm in the longest dimension) is treated as being *three* Ranges away for almost all ranges, and it treats Close Range as Short.

For larger size objects (at least 2m in length, width, and height, such as a wall), the shooter might still hit the target, if it matters. Use the deviation rules under the Throw rules (p. 115), using the attacker's roll. If the percentage deviation for the range is still enough to hit the target, then the target was hit.

Note: size rules apply when the *objects* are targeted, not when an *area* is targeted. For example, if you Watch a Medium-Ranged Area, you can still shoot at small targets that enter it – they just use Long Range's defense die.

Cover and Concealment is a percentage of how much of the *target* is covered or concealed; the Game Host rule on percentages for differently sized targets.

Temperature

All races of *Albedo* have protective fur or feathers that helps protect folks from the elements. While fur can be singed or frozen, it will grow back – unlike skin.

At temperatures below freezing (0 degrees Centigrade) a character must spend 1 Body every eight

hours or suffer Debilitating frostbite. For every 5 degrees below that, increase reduce the time to seven hours, six hours, etc. At temperatures of -40 degrees or below, exposure for even one Round costs 1 Body.

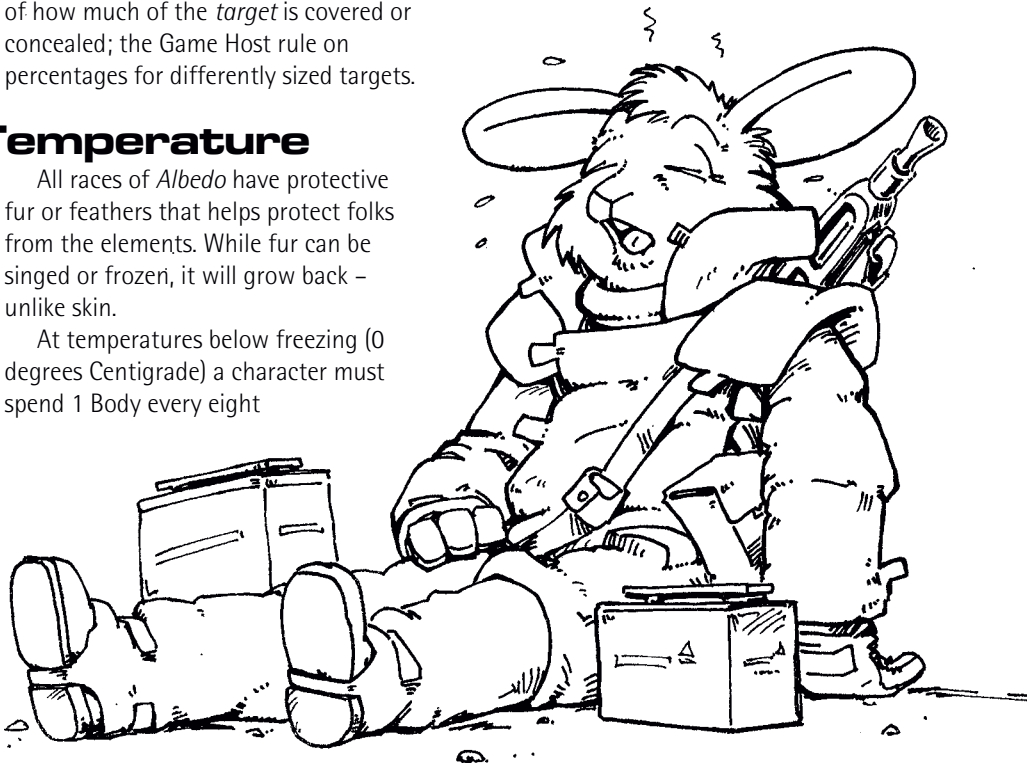
At extreme heat (30 degrees Centigrade), a character must spend 1 Body every eight hours or suffer Debilitating heatstroke. For every 5 degrees above that, increase reduce the time to seven hours, six hours, etc. At temperatures of 70 degrees or above, exposure for even one Round costs 1 Body.

Fire

Spaceships will often have hyper-oxygenated environments, making fires quite dangerous.

Fires consume oxygen in the rooms that they are in, filling them with smoke. Smoke limits visibility and will suffocate those trapped inside. On a planet, people can drop to ground level and crawl, being able to see and breathe. In micro-gravity, the room will fill uniformly.

Normal brushfires cause damage to anyone in them, as if the zone were Suppressed. (Combatants suffer 1 Awe to enter or to remain inside a burning area, for example.) Damage is 0+20



Terrain

During the course of the game, Player-Characters will encounter all kinds of strange places. Defending forces will attempt to exploit any advantage they can. For game purposes, terrain is divided into three categories: *Even*, *Uneven*, and *Impassible*.

Tactical maps should have clearly marked what sort of terrain is in what areas. Rather than mark every single tree, the Game Host can use the following table to determine average Concealment because of distance to a target.

<i>Description</i>	<i>Ground</i>	<i>Concealment</i>
Brush	Uneven	None
Building Interior	Even	100% per 10m
Collapsed Building	Impassible	50% per 100m
Desert Sand	Uneven	None
Hills	Uneven	100% per 500m
Light Forest	Uneven	25% per 50m
Marsh	Uneven	25% per 50m
Mountains	Impassible	100% per 100m
Plains	Even	None
Space Station	Even	100% per 5m
Swamp	Uneven	25% per 25m
Thick Forest	Impassible	25% per 25m
Urban Zones	Even	100% per 300m

Even Ground

City streets, sports arenas, level plains, building floors, and anything that is flat and level is *even ground*, the default assumption of combat. Combatants and vehicles can cross even ground at their normal movement rate.

Uneven Ground

Debris from nearby explosions, craters caused by bombs and shelling, thick plant growth, and the like are *uneven ground*.

Movement over uneven ground is at half-rate. (Thus, combatants can only claim reduced Cover and Concealment within 1m of their position.) Given the rubble and other debris present almost everywhere, infantry can claim 25% Cover and 25% Concealment almost anywhere.

Impassible Ground

Walls 1-meter high, collapsed buildings, dense trees, fences, and other barriers are *impassible ground*. Essentially, such ground must be climbed over.

Infantry must stop and climb over such obstacles, losing $\frac{3}{4}$ of their movement. Land vehicles must either destroy the obstacles or move around.

Units expecting urban combat will be issued grappling hooks and climbing gear. With proper equipment, a unit can scale a cliff at its Climb score as a full-action per Round.

Water

Units may have to cross water, such as streams or rivers or even lakes. Hard rain and other climate changes can cause floods.

A unit can Swim through still or slow-moving water as their only action, moving their Swim Score. Fast moving water is more difficult, requiring a Swim roll to even swim 1 meter, vs. difficulty starting at 2 and rising. Rapids will be impassible.

Guns *will* fire underwater, but the water itself will provide Cover, at 25% per 10m. Healthy lakes and rivers are full of algae, as well as dirt and other impurities. Concealment is 25% per 10m.

Unarmed Combat

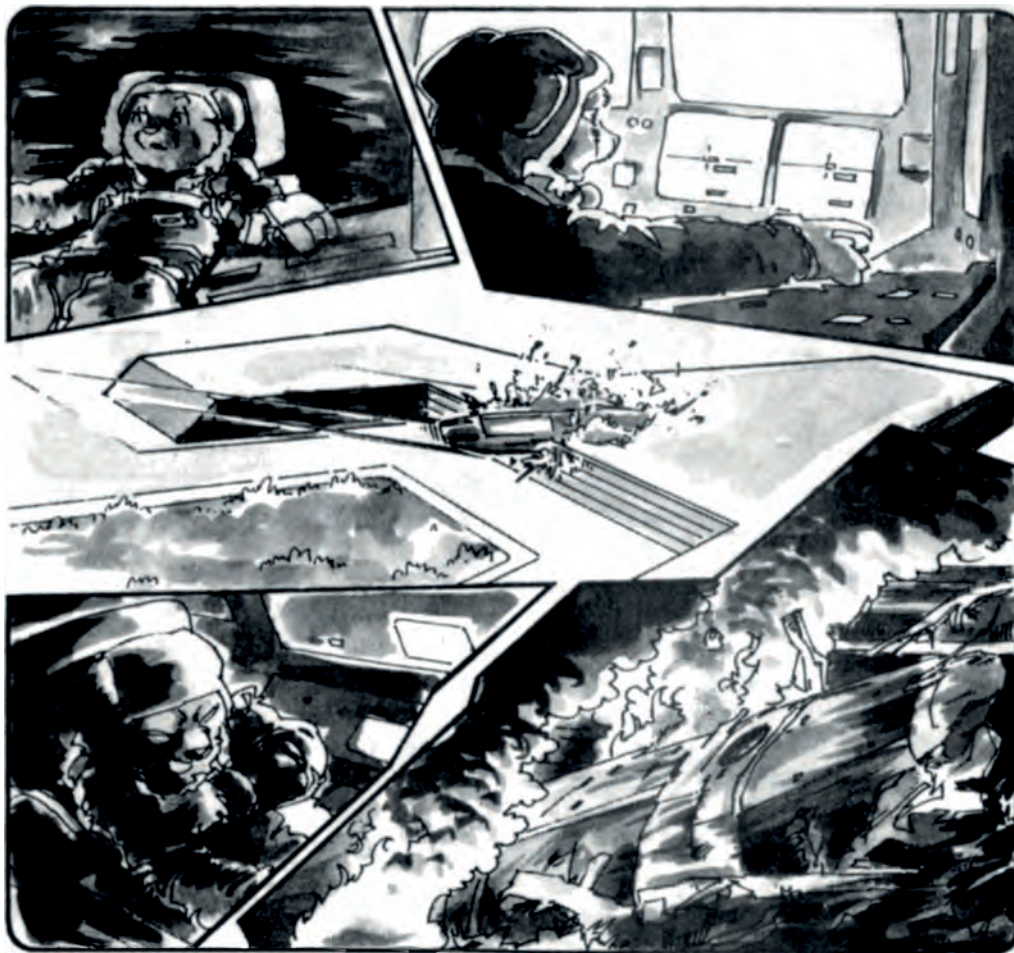
The basic rules of engagement assume that all combatants want to do is punch each other.

Grappling

Instead of attempting to strike, a combatant can *grapple* with a target instead. The attacker must have at least one hand free to grapple. The target can grapple as a counter-attack, as well. Grappling targets cannot claim reduced Cover or Concealment within 2m, and they can only use Close-Range weapons (against any target).

As their next Action, the attacker can follow up with a *pin*. The target gains 50% Cover against the attack if only one hand is used; if both hands are used, there is no Cover. The target can counter-attack, and if they win, they can choose to break the grapple instead of damaging the attacker. (Of course, a Crippled or Incapacitated attacker will have to let go.)

Grappling and pinning are contests of physical strength. On a *Tie*, the target with the highest Body wins.



Disarming

Instead of attempting to strike, a combatant can attempt to *disarm* the target. This is functionally the same as grappling, only targeting the weapon instead. Since weapons are small targets, the attacker gains the benefit of Cover, as per the Size rules – and yes, this Cover benefits their counter-attack.

Velocity

One G is equal to the gravitic force exerted on a man-sized body on a typical world. Aerodynes and other high-velocity vehicles are capable of rapid changes in vector, which can exert G-forces on the crew. In some cases, blood can be forced out of the brain (resulting in “black-out”); in extreme cases, physical damage may result.

In standard situations, a character can endure their Rote in G-Forces Skill with no ill effects. Increase effective G-Forces by 2

if the character is Wounded, by 4 if the character is Crippled, and by 6 if the Character is Incapacitated.

If the G-Forces exceed the character's Skill, the combatant must spend 1 Body of immediately fall unconscious, recovering 1d6 Rounds later. In addition, the character suffers Damage of 0+5, rolling 1d20 for each G that exceeds the G-Forces skill score. Armor does not apply: instead, use a Deflection of 11 if the character is in full harness and seat-belt, 3 if otherwise.

Visibility

Defensive forces will often prefer to fight in the dark, especially if they plan to flee. An invading force will often cut the power to a building or space station, to disable cameras and to allow an invading force cover of darkness. If one side has superior visual equipment, they will use it to their advantage.

Infrared cameras can see man-sized heat sources through thin walls, negating Concealment; however, infrared visuals lack the detail of the full spectrum, and thus grant 25% Concealment. Infrared cameras are a passive sensor, using existing heat sources.

Low-light enhancement takes existing light and amplifies it, often with computer-assisted correction; they are passive sensors which improve Concealment to only 25%. Low-light enhancement requires *some* lighting; in pitch darkness found inside or underground, low-light has no effect (and concealment remains 100%).

Ultra-violet sensors, or *UV sensors*, use a higher end of the light spectrum than characters can see. However, UV light is weaker than regular light; when combined with active UV spotlights, the sensors can see targets without revealing their own positions – unless the targets have UV sensors as well.

Many robots are equipped with *active sonar*, bouncing ultra-sonic sound off targets to identify their contours and their distance. Active sonar does not work in a vacuum.

Robot sentries can be deployed, and buildings will often have security cameras. *Remote viewing* – seeing your target through a third party (as opposed to “first-person” direct viewing) – is better than not being able to see them at all; at least you know where they are to Suppress their occupied area. In game terms, any form of remote viewing – that is, not looking at someone from first-person perspective – increases effective Concealment by 25%, as measured from the remote viewer. For example, if you use a camera to see someone in plain sight, they have effectively 25% Concealment. If the target was 200m away from the camera, outside in a soft rain, they would have 75% concealment.

Complete, total darkness is rare. Surrounding objects give off diffuse light, so even targets in shadow will probably have some cast-off light on them. True darkness is mostly only found underground and in impeccably sealed rooms.

<i>Visibility</i>	<i>Concealment</i>
Active Sonar	25%
Active UV Lighting	None
Daylight	None
Dusk	25%
Full Moonlight	50%
Infrared (heat sources only)	25%
Light Pollution in Cities	75%
Low-Light Enhancement	25% or 100%
Remote Viewing	Increase 25%
Underground Darkness	100%

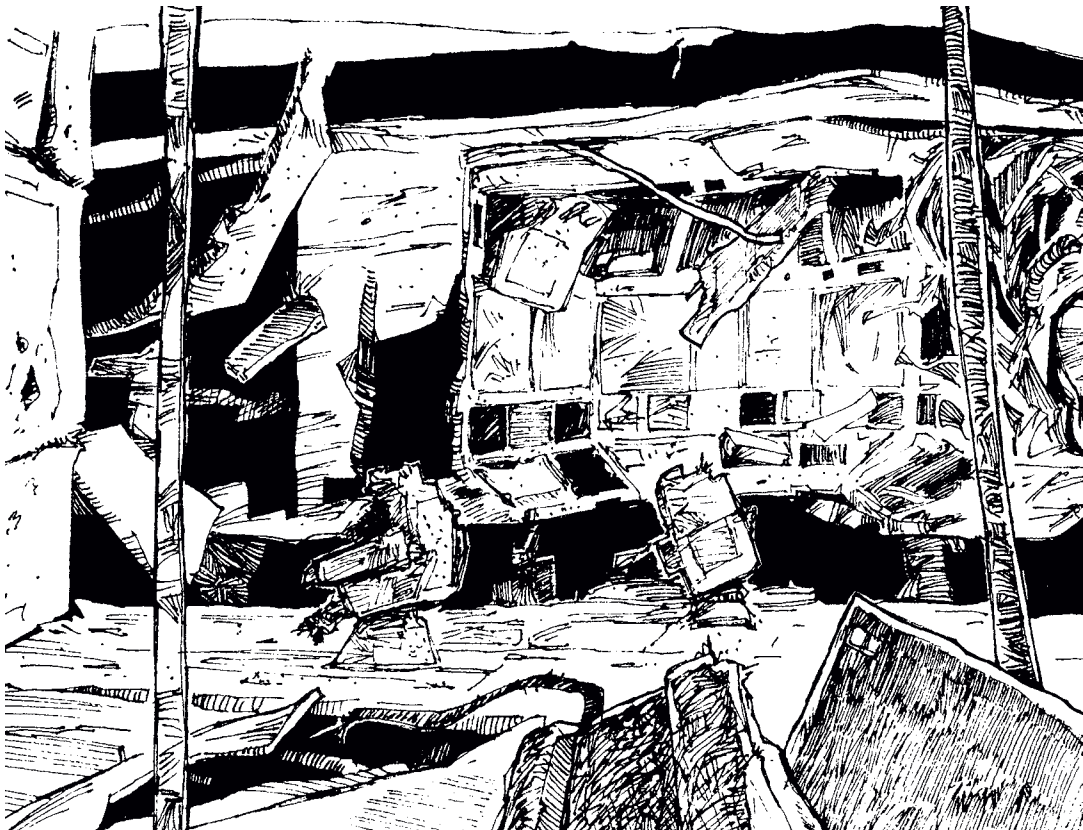


Weather

Strong winds will lower the effective temperature. Winds of gale force (80 kph or stronger) impede movement, reducing movement to half rate. Hurricane-force winds (120 kph or stronger) will send characters flying about, costing 1 Body (or more) per Round to resist Debilitating broken bones.

Snow can limit visibility and slow movement. Sleet reduces movement and makes ground slick, reducing land movement to half.

<i>Description</i>	<i>Ground</i>	<i>Concealment</i>
Flooding Rain	Uneven	25% per 10m
Hail	Uneven	25% per 25m
Hard Rain	Uneven	25% per 25m
Heavy Snow	Uneven	25% per 50m
Light Snow	(no change)	25% per 100m
Sandstorms	Uneven	25% per 10m
Snowstorm	Uneven	25% per 10m
Soft Rain	(no change)	25% per 100m
Thick Fog	(no change)	25% per 10m



AFTERMATH

ΛΓΖΕΠΝΑ7

After any battle, EDF officers will be expected to attend a debriefing, to report what occurred. Video records will be compiled, statements will be taken, and equipment will be accounted for.

In game terms, damage will be recorded, healing will begin, and character improvements and experience will be awarded.

Rest Period

Characters that rest can recover spent Attribute Points. A *Rest* is eight hours of sleep – no combat or Pushed rolls pertaining to the relevant attribute.

Recovery for Main Characters

Each Main Character has a *Recovery* number – their *highest* Attribute times their *lowest* Attribute divided by 5, rounded down.

		Highest Attribute (of Body, Clout, or Drive)															
		4	5	6	7	8	9	10	11	12	13	14	15				
Lowest Attribute (of Body, Clout, or Drive)	4	3	4	4	5	6	7	8	8	9	10	11	12	10	11	12	
	5	4	5	6	7	8	9	10	11	12	13	14	15				
	6	4	6	7	8	9	10	12	13	14	15	16	18				
	7	5	7	8	9	11	12	14	15	16	18	19	21				
	8	6	8	9	11	12	14	16	17	19	20	22	24				
	9	7	9	10	12	14	16	18	19	21	23	25	27				
	10	8	10	12	14	16	18	20	22	24	26	28	30				
	11	8	11	13	15	17	19	22	24	26	28	30	33				
	12	9	12	14	16	19	21	24	26	28	31	33	36				
	13	10	13	15	18	20	23	26	28	31	33	36	39				
	14	11	14	16	19	22	25	28	30	33	36	39	42				
	15	12	15	18	21	24	27	30	33	36	39	42	45				

For characters with Injury, Oversight, and Trauma, Recovery is a long-term Labor (p. 105). For each rest period, add you Recovery to your Labor status. It takes 100 times your current loss to remove just *one* point of Injury, Oversight, and Trauma.

Then, subtract the carry-over for your *next* Recovery. Keep track of the three kinds of Damage separately.

EXAMPLE

Example: Auitzotl has Body 11, Clout 7, and Drive 9. His highest attribute is 11 and his lowest is 7. His Recovery is $(11 \times 7 = 77 / 5 = 15.4 \approx)$ 15, after rounding down.

Auitzotl has 2 Injuries. To recover from 2 Injuries to 1 Injury takes $(100 \times 2 =)$ 200 Labor. On his character sheet, Auitzotl lists "0/200" in his Recovery track. Each rest period, Auitzotl recovers 15 worth, so after three rests, Auitzotl has "Injury Recovery 45/200" listed on his character sheet.

After 12 Rests, Auitzotl has 195/200, so he's feeling better. After one more Rest, his Recovery becomes 205 – he subtracts 200, and removes one Injury. He applies the difference of 5 to his *next* Recover – removing the 1 Injury, which costs 100. Auitzotl's player erases one point of Injury, and he writes "Injury Recovery 5/100" on his character sheet.

If a character suffers Damage, their Recovery resets back to zero.

EXAMPLE

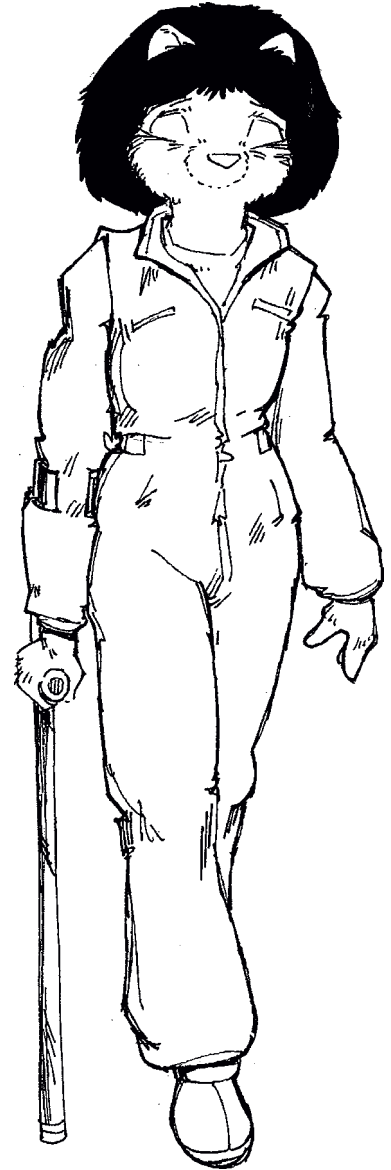
Example: If Auitzotl's Injury Recovery is at 195/200, and he suffers 1 Injury point, he loses the complete 195. With his Injuries up to 3, he now writes "Injury Recovery 0/300" on his character sheet, and must start over.

Keep track of Recovery on the three Damage tracks (Injury, Oversight, and Trauma) separately. Damage on one track does not reset the other two.

Recovery for Supporting Characters

Supporting Characters only have generic Damage such as Wounded, Crippled, and Incapacitated. *Supporting Characters have a Recovery of exactly 10.*

<i>Recovery from</i>	<i>Labor</i>
Incapacitated to Crippled	2000
Crippled to Wounded	700
Wounded to None	300



Devastated Supporting Characters are beyond medical help.

If a Supporting Character suffers a Wounding result or worse, their Recovery is zeroed out and must be started over.

Professional Help

People with the right Gifts (Doctor, Fac-totum, and Psychologist) can assist in the Recovery process.

Professional Help for Main Characters

Main Characters in the care of one or more Logistics Experts have their Body, Clout, and Drive Recovery increased by 1 per Rest.

A character with the Gift of Doctor can apply their Medical Sciences skill to treat a patient.

After a visit from a Doctor, reduce the Recovery number by *five times* the score rolled by the Doctor. (Note that if the patient suffers new Damage, that will reset the counter.)

A patient can only visit a Doctor once, to reduce Recovery. However, once a new Recovery number appears (either because of a reset from new Injury, or because of healing to the next step), a Doctor can treat the patient again.

EXAMPLE

Example: Auitzotl has 2 Injuries and a Recovery of 15. After three Rests, his Injury Recovery is 45/200.

He visits a Doctor, who has 5 Marks in Medical Sciences. With a rote of 6, that's good enough to deduce $(6 \times 5 =)$ 30 from the Recovery. Auitzotl's player writes "Injury Recovery 45/170" on his character sheet.

The Doctor tells Auitzotl to take it easy. If Auitzotl suffers 1 Injury, that would change his Recovery to 0/300 – not only negating all his rest, but also eliminating the benefit of the Doctor's treatment.

After 12 Rests, Auitzotl has 180 Recovery. He completely heals the first 170, and now has "Injury Recovery 10/100" on his character sheet. He can now visit the Doctor again, who could lower this to 10/70.

A character with the gift of *Factotum* can use Bureaucracy to organize another character's schedule, perform damage-control on their mistakes, advise them of their schedule, and generally help get things back in order. A Factotum treats Oversight the same way a Doctor treats Injury – by reducing Oversight Recovery by $5 \times$ a roll of Bureaucracy skill.

A character with the gift of *Psychiatrist* can use Question skill to psychoanalyze a patient, helping them to resolve their anxiety. A Psychiatrist treats Trauma the same way a Doctor Treats Injury – by reducing Trauma Recovery by $5 \times$ a roll of Question skill.

Professional Help for Supporting Characters

Supporting Characters only suffer from Wounding, Crippling, and Incapacitating. A character with the Gift of Doctor can reduce Recovery by $10 \times$ a roll of Medical Sciences. Once again, only one treatment is possible per step of Recovery.

If the Supporting Characters are in the care of one or more Logistics Experts, increase their Recovery by 1.

Debriefing and Review

After the debriefing, equipment will be inspected and repaired. Ammunition, batteries, and other consumables will be replaced.

Incapacitated Supporting Characters will be sent to the infirmary. For each supporting character that was killed, the commanding Main Character's credibility will take a hit – add 1 Oversight.

A Main Character whose Body Rating has been reduced to zero from Injury will be sent to the infirmary, temporarily relieved of command.

A Main Character whose Clout Rating has been reduced to half due to Oversight will generate gossip among their peers about how they are having difficulty keeping their affairs in order. The character will be brought before their superior officer for review – which should be an opportunity for role-playing. If they fail to present a good review, their SPI will be reduced by 1, 2, or even more. A Main Character whose Clout Rating has been reduced to zero due to Oversight will be censured – they will be relieved of command, given a new assign-

COMMAND REVIEW • ANZERNAN DEFEUP

Why is Recovery So Involved?

Battles will go quickly, with lots of fateful decisions. The aftermath, however, will have long-term repercussions. A commanding officer will have to make decisions about which of their subordinates will have to perform dangerous work, and which ones need to take it easy. Recovery is shown as two numbers – one progress, one goal – for easier record keeping between game sessions.

ment, have their SPI reduced by 3 (or more), and possibly be demoted.

A Main Character whose Drive Rating has been reduced to half due to Trauma will be noticeably frayed, and their associates will try to cheer them up, help them relax, and otherwise get them some help. A Main Character whose Drive Rating has been reduced due to Trauma will suffer a mental breakdown, brought on by the stress of combat.

Retiring a Main Character

Having any rating drop to zero could be cause to retire the character from the game. Most Players will become emotionally attached to their characters – they've spent a long time playing their role in the game, and time equates to improved abilities, greater reputations

Character Improvement

As characters continue play, they will face dangerous threats and encounter new places and situations. Some missions will be successful. Others ... will be charitably described as a "learning experience."

A Main Character's abilities improve. On the character sheet, you will find an *Improvement Track*. After three game sessions of harrowing, nail-biting adventure, a Main Character gains one kind of improvement.

<i>Adventures</i>	<i>Improvement</i>
3	Low
6	Medium
9	Low
12	Medium
15	Low
18	High

After the High Improvement, the counter resets. So three adventures after the last High Improvement, the Main Character receives another Low Improvement, and so on.

Low Improvements

- +1 Mark in any Skill which has no more than 3 Marks already (from any source). This can be a brand new Skill.
- +2 SPI

Medium Improvements

- +1 Mark in any Skill which has no more than 5 Marks already (from any source)
- +1 Mark in any of the Skills from Basic Training in your current Branch of Service (regardless of current Marks)
- +1 Group Gift in your current Service
- Any Gift listed on your list of Homeworld Gifts (provided you meet the Requirements)
- Any Gift listed on your list of Species Gifts (provided you meet the Requirements)
- Replace any Dubious Gift with a Basic Gift. (Remove any Attribute adjustments, plus or minus, but do *not* adjust SPI.)
- +4 SPI

High Improvements

- +1 Mark in any Skill
- Any Basic Gift
- Any Advanced Gift, provided you already meet the requirements
- Any Dubious Gift
- +1 in your *lowest* Attribute Rating
- +6 SPI

SPI and Promotions

After every mission debriefing where a mission was successful, a Main Character gains +1 SPI. For particularly successful missions, the Game Host may award more. Likewise, failed missions can lower SPI.

A character cannot attempt to rise to the next rank until their Social-Political Intelligence is equal to the minimum for the rank.

Promotions rarely happen on the battlefield. The Character will have to submit their request in writing, and to wait for a response from their superiors.

EQUIPMENT

EQUIPMENT



Despite the overall advanced state of technology in the Confederation and in the Republic, military scientists have yet to improve on the familiar ballistic weapons of the sort employed in the real world. While more exotic weapons do exist (such as powered rifles that use magnetic fields to hurl thousands of razor-sharp flechettes at a target) these tend to be prototypes, rarely seen in the hands of the common soldier. Old fashioned slug-throwers remain a quite effective way of killing at a distance, and the most affordable manner in which to equip an army.

Slug-throwers manufactured by the major powers fire rounds of two basic calibers – 6mm and 8mm. The EDF uses the 8mm standard caliber in all their firearms, while the Republic uses 6mm. The Enchawah Group generally uses 5mm ammunition, and a wide range of calibers is offered by civilian manufacturers. Military firearms fire sabotaged projectiles, meaning that each round contains a smaller projectile, one which actually strikes the target. The larger round (8mm in the case of the EDF) is fired out the barrel but is quickly shed, and the smaller projectile proceeds on its own trajectory. Sabotaged rounds are capable of great velocities, and pierce armor quite readily. EDF rounds are cased in Teflon, in the belief that this enhances their penetration ability further, while ILR rounds are caseless. Civilian and police rounds are

seldom sabotaged, as the targets they are shooting at do not wear armor.

Gun controls vary widely from world to world, and are largely dependent on the local state of settlement and attitude towards personal security. Gun ownership is strictly controlled in the Core Worlds, and civilian weapons include digital gun cameras that record an image every time the gun is fired. In some cases, this image may even be automatically broadcasted to the local police station. On some Core Worlds, gun ownership may even be taken as a sign of undue paranoia and unsociability. On some Outer Worlds, personal firearms are the norm.

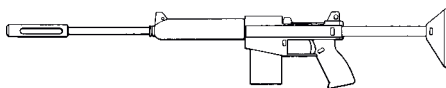
All normal ammunition can be fired in a vacuum, or underwater, as the rounds are propelled by means of a chemical charge that contains sufficient oxygen within itself to ignite and explode. An unsupported person firing a gun in zero-g will find themselves moving in a direction opposite the one they were firing in. The movement imparted will be very slight in most circumstances. For example, an 80 kg character who fired a two-gram bullet at 400 meters per second would find himself traveling backwards at a rate of one centimeter per second, or 0.036 kph. Even firing under full automatic for several seconds would not send the character spinning away into space. A gun fired underwater works normally, but accuracy is very poor.

Weapons of the EDF

EDF military weapon design philosophy proceeds from the assumption that their forces will be engaged with armored, military opponents. As such, they are loaded with rounds specifically designed to penetrate normal infantry armor. All EDF weapons use standard 8 mm ammunition, and may also fire non-sabotaged 8 mm civilian rounds. The only differences lie in the length of pistol and rifle ammunition, 24 mm and 56 mm respectively. Civilian models of most weapons are available – with the exception of assault and

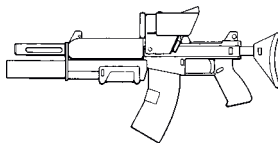
support weapons – but these may have limited capabilities depending on local laws. A digital camera that broadcasts an image of the target to the local police station whenever a shot is fired is a common addition to civilian weapons, as are mechanical restrictions on fully automatic fire.

LAKW 1-56 rifle



The standard combat weapon of EDF surface operations, the LAKW-156 8 mm automatic rifle is efficient and easy to use. Administrative Operations personnel attached to surface units are also issued these weapons, though they are usually kept in storage. Known to most troopers simply as the LAK (and informally as “the lackey”), the LAKW is an excellent all-round weapon, suitable for a range of operations. Standard surface operation models include a laser spot, and may also come with digital sights that feature night-vision and zoom capabilities. Homeguard units often have stripped down versions, with a just a laser-spot. The metal stock may be slid into the body of the weapon – this is commonly done when fighting in close quarters. The military version of the LAKW is capable of single-shot, burst, or fully automatic fire. EDF battlefield philosophy discourages the use of auto-fire. It has a magazine capacity of 24 rounds. It weighs 3.5 kg, unloaded.

LAKW 1-30 carbine/assault weapon



The LAKW 1-30 is a stripped down version of the LAKW 1-56, with a shorter muzzle. It is used for close range fighting. Among EDF forces it is most commonly seen in the assault weapon variant, with a grenade launcher slung under the barrel. In this configuration the LAKW 1-30 also serves as a powerful support weapon. Digital sights work with the launcher to determine range and targeting, automatically informing the user of the best angle

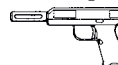
for firing. The grenades may also be set to explode at certain ranges before impact – allowing a soldier to rain shrapnel on the heads of enemy troops by exploding a grenade above their heads. The carbine magazine contains 24 rounds, while the grenade launcher holds a single 32 mm grenade. With the launcher it weighs 3.5 kg, unloaded. Without, it weighs 3 kg.

GLKW 32 under-rifle grenade launcher



Not an independent weapon of its own, the GLKW is designed to be mounted under the muzzle of any of the LAKW rifles. It is essentially a barrel designed to accommodate a single 32 mm grenade. Internal electronics can adjust the standard EDF variable grenade, allowing the firer to control at which range the grenade explodes. The GLKW must be used on a rifle with digital targeting sights to make use of this capability. The GLKW weighs 0.5 kg.

PAKW 4-12 semiautomatic pistol



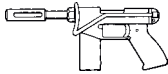
Issued to everyone of rank O6 or above, regardless of service, the PAKW is nearly as common as the LAKW. A durable and simple weapon, it is also commonly found in civilian use, for personal use or civic security. The PAKW is used solely for close-range fighting, and is particularly useful for indoor engagements or fighting in close quarters, as aboard a ship. The military version of the PAKW usually features a laser-spot. Its magazine holds 16 rounds. It weighs 0.75 kg, unloaded.

COMMAND REVIEW • АРМАНД НЕГЕРУП

Equipment of ILR Troops

Republican troops on the ground often lack access to specialized equipment. There are two reasons for this. First, the overriding desire to achieve the most “bang for buck” means that advanced or expensively manufactured equipment is spread as thinly as possible. Secondly, the average ILR recruit has rather weak technical skills, and cannot be trusted to make use of some equipment. As an example, hand computers are assigned only to officers.

MPKW 2-18 machine pistol



The MPKW is the standard weapon of Aerodyne crews and Aerospace security teams, and also sees use with surface operations specialists and armor crews. It combines high rate of fire with a compact size essential for shipboard actions and storage in a cramped cockpit. The MPKW includes a folding wire stock and laser spot, and may be fitted with digital sights in special situations. Its range is limited, but its magazine capacity and capability for automatic fire make it an excellent tool for clearing rooms. It may be fired in single shot or burst modes as well. The magazine holds 24 rounds. It weighs 1.5 kg.

COMMAND REVIEW • АРХИВНОЕ РЕЗЕРВ

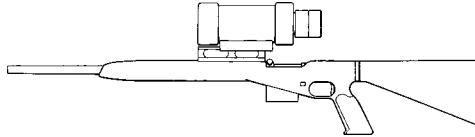
Firearm Action

The game term Action refers to when a character does something in the Round. The firearm term "action" refers to the mechanism of how a gun readies a bullet.

- . With a *single-action* (such as a shotgun or rocket-launcher), after firing one shot, the user must slide a bolt, pump a lever, or otherwise do something to ready the next shot.
- . With a *semi-automatic action*, every time the user pulls the trigger, another shot is readied, so bullets are expended as fast as someone pulls the trigger, which could be two or three every second. Semi-auto allows a shooter to quickly correct for a miss, but firing too many shots this way (with recoil, shell ejections, and the motion of repeated trigger pulls) will reduce accuracy.
- . With a *fully-automatic action*, the gun fires bullets as long as the trigger is held down, allowing the user to expend bullets very quickly (10 bullets a second or more) and to properly suppress an area.

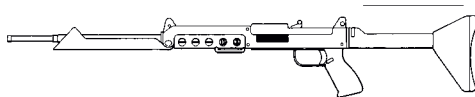
All fully-automatic guns in this game are also *selective-fire* – the user can choose among single, semi-auto, and full-auto fire.

CKW 8x56 precision rifle



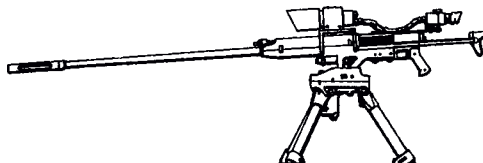
A military version of an early civilian weapon, the CKW is extremely accurate out to several hundred meters. They use standard 8 mm rifle rounds, and have powerful optical telescope sights that feature digital targeting assistance. The precision rifle is not same as a sniper rifle, as it is less powerful and has a shorter range. Precision rifles are used to kill individual enemy personnel from a distance during an advance. The CKW may only fire single shots. Its magazine holds 24 rounds. Unloaded, it weighs 5 kg.

MAKW 3-60 light machine gun



A rugged and relatively light-weight weapon, the MAKW is the standard support weapon found in most light infantry squads. If belt-fed, it is capable for firing continuously. However, it is more commonly fed with 100 round magazines. The MAKW fires standard 8 mm rifle rounds. It comes with a folding bipod for stable fire, and some squads may also use a tripod. The MAKW may be fired without a support, but at greatly reduced accuracy. It weighs 8 kg when unloaded.

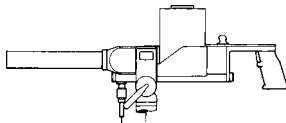
LRCKW 10x56 sniper rifle



This bulky and powerful tripod weapon is capable of puncturing vehicle armor at ranges of near 1 kilometer. Due to the ranges involved, optical sights are required, but these have extensive digital targeting assistance enhancements. The LRCKW fires 12 mm sabot rounds from an 8 round magazine, and must be mounted on a tripod to be fired properly. Ideally, it is placed in a

very high vantage point, such as an apartment building. LRSKWs are too bulky to be assigned to squads in normal operations, and are controlled as company level resources. It weighs more than 15 kg.

GAKW 32 grenade launcher



An imposing looking piece of armament, the GAKW fires 32 mm grenades up to 400 meters. It is normally used for indirect fire over the heads of the enemy, though it can also be used to disable armor and APCs. It includes digital sights that can be used to pre-set detonation times and ranges. The magazine contains four grenades. Unloaded, it weighs 6 kg.

PRLW portable rocket launcher



The PRLW portable rocket launcher is the most devastating conventional weapon available to a squad level unit. When uplinked to Command and Control through a field computer (see Infantry Gear) they are capable of striking targets up to 4 km away. While normally operated by two people, the PRLW may be fired by a single soldier if necessary. It is capable of firing anti-armor or fragmentation anti-personnel missiles. Fragmentation missiles are typically used against large concentrations of enemy troops and thin-skinned vehicles. While it is capable of severely disabling armored vehicles, the PRLW is less useful against flying targets. Aerodyne gunships can

usually out-maneuver or outrun the missiles, and larger vessels are unlikely to suffer serious damage. However, the PRLW can be extremely effective when used against an aerodyne as it is landing. The launcher weighs 12 kg, and each rocket weighs 3 kg.

Variable Grenades



EDF variable grenades may be thrown or fired from 32 mm grenade launchers. When used with a launcher, they may be manually set to explode after a given period, and to either serve as armor-piercing or fragmentation grenades. The armor-piercing setting is only useful when the grenade is fired from a launcher, as it will only explode when it strikes the target. This setting is useful against lightly-armored vehicles, and can also cause severe damage to structures. The fragmentation setting explodes after a set period (or at a preset range if used with a digital targeting sight), and spreads shrapnel over a large area. The casing of the grenade is made of sturdy plastic infused with razor sharp metal flechettes. These provide the shrapnel. When they are set for armor piercing, three guidance fins pop out of rear of the casing. Each grenade weighs 0.5 kg.

Specialized Grenades



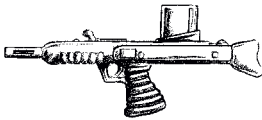
The EDF produces a number of highly specialized grenades for specific purposes. There are five basic types, incendiary, smoke, flare, irritant and stun. All of these grenades may be thrown or launched. They weigh 0.5 kg.

Incendiary grenades are packed with napalm, a highly flammable and sticky chemical that spreads over a large area when the grenade explodes. These devices can cause horrific (and often nonfatal) wounds, and are rarely issued to EDF troops. Smoke grenades are used to conceal troop movements from the enemy, and provide thick, billowing clouds of smoke for several minutes. They have no other use, though they may be combined with irritant chemicals to create opaque clouds of tear gas. Flare grenades use burning magnesium to illuminate a large area, and may also

temporarily blind enemy combatants, especially if used at close range. Flare grenades may also serve as a signal to passing aircraft.

Irritant grenades emit a cloud of noxious chemicals, such as tear gas, potent enough to force most unprotected people to flee the area. Typically, they cause shortness of breath and extreme eye irritation. These effects are temporary, but highly unpleasant. Depending on the chemical used, they may linger for several hours. Stun grenades emit a powerful burst of sound and light meant to shock and disorientate the target, and can be devastatingly effective if used indoors.

SBKW 10 Shotgun



Shotguns were invented fairly early on in history, and continue to see use as a civilian self-defense weapon and as a specialized firearm by security and military forces. The shot-gun is a smooth-barreled rifle that is most commonly loaded with shells containing "shot," tiny metal pellets. When the gun is fired these pellets spread over an arc, potentially striking a number of targets. They have a relatively short range.

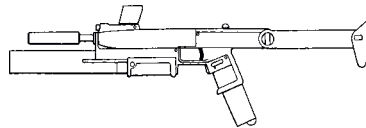
While shotguns are largely ineffective against armored targets, they are useful for untrained shooters, allowing them to at least graze a target without precise aiming. They are also useful for security teams driven to use force against a large group of rioters. Military personnel find shotguns handy in cramped conditions, such as indoor fighting; shotguns can be issued for infiltration of urban settings.

Weapons of the ILR

Cost, reliability, and fully-automatic fire capability are the greatest deciding factors when it comes to the design of weapons in the Independent Lapine Republic. ILR conscripts are typically not as well-trained as their EDF counterparts. Reliable weapons do not require skilled maintenance, and very

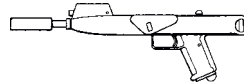
high rates of fire compensate for mediocre marksmanship. The average ILR infantry squad is equipped with stripped down automatic carbines, submachine guns, or machine pistols, all using saboted 6x40 mm rounds. While this ammunition load is not always effective against EDF troops in battle armor, it is brutally efficient when it comes to killing lightly-armored Homeguard troops and civilians. The high rate of fire also makes these weapons effective tools for denying passage through a given area to enemy troops – ILR squads are trained to simply hose the enemy with projectiles until they can close with them.

AW 191 carbine



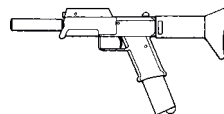
This is the standard weapon used by ILR heavy infantry squads and boarding teams. The AW 191 is an extremely rugged weapon, and capable of very high rates of fire. It has a laser spot and an optical "snap shot" sight. It has a folding metal stock. The AW 191 is the weapon that most ConFed citizens envision when they think of the ILR. The magazine has a capacity of 48 rounds.

ML 199 submachine gun



While the AW 191 is representative of the ILR in the minds of many, the ML 199 is actually the weapon most commonly found in the hands of Republican troops. This is an odd-looking weapon, scarcely larger than a machine pistol when the stock is folded. The ML 199 has a laser spot and short sight, and has a magazine capacity of 32 rounds.

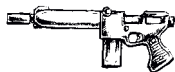
MP 197 special weapon



The MP 197 is assigned to officers and armor crews in the ILR. It is even more compact than the ML 199, and when the stock is retracted or removed it would be indistinguishable from a machine pistol,

where it not for the extra-long magazine protruding from the grip. The MP 197 is a devastating weapon in close quarters combat. It has a laser spot and short sight. The magazine contains 32 rounds.

MS 195 shotgun



The preferred weapon for pacification forces on the ILR homeworlds, the MS 195 does not often see field use -- the ILR prefer to use machine-guns, rifles, and armor to prevent hostile troops from entering territory in the first place. However, police forces and hold-outs during EDF mop-up operations will often encounter desperate soldiers holed up in buildings, with these shotguns.

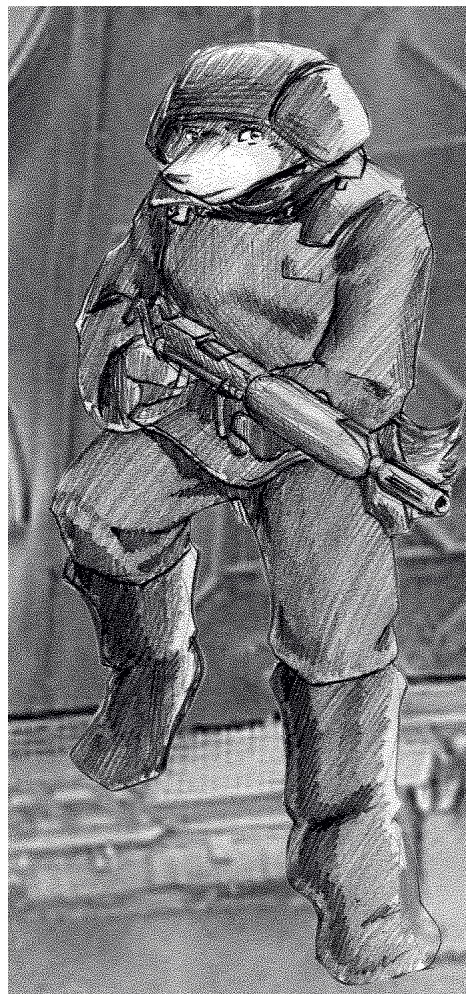
Clothing and Armor

Clothing presents a special problem for the EDF, given the varied body-types of the species in the service. Entire committees of administrative and logistics staff work to solve the matter, spending months designing a better sock, or a VHALO boot that will fit a penguin. Avians are a particular problem, with the exception of penguins, who may dress in tailored version of normal garb with extremely short trousers. The avian body form is simply unsuited to military garb and armor, and most birds go unclothed. While this undress causes no concerns when it comes to modesty or comfort, an eagle (for example) who ventures onto a battlefield in the altogether is going to be at a significant disadvantage when facing his well armored enemies. Solutions do exist, but they are far from perfect, and as a result very few birds end up in combat roles.

Most military garments make use of ballistic cloth. This is a light-weight, durable fabric made from multiple layers of synthetic fiber that are, weight for weight, many times stronger than steel. When a bullet or fragment of shrapnel hits the ballistic cloth, it cannot penetrate, and the force of the impact is spread over the surface of the fabric. Handguns are incapa-

ble of penetrating standard EDF ballistic cloth, though rifle rounds may do so. It is possible to severely injure or kill someone who is wearing ballistic cloth armor, even if firing a weapon that cannot penetrate the material, as the force of impact is in no way reduced. It is simply spread over a larger area.

Battle Armor: Surface and Aircrew



Worn over the standard combat fatigues (see below), EDF infantry battle armor provides ample protection, and can even deflect direct rifle hits. A shell of ballistic cloth contains several monomolecular plates that protect the torso and limbs. To preserve flexibility, the joints are protected with an additional layer of ballistic cloth instead of metal plate, making them somewhat vulnerable. A ballistic cloth collar may be closed around the throat and chin, though

this is normally only done when a soldier is bracing for an explosion. Aircrew battle armor is similar to infantry armor, but is much less bulky in order to deal with cramped cockpits. Consequently, it offers less protection from direct fire. This armor is worn by aerodyne pilots and crew while they are in the atmosphere, and expect surface fire.

Both versions of the battle armor are worn in two pieces – trousers and jacket – and may be worn underneath foul weather garb. It contains biometric sensors that monitor the life-signs of the soldier wearing them. These are constantly relayed to *Command and Control* (C&C), and also serve to act as a locator beacon that displays the soldier's location. The avian version of this armor is comprised of a rugged bib that protects the soldier's torso, lined with monomolecular plates. The wings are covered with a thick cape of ballistic fabric. All versions of the battle armor include durable gloves.

Standard Battle Helmet and Field Communicator



Lightweight and durable, the standard EDF battle helmet is designed to protect against impacts and shrapnel, as well as keep an infantryman in constant contact with the chain of command. The rigid monomolecular shell can deflect direct hits from smaller caliber sidearms, and internal padding diffuses the shock of impacts. The

internal padding is shaped to reflect the diverse ear types of EDF soldiery. Rabbits and similarly large-eared animals keep their ears under the helmet, which may become uncomfortable after long wear.

The helmet is open-faced, with a padded chinstrap. Transparent ballistic visors can be affixed to the front of the helmet for face and eye protection, but these are distributed only for specific short-term operations (such as raids), and soldiers on long-term duty in the field rarely use them. Helmet electronics are powered by a small battery, which typically has a field-life of 96 hours. Soldiers carry several of these batteries.

The helmet is a miracle of compact electronics. It incorporates a computer controlled radio headset and throat microphone that allows a soldier to stay in contact with C&C, and with members of his own squad. Squad leaders are able to carry on private conversations with individual members of their unit, and can enforce radio silence. The helmet understands basic verbal commands for directing communications – a squad leader who requests a private channel to his superior is connected without pressing a single button. C&C passively records every conversation for later reference, but does not actively monitor radio chatter.

Embedded sensors in the helmet monitor brainwave activity, and upload this information to C&C. An alarm is triggered if brainwave activity ceases or drops below a certain level. Medical officers and psychologists can actually interpret this data to determine the basic emotional state of an individual.

Advanced Battle Helmet and Field Communicator

Worn by combat officers, armor crews, and pilots, the advanced battle helmet is actually comprised of two separate layers. The first is a padded skull-cap that contains communications gear and biometrics. This skull-cap is covered with ballistic cloth, and provides enough protection against impacts that many armor crew rely on it alone. In the field the padded cap is worn under a monomolecular shell similar to the standard battle helmet. The advanced helmet con-

tains more extensive electronics, and a longer range integral radio. It may also be fitted with an armored face plate that automatically seals to the helmet, making it a suitable component for a spacesuit. If this is done, a miniature oxygen tank and rebreather provides life-support for up to two hours. VHALO personnel invariably wear this face plate during drops.

Concealed Armor

Dignitaries, secret police, criminals, and other folks of means who are expecting violence may employ varieties of concealed armor. Protective vests can be worn under bulky clothing, but sometimes such clothing is inappropriate. Clothing can be crafted from monomolecular fibers woven over protective plates, appearing almost indistinguishable from regular clothes, but providing protection that approaches full battle dress.

Footwear

The design and issue of practical footwear provides a particular challenge for the EDF, given the wide differences in foot and leg physiology amongst the various races of the Confederation. The sentient races have hooves, trotters, and paws of every description. The talons of birds present a particular problem. Though they are able to go "bare-foot" in almost all situations, they obviously require foot protection in combat conditions, extreme environments, and in a vacuum.

Another complicating factor is the difference between digitigrade and plantigrade legs. Digitigrade legs most closely resemble those of real world dogs and cats, and feature what appears to be a "backward knee." In reality, this is an extended foot and ankle structure, and the toes are used as the foot. Digitigrade legs appear in a small, but significant, portion of the population, most commonly among foxes. Plantigrade legs are humanoid. To address this problem, the EDF is forced to produce a large range of fairly generic shoes and boots suitable for both leg types. Digitigrade footwear is simply more flexible than plantigrade footwear, almost resembling a snug sack that is placed over the leg. It has a smaller sole to reflect the smaller walking surface.

All EDF personnel are provided with a pair of combat boots and uniform shoes, with the exception of birds, who receive general purpose "gloves" they may choose to wear over their talons. Aerospace crews wear a combat boot variant that connects to their spacesuit. Non-avian officers with higher than O6 rank also receive parade boots (plantigrade only) to wear with their dress uniforms. Normal combat boots are made from durable, waterproof synthetics, with a rubber sole. They are laced up the front. Aerospace boots are laceless, and must be pulled on. They may be sealed to any standard spacesuit or vacuum-suit liner. VHALO troops wear specialized combat boots that contain a complicated internal metal framework that provides ankle support during drops. Combat boots are worn by all personnel when they are dressed in their utility fatigues or battle armor.

Uniform shoes and dress boots are made from a glossy synthetic coating over a organically grown suede-like material, similar to patent leather. They are worn more for their appearance than durability. Uniform shoes are worn with the standard general duty uniform, and are laced. Dress boots rise to the knee, and are lace-less. They are meant for wear with the formal dress uniform, but are sometimes worn with the general duty uniform by officers in specific units, as part of an obscure military tradition that likely originated in a local shortage of uniform shoes.

Socks are worn under all footwear, to provide additional insulation and protection from chafing. Socks of different weights and warmth are worn in each season – this is affectionately known as the CSS, or Combat Sock System.

Foul Weather Garb

In cold weather infantrymen will don insulated jackets and trousers over their fatigues and battle armor. These waterproof garments are bulky, especially when worn over battle armor, but are loose and light enough that they do not impede mobility. The padding provides a small degree of protection against minor impacts, such as punches and kicks. Foul weather garb is invariably olive green, no matter the service.

The avian version of this clothing resembles an insulated cape, with leggings. In extremely wet or rainy conditions infantrymen will be issued a rain poncho made of coated cloth that goes over all other clothing. It is open at the sides to allow access to firearms and gear. Avians may wear this poncho with only minor modifications.

Headgear (non-combat)

EDF units normally disdain non-functional headgear, limiting themselves to woolen toques or watch-caps in cold weather, and peaked caps (similar to a baseball hat) in sunny weather. Homeguard units have a wide variety of headgear, much of it simply decorative. These hats serve to distinguish units and identify their planet of origin.

Spacesuit: EDF Utility



The standard EDF spacesuit is little different from the civilian model. It is made from two semi-rigid layers of synthetic cloth, in between which are suit electronics, a layer of sealing gel, and a Mylar sheath that blocks a portion of incoming cosmic radiation. The gel also acts as temperature regulator, and is capable of rapidly cooling or heating. The outer layer is a light ballistic cloth that resists tearing and micro-meteor

impacts. The outer layer is not flexible, requiring the joints to be made of a complicated "accordion" of ballistic fabric that allows the wearer to bend his arms and legs normally. Gloves and boots are separate from the basic suit, and must be worn for it to be effective. Normal Aerospace combat boots can be used with the suit, but these do not offer the same protection.

If the suit is slashed, the gel forms a barrier that serves as a temporary patch. Larger tears can be repaired with adhesive repair patches that are stored in a pocket. The most obvious difference between the EDF suits and civilian models are the protective monomolecular plates sewn into the torso section. These provide substantial protection against firearms and accidents.

The suit is a one piece garment (aside from the helmet, gloves, and boots) that is put on like a coverall. It must be worn over a liner (see below) for maximum effectiveness, though in a pinch it may be worn alone. Biometric and environment sensors are located throughout the suit, and transmit data to a tiny computer in the helmet. A computer jack and status monitor is affixed to the left breast, and it may be used to patch into shipboard computers. Spacesuits have a variety of Velcro patches, clips and pockets for storing tools, as well as a detachable electric lamp used to provide light during repair jobs. EDF suits have electromagnetic pads on the soles and palms. These pads can be activated at will, and allow the wearer to adhere to any metallic surface. A flexible coil of tether line is normally secured to the ship as an additional precaution.

The suit is light enough and flexible enough to be worn on the surface, and may be used to explore airless bodies, or planets with poisonous atmospheres. It is water-tight, but the military version is not buoyant, making it a poor choice for underwater exploration. It offers limited protection against high pressure conditions, and specialized hard-shell suits are required for exploring planets with very high atmospheric pressure. Utility suits are not suitable for protection from large amounts of hard radiation, though they do provide enough protection for normal wear in space. The

suit has a small backpack with an oxygen supply and advanced rebreathing system that provides about 12 hours of life support. This backpack may be replaced or supplemented by a much smaller unit that attaches to the back of the helmet. This smaller unit is only useful for two hours.

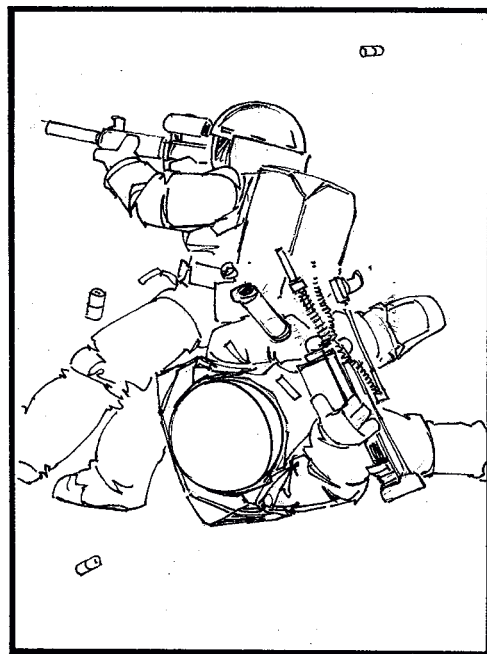
Spacesuits cannot recycle bodily waste. Urine is usually collected by a super absorbent gel pad (essentially a diaper) that can trap several times its own weight in liquid. This is usually sufficient for the normal duration of the suit's life support. Some suits intended for only extravehicular use have the option to store urine in a bladder that may be discharged into space. While no provisions are made for the collection of solid waste, the suit is designed so that a bowel movement will cause no serious problems, though the personal comfort and pride of the wearer will certainly be damaged.

The suit helmet consists of a durable shell that covers the head and a separate face plate. The face plate is designed to suit a range of muzzle sizes and types. It is made from monomolecular metal, with a transparent polycarbonate visor. If the user wishes, a second photosensitive visor can be lowered over the main visor. This automatically darkens when exposed to very bright light or flashes. Wearers normally lower the photosensitive visor while moving from place to place outside the ship, and raise it when doing repairs or other tasks that require full use of their vision. Some faceplates are simply transparent plastic half-spheres that affix to the helmet – these are worn when full visibility is required. The helmet incorporates much of the suit electronics, and includes a radio, additional biometric sensors, and a miniature video projector that can display visuals on the inside of the faceplate. Vomiting inside a suit helmet is a potentially serious matter, especially for zero-g novices. EDF suit helmets are equipped with filters that prevent vomit from entering the rebreather system, and all internal helmet electronics are waterproof.

Utility suits are issued to normal EDF crew and are donned whenever the vessel enters a hostile system. Passengers, such as

infantry in transport, are given generic emergency suits. Some crewmen may wear armored spacesuits instead, especially on smaller ships. Civilian ships are not required to provide utility suits to passengers, but they must have an adequate supply of emergency suits or rescue balls (see below) for everyone aboard. Avian spacesuits are available, though they greatly reduce manual dexterity because the delicate, feathered fingers must be enclosed in fairly crude mittens.

Spacesuit: Armored



Armored spacesuits are worn by freefall infantry and aerospace crew in extraordinary situations. It is simply a more extensively armored version of the EDF utility suit, with additional plates in the legs and arms, and a more durable helmet. The suit is designed to fit onto the EVA rig (see below) and has an elaborate system of backpack clamps to accommodate the rig. It also has clips and ammo pockets, similar to those on surface body armor, for securing arms and ammo. It is otherwise identical to the utility suit.

Armored spacesuits are very bulky – anyone wearing one moves much slower.

Spacesuit: Emergency

Emergency spacesuits are issued to passengers on civilian liners and infantry in transit aboard a capital ship. They are necessarily very generic, and a given suit can be adjusted to fit every body type, though some of the more unusual avian types will require some effort. Essentially, the emergency suit is an air-tight bladder in roughly humanoid shape, topped with a metal collar that holds the helmet. A small canister on the chest contains basic life-support equipment, and a pouch around the waist contains an emergency repair patch. Unlike rigid utility suits, which are able to maintain a constant volume of air and pressure, emergency suits inflate like large balloons, lending the wearer a somewhat comical appearance.

Emergency suits have a durable outer layer of thin ballistic cloth that serves to block micrometeor impacts and resist tears. An inner layer of Mylar and fabric insulates the suit somewhat and deflects a portion of incoming radiation. The limbs and torso of the suit are covered horizontally and vertically with belts and straps that may be used to crudely tailor it. For example, the arms can be shortened by folding the sleeves onto themselves and securing them with straps. Emergency suits are not suitable for extended wear outside of a spaceship, and are intended for protection in the event of a hull breach.

The "fish-bowl" helmet is divided into two pieces, front and back. These are locked together with metal clasps, and the whole assembly snaps on to the metal collar. The helmet is made of a durable transparent polymer. The canister on the chest contains a basic rebreather and small oxygen supply, enough for eight hours under normal conditions. The canister has a small heater and air cooler unit that regulates temperature, but if the wearer undertakes any vigorous action his body heat will rapidly make the suit extremely uncomfortable and cause condensation to form on the interior of the helmet. The suit and helmet can be folded down and stowed in a very small compartment. Ideally, they should be worn with a vacuum-suit liner.

Uniforms

When not in combat or engaged in potentially messy duties, cadets and officers alike are expected to don their general duty uniform. The general duty uniform is made of light-weight material, and is intended for indoor wear or temperate weather. A short-sleeved tunic is often worn aboard ship. Aerospace personnel wear blue uniforms, while Surface Operations wear green. Administrative staff and specialists wear the color appropriate to the service to which they are attached, with the exception of certain departments. Doctors, especially in space, wear white versions of the uniform when not in field. Most avians do not wear general duty uniforms, with the exception of a collar featuring rank and service insignia.

The normal general duty uniform consists of high collared tunic, belt, and trousers. The jacket is fastened up the left hand-side of the torso with clasps that are concealed when the jacket is closed. Service insignia is placed on the collar, while rank insignia is placed on the left breast. The uniform is belted around the middle, with a shoulder strap for additional support if a pistol is worn. Only commanding officers are normally issued pistols. A long overcoat is available for cold weather conditions, though most prefer to wear the more durable coat that is issued with foul weather garb. The general duty uniform is worn on formal occasions by cadets, while officers have a dedicated dress uniform.

The EDF dress uniform may vary in slight particulars between units, with one unit having a different cap, or color patches. Essentially, the dress uniform is a more elaborate version of the general duty uniform, with knee high jackboots. A full-length cape is worn over the shoulders. The dress uniform is worn at diplomatic functions, social affairs, and important events, such as treaty signings and medal award ceremonies.

Utility Fatigues

A set of durable one-piece coveralls made of lightweight acrylic fabric for most personnel, and a bib covered in pockets for avian troops. Normal infantry wear olive

green, though black fatigues may be issued to commandos for night-time raids. Aerospace technical personnel wear orange fatigues while aboard ship, while normal starship crews wear blue. The overalls have several pockets and Velcro patches for easy equipment storage. They treated with an oil and water repellent, and are ideal for warm-to-cool temperate environments. They are designed to be worn comfortably over spacesuit liners, and under battle armor, spacesuits, or foul weather garb.

Spacesuit Liner

This is a skin-tight body sheath that covers the torso, arms, and legs, rather like a pair of long underwear. Aerospace crew wear liners under their outer clothing at all times. When worn under a normal or emergency spacesuit the liner provides additional support to the internal organs and guards against chafing. The liner may also serve as a very short-term spacesuit in and of itself. The collars, sleeves, and pant cuffs of the liner can be secured to a normal spacesuit helmet, gloves, and boots respectively and thus serve as a crude spacesuit. They may also be used with normal Aerospace combat boots, and experienced Aerospace personnel will keep their gloves and helmet within easy reach. In the event of a hull breach, these can be donned much faster than a full spacesuit. A vacuum-suit liner used in this way provides adequate life-support for up to two hours, using the miniature life-support pack on the helmet. After 30 minutes, however, the wearer will experience severe discomfort as the liner is unable to provide adequate support for internal organs on its own.

COMMAND REVIEW • APNANA NERFUP

Gear of the ILR

ILR equivalents to all the EDF equipment listed above exist, but they tend to be made as cheaply as possible. This does not necessarily mean that ILR equipment is unreliable, but it does mean that ILR forces do not always have the same level of flexibility as their EDF counterparts. Even a piece of ILR equipment as basic as a canteen will tend to be somewhat basic. The ILR strives for durability over flexibility.

Other Gear

Military planners in the EDF believe that it is essential for their troops to be prepared for anything. As such, they are sent into the field with an enormous supply of resources. Most of these are kept in the stores of the central Administrative Group for the unit, and are distributed as needed. Larger units, such as carrier groups, actually have an extensive manufacturing capability, and can create new equipment when the demand arises. However, every individual crewman or soldier is assigned a broad selection of tools and gear designed to support them in their day to day tasks. The list below is a representative sample of the typical items a player can expect his character to have at hand at short notice, within reason. A shipboard technician is not likely to have an entrenching tool in his personal kit, and a light infantry lieutenant won't be able to obtain an EVA Rig from her platoon quartermaster.

When sent into the field, Surface Operations troops are equipped with either a 24 hour kit, or a 72 hour kit. These kits contain everything the soldier is likely to need to survive in the field during that period.

24-Hour Kit

The bulk of the 24-hour kit is contained within a small backpack with a rigid frame. The pack is one size fits all and is held with padded shoulder straps, a chest strap, and a detachable waist belt. It is made of light ballistic cloth, affording an additional layer of protection to the back, and weighs about 1.5 kg when empty. The main compartment has a volume of 20 liters, and two side pouches hold 5 liters each. A rifleman's 24-hour kit includes the following items, some of which are stored in the pack, and some of which are clipped to the front of the armor:

- Aid kit (personal for riflemen, trauma for medics)
- Battery pack (25 batteries)
- Blanket
- Canteen (2)
- Cord
- Entrenching tool
- Flare (2)
- Flashlight
- Gas mask

- . Grenade, variable (2)
- . Hygiene kit
- . Infantry Field Computer
- . 8 mm rifle or machine pistol magazine (8)
- . 8 mm pistol magazine (4) (Officers only)
- . Ration bars (3 meals)
- . Utility tool

The total weight of the 24-hour kit ranges between 12 and 16 kg for most personnel.

72-Hour Kit

The 72 hour kit is issued when troops can expect to be in combat without support for an extended period. The majority of the items are contained within a large rucksack that covers the entire back. The rucksack is made from ballistic cloth, and armor plates may be placed in the external pockets for added protection. Internal support is provided by two aluminum stays which are bent to the shape of each individual's back. It has a capacity of approximately 80 L. The rucksack can be divided into two compartments by a draw cord closure in the center, or used as a single large bag. Access is through the top. A strap on the hip belt is attached to load transfer rods that run up the sides of the rucksack. This allows weight to be transferred between the shoulders and the hips. It also has a chest strap. The 72-hour kit includes the following:

- . Aid kit (2 personal kits for riflemen, 1 trauma kit for medics)
- . Battery pack (25 batteries)
- . Blanket
- . Canteen (2)

- . Cord
- . Entrenching tool
- . Flare (2)
- . Flashlight
- . Gas mask
- . Grenade, variable (6)
- . Hygiene kit
- . Infantry Field Computer
- . 8 mm rifle or machine pistol magazine (16)
- . 8 mm pistol magazine (6) (Officers only)
- . Ration bars (12 meals)
- . Utility tool
- . Tent (Personal)

The 72 hour kit weighs about 19 kg.

Aid Kit: Personal and Trauma

The personal first aid kit is a small zippered pouch containing pressure bandages, pain-killers, tweezers, scissors, and antibiotic spray. All personnel are issued a kit. Surface Operations troops carry theirs into the field, while Aerospace crews typically store them in their personal lockers. The pain-killers are mildly narcotic, and it is possible to form a psychological addiction to them. However, psychological screening keeps addictive personalities out of regular service, and regular equipment checks quickly turn up missing painkillers. The personal kit weighs 0.25 kg.

The trauma aid kits issued to medics are much more extensive. In addition to a wide selection of bandages they include: burn dressings, blood clotting spray to quickly seal injuries, wound probe, large syringes for wound irrigation, 2 meters of plastic tubing, antibiotic spray and pills, various forceps, scalpel, sutures, needles, tweezers,



penlight, cold packs, painkillers, sedatives, pep pills, and eight life-sign monitors that can be placed on the chest or forehead of the wounded. These monitors constantly transmit data to the medic's hand computer. The medic kit weighs about 3 kilos, and is contained in a 15 cm x 10 cm case.

Battery Pack

Standard EDF batteries are used to power everything from field computers to digital sights to helmet radios. They can provide a continuous charge until almost entirely depleted, something that may take several hundred hours in the case of low-power devices. Physically, they are tiny flattened cylinders, about 2 cm thick and 1 cm wide. They may be fully recharged by plugging them into a charger unit connected to a central power supply for an hour. Surface operations personnel in the field are issued a package of 25 batteries, and rarely have the opportunity to use more than one or two of them. The battery pack weighs 100 grams.

Blanket

The Surface Operations field blanket is 2 m x 1 m rectangle of thinly quilted waterproof material, containing several tiny heating elements that run the length of the fabric. When these are switched on, the blanket provides adequate sleeping protection for temperatures as low as -14 C. The blanket uses standard batteries and can operate for more than 100 hours on a single cell. When the heating elements are off, the blanket alone is suitable for temperatures as low as 10 C. It can be folded into a 30 cm x 20 cm x 10 cm bundle. The blanket weighs 0.5 kg.

Canteen

More than a simple container for water, EDF canteens also feature micropore filters under the cap that can remove most chemical or biological contaminants from water. To use the filter, the top piece of the cap is removed during filling, which exposes the filter. The canteen is held underwater, and water pressure pushes the liquid through the filter. Contrary to barracks rumor, they cannot be used to make urine into potable water. Unpopular

Homeguard recruits are often told otherwise. Canteens are normally only issued to surface troops, and are carried in ballistic cloth case. They are canisters, similar in size and shape to a thermos. A full canteen contains 1.5 liters of water, and weighs 2 kg in total. An empty canteen weighs 0.5 kg.

Cord

A 15 meter length of thin nylon rope, typically yellow. It can support about 150 kg of weight, but is easily cut. It weighs about 0.25 kg. It can be used to tie up prisoners, or as a garrote.

Entrenching Tool

Ubiquitous among Surface Operations troops, but very rarely used. The entrenching tool is essentially a small metal shovel that folds into a very compact package, about 15 cm x 12 cm. It is next to useless as a serious tool, but is better than nothing. Though its stated purpose is to dig shallow trenches during extended fire-fights, it most often sees use in the construction of impromptu latrines. When unfolded, the shovel is about 40 cm long. It is heavy enough to be used as a light club. It weighs 2 kg.

EVA Rig

Intended for extended jaunts away from a spaceship, the EVA (Extravehicular Activity) Rig is a bulky backpack that plugs over the life-support unit on a utility or armored spacesuit. A series of miniature rockets propel the operator at great speed towards his target. The operator approaches the target in an upright position in order to ensure maximum visibility. The Rig is designed to automatically correct for dangerous trajectories, and will brake to avoid impacts. It can propel the wearer at a relative velocity of 250 kph in zero-g, and can operate at full thrust for 10 minutes. It is useless in any kind of gravity field, though it might contribute to some impressively high jumps in very low gravity. The rig weighs about 30 kg.

EVA Unit

The EVA (Extravehicular Activity) Unit is a handheld device that resembles a pistol grip attached to a small oxygen canister. A

small nozzle protrudes from the end of the canister. The unit is used to assist in moving around outside a spaceship. Essentially, the operator points the nozzle in the direction opposite the one they wish to move, and pulls the trigger. A jet of highly-pressurized oxygen is released, pushing them backwards. The operator should be tethered to the ship, as the unit has a limited number of charges. When full, it has enough for 30 one-second bursts. The canister actually does contain oxygen, and may serve as a supplement to the suit's normal supply by plugging it into the helmet life-support unit. The EVA Unit cannot propel the operator at speeds great enough to cause serious injury – a full strength blast would propel the operator at about 5 kph. It weighs 2 kg, and may be used as a very crude club.

Flashlight

The standard-issue EDF flashlight is a durable, handheld unit with a bright light-emitting diode. They differ very little from civilian models, and are capable of operating for several hundred hours on a single standard battery. Flashlights used by the military and civil police units are 35 cm long and artificially weighted so they can double as a nightstick. Flashlights assigned to normal EDF personnel are much smaller and lighter. The smaller models weigh 0.25 kg, while the nightstick variety are 2 kg.

Gas Mask

The gas mask locks in place over the front of the standard battle helmet. A pair of elastic straps allow it to be worn without a helmet. It is a generic garment designed to fit over any muzzle or beak, and such protrudes outwards noticeably. It is made of light, high-impact plastic, and does not provide any protection from gun fire. A visor and a single filter tube are set into the mask. If worn alone, it provides full protection against inhaled irritants like smoke. If used with gloves, boots, helmet, and full-length clothing, the mask provides adequate protection against most chemical agents in the short term. It weighs 1 kg.

Hand Computers



Everyone in the EDF has access to a personal hand computer that keeps them connected to the Net and military infrastructure. While these computers vary from service to service, they all are built around a standard form. The hand computer is made from sturdy titanium, measuring 10 x 12 cm, and is less than a centimeter thick. Inside are a powerful processor, digital camera, environmental sensors, and an effectively unlimited amount of memory. Users input information on the 8 cm x 10 cm touch-sensitive screen, or by using a tiny keyboard which slides out of the bottom of the unit. They may also be operated with verbal commands if the unit is connected to the Net. It weighs about 0.5 kg.

Sliding open a cover on the top right-hand of the back of the hand computer reveals a miniature camera lens, allowing the unit to be used as a digital video camera. The lens-cover swivels outward and snaps down into place, acting as a convenient handle for steadier filming. The camera is capable of filming in infrared and low-light conditions. The computer also has miniature microphone and speaker, and may be used as a communication device or sound recorder when necessary.

The standard hand computer has two major variations, the Aerospace Field Computer (AFC) and the Infantry Field Computer (IFC), known familiarly as the "Af-cee" and "If-cee" respectively. The AFC has specialized connectors and software that allow it to be used as replacement for any crew station, and may even override commands given from the

physical station, provided the user has the authority to do so. For example, if the bridge has been taken over by raiders, the ships engineer can plug his AFC into any data-port and issue commands to the helm. A simplified graphical representation of the crew station appears on the screen. The AFC camera may also be used to record a graphical representation of electromagnetic fields and local radiation levels, which is very useful for detecting reactor leaks.

The IFC is a flexible and highly portable tool that keeps individual infantrymen informed about changing battlefield conditions. It is designed to work with the EDF battle helmet, but may also function independently. The IFC is wirelessly connected to C&C through the radio in the battle helmet, and can also link into any standard communication device. The IFC can also be operated with verbal commands, and if linked to a battle helmet the operator can whisper those commands almost inaudibly. Under normal conditions, a soldier keeps the IFC unit secured in a padded ballistic-cloth pocket on the right leg of his battle armor. Only the commanding officer of a given unit is likely to have the device out at any time, to prevent battlefield distractions.

Before any military operation, every IFC assigned to a soldier participating in the action is preloaded with extensive maps, combat objectives, and other essential information. These maps are interactive and capable of displaying current battlefield conditions. For example, if a column of enemy armor is advancing along a road, the map will display its progress in near real-time. Any soldier can indicate enemy positions on the touch screen, and upload that data to C&C. However, in normal operations, only the officer in charge of a given unit is authorized to send these updates, and submitting false data is a serious crime. Each upload instantly updates the overall battle map at C&C, and this information is then downloaded to every IFC unit in the field. In this way, every soldier has quick access to maps that reflect a constant stream of new battlefield intelligence. C&C may periodically request live video feeds from the battlefield, and this can be easily provided with the camera. Footage

from the camera is automatically uploaded to C&C, whether it has been requested or not.

The IFC is shielded against electromagnetic radiation (such as that caused by a nuclear explosion) though radio jamming devices can cut it off from outside communications. A miniature spool of fiber-optic wire can be drawn from the left-hand side of the IFC and plugged into the helmet to ensure secure communication between the IFC and the electronics in the battle helmet. Built-in environment sensors inform the operator over the battle helmet headset when local radiation levels are elevated. While the IFC itself cannot detect the presence of chemical weapons or similar toxins, it does automatically monitor any detectors a soldier may be carrying. If a soldier is captured or killed, or fears capture is inevitable, the computer's memory can be instantly purged with a signal from C&C. The computer's own operating system is intelligent enough to conduct this purge by itself if it feels the situation is dire enough, based on data it is receiving from the biometrics in the combat armor.

Hygiene Kit

This is a small flexible case of toiletries and soap that allows troops in the field to stay clean. It contains a toothbrush, 50 ml tube of toothpaste, fur comb, antibiotic wipes, plastic mirror, and a 150 ml tube of soap. All hygiene kits are issued three packaged condoms. These are assigned to male and female personnel alike, according to species. Though few will admit it, they are most often used to waterproof rifle barrels.

The hygiene kit weighs .25 kg.

Magazine

The standard EDF rifle magazine contains 24 8x56 rounds, and weighs 0.4 kg. An EDF pistol magazine contains 16 8x24 rounds, and weighs 150 grams. The machine pistol variety holds 24 8x24 rounds, and weighs 0.25 kg.

Rations

EDF field/emergency rations are simply preserved bars of nutritious organic material. A single bar fills all the basic vitamin and caloric requirements for a meal, though they are not particularly palatable. These rations are the only source of sustenance that surface troops receive while in combat, and

each person carries a three-day supply. A huge store is kept on most capital ships as a supplement to ordinary nourishment in the event the organic food tanks fail. A single meal consists of a single 100 gram bar.

Rescue Ball

Used when emergency suits are unavailable, or when the crew needs to abandon a rapidly disintegrating ship, rescue balls represent an absolute last resort for protection against the void. They resemble enormous transparent beach balls, about two meters in diameter, and are designed to hold a single person. They are pulled over the head while uninflated, and the circular "door" is zippered shut behind the occupant. A small oxygen cylinder inflates the ball and provides sufficient breathable air for two hours. Rescue balls provide no protection against radiation, and contain no emergency equipment or maneuvering jets. The occupant simply bobs about forlornly in the hope of rescue. The rescue ball weighs 10 kg.

Suit Patches

These are 10cm x 10cm squares of flexible material with an adhesive backing. They

come standard with all EDF spacesuits, and can be used to temporarily patch large holes or tears. They are not as strong as the original material, and should be replaced at the earliest opportunity.

Tent, 1-man

The personal tent is an extremely compact structure. It consists of a 2 meter long tube of waterproof, windproof fabric, and a collapsible square wire frame. The frame is placed in the open end of the tube, creating a small support doorway. The user simply climbs into the tube in order to sleep. Personnel are expected to sleep with their heads at the doorway to assist in quick exits. When used with the standard blanket, the personal tent is quite snug and resistant to all but the most extreme weather. It weighs 2 kg and may be folded down into a 20 cm x 15 cm x 5cm bundle.

Utility Tool

This pocket-sized, multipurpose tool has found its way into every branch of the EDF. It is made entirely from metal, and folds into a relatively small rectangle, about 10 cm x 4 cm in size. The edge of the tool has measurement markers that allow it to serve as a short ruler. The tool incorporates a full set of screwdrivers, wire-cutters, small pliers, a 5 cm knife blade, a serrated 8 cm saw-blade, and a 20 cm long wire saw. The knife and saw blades can be used as weapons in a particularly desperate situation. The wire saw can be used as a particularly brutal garrote. It weighs 0.5 kg.



HOSTING A GAME

הַפְּזָזִיּוֹת אֶל הַחֵן



To play *Albedo: Platinum Catalyst*, one person must serve as Game Host. The Host establishes a scenario and referees the Players' actions in it. The Host arbitrates the rules and describes the results of everything the Players do. The Host also plays the roles of all Characters not run by the Players themselves.

The ultimate aim of *Albedo* is for all participants to have fun. It is a game, after all. After a long week of school or work, it's fun to sit down and unwind by shooting rabbits. *Albedo* offers a variety of war exercises, such as escape, extraction, invasion, infiltration, sabotage, and assassination.

Albedo has no pre-determined conclusion, no magic number of points to accumulate, and no victory conditions other than those which the Players and the Host set for themselves. This is what RPGs are all about. Different Players will have different goals for their Characters, and meeting those goals is a form of winning. But everyone wins as long as the game is fun, so encourage fun whenever you can.

Several elements combine to make role-playing games different from most other games.

Narrative Elements

Role-playing is often compared to storytelling. But what makes a good story? Beyond the simple fun of the game, as Game Host you should keep in mind what makes for good narrative.

Developing a good game scenario is very similar to writing fiction. In some ways it's much easier. For one thing, the Host doesn't have to worry about who the main characters are or whose point of view to present: The Players are the main characters, and the story is always told from their point of view.

The key element that is the same between games and fiction is the element of conflict. All good stories have conflict, because conflict brings change, and without change there is no story. A conflict can change one person, or it can change the entire world.

What is conflict? Conflict is an attempt to overcome one or more obstacles, antagonists, or disasters. Every important scene in a game session should include conflict. Going through a conflict can be outlined as a four stage encounter:

- **Meeting:** The Players meet the opposing force.
- **Struggle:** The Players attempt to overcome their opposition.
- **Resolution:** Win, lose, or draw, the conflict is resolved.
- **Change:** As a result of the encounter, something changes.

In a long-running campaign, the change brought about by each encounter can contribute to the next encounter. Each conflict builds on the previous one. The nature of those conflicts will help determine the overall theme of the game.

Theme

Behind every story is at least one message the story wants to tell. The personality and interests of the Host often determine the primary *theme* of the overall game.



Existentialism

The core theme of *Albedo* is *existentialism* – the idea that things happen because people make them happen. There are no gods who made the universe and who dictate the way things should be. The rules don't define good or evil. Even the SPI is just an arbitrary number determined by Confederation society. The best stories in *Albedo* are ones where the characters examine themselves and their own motivations. If things happen around them because of the choices they make, then what do those choices tell them about themselves?

As Game Host, you should invoke this theme often by presenting the characters with moral dilemmas. Do they call in an air strike on a target that has civilians? Can they carry out an assassination without having exhausted every other opportunity? When evacuating personnel, who gets shipped out first? The Player Characters will be officers with responsibility over other people's lives – remind them of the weight of that responsibility often.

Romanticism

A Romanticized setting is generous to the characters because the universe is

benevolent. Things happen because of individuals, who are themselves larger than life. Lucky things happen to characters almost without effort. Characters can dodge automatic fire, and have peerless skills. They are set apart from society, because of how great they are. They do the impossible on a regular basis, and mundane individuals cannot compete. This theme functions in opposition to Naturalism, below.

A Game Host can invoke Romantic themes by personifying issues rather than leaving them abstract. An adventure about the dangers of runaway industrialism would feature an amoral company president for the PCs to meet and dislike. A hostage negotiation can be made more dramatic by having one of the hostages be a subordinate or peer of one of the Main Characters. Whenever a situation comes up in the game, think of a way to make it relate directly to the Players.

Naturalism

Naturalist themes can be unforgiving to the characters, and present the universe as uncaring or even hostile to them. There is no meaning, only a lot of events that happen. Individuals are left to make their own meaning in the face of this. Bad things happen without reason. Characters can plan for things, but in many cases things just don't go their way. The future is uncertain, and something greater than the heroes often threatens to destroy them, with their best hopes lying in simple survival. Characters are isolated from society by their inability to affect change. They may bond with one another in their struggle to survive, but alienation is a recurring theme. This theme opposes Romanticism, above.

As Game Host, use Naturalism sparingly. Being powerless can be emotionally draining for the Players. On the other hand, fear and risk build tension. Naturalism gets its name from the natural world, so this theme works best in adventures pitting the Player-Characters against the environment, such as being stuck on a planet months with dwindling ammunition, or trapped on a decompressing space station.

Naturalism works best when used on Supporting Characters – having one experience a tragic, random demise can remind the Players of the fatalities of war.

Realism

Between these two extremes, Realism gives the characters a fair shake. The universe is neutral. Things happen because people make them happen, although every now and then a random turn comes up. Individuals can change their circumstances, but it usually takes a lot of effort. Good and bad things happen, but rarely unpredictably. Characters can have lucky breaks, but those are few and far between. Characters pushing their luck in dangerous situations sometimes suffer for it – but not always. Characters are encouraged to work together, to watch each other's back.

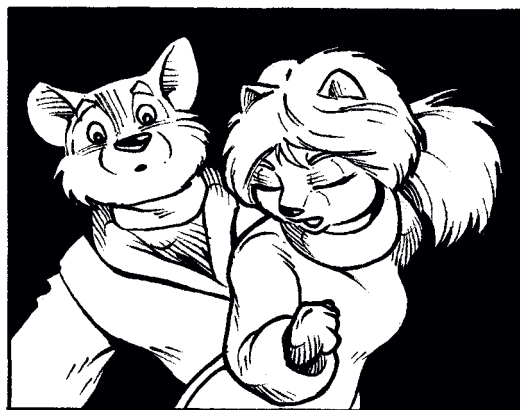
The Players should feel that their Characters are in a universe where many consequences to actions are pretty obvious, where random things rarely happen but can still be spectacular, and where working together in a society is the best way to accomplish goals. Keep things personable and fun, but don't be too generous or the Players will lose their motivation and their sense of wonder. Throw a curve every now and then, but don't crush your Players and deny control to their Characters, or they will become frustrated and lose interest in the game.

Social Elements

What makes tabletop Role-playing games different from other kinds of games? Tabletop Role-playing games are always social; at heart it's a group of people sitting around a table. Many computer Role-playing games can be played entirely alone, which begs the question, "to whom are you playing your role?" Tabletop Role-playing games may be played with unlimited durations and goals, while computer Role-playing games are pretty much over when a player has accomplished all of the goals set by the game. Tabletop games are also more flexible in their rules and in their settings. *Albedo* has many optional rules which the Host may include or disregard, and the

Host determines the scope of the setting, whether it be a single military campaign on a single world, or a series of campaigns across the whole of space.

All these elements make tabletop Role-playing games far more social than their computerized counterparts. Hosts can alter the game to suit their own interests and that of their Players. Everyone is involved in making the game work for themselves and for others. The Host's part in this lies in communication with and knowledge of the Players. Most communication is taken from verbal and visual cues. As Game Host, try to change the tone of your voice, or use gestures. Don't be afraid to use inside jokes with the Players, but don't let the game stray too far.



Know Your Players

Though there will only be one type of Host per game (you), there are liable to be several types of Players. The Host should know the Players well enough to craft stories that will be of interest to their Characters. What follows is a list of Player stereotypes.

The Author

This type of Player takes the narrative element of the story very seriously. An Author will often keep notes, and have lengthy character histories. This person has a serious interest in playing and is highly involved with the game. Such Players can be highly rewarding, but can also be very demanding of the Host. If Authors feel the Host doesn't take the game seriously, their own interest will decline.

The Stickler

Players who are familiar with the source material and the setting of the *Albedo* series often know more about this twenty-year-old setting than the Host. They are useful resources due to their profound knowledge of the original material. Sticklers can be blind to errors and contradictions in the source material, and often says something cannot happen in the game because it wouldn't happen in the series.

The Butcher

Players who design their characters around the idea of being the biggest, baddest killing machines possible will find they can do little outside of a combat situation. Such individuals may literally sleep through the stretches of the game between battles and thus may not be appropriate for most games of *Albedo*, unless they enjoy repeating the character creation process.

The Maniac

Some individuals, addictively attracted to Role-playing games, will have unholy compulsions to play. Maniacs take genuine interest in the game and are liable to want to play as long as possible, as often as possible. It might be necessary to talk to these Players out-of-game and talk them down.

The Professional

Those who want to be the best at everything. These Players are likely to have a healthy interest in character growth, but they can be annoying to other Players because of their lack of humility. Their interest in the game fades whenever their Characters are out of the spotlight or are in situations where their best capabilities don't come into play.

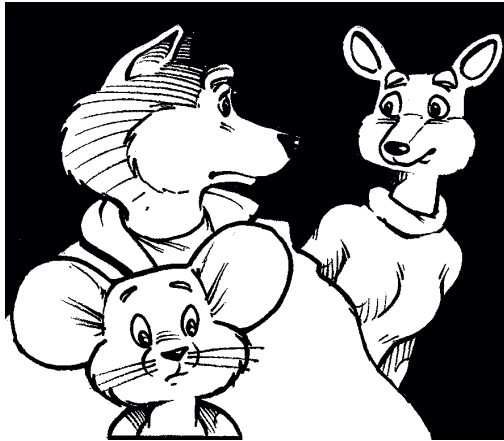
The Formalist

Some Players end up learning the rule book from cover to cover and can quote it from memory. These Players make excellent rules resources. They often go to the effort to fully comprehend the rules out of a genuine desire to do well in the game. From time to time they can bog down the game in a rules dispute. Some Formalists succumb to the Dark Side and become

"Rules Lawyers", who quote only rules which help them and not the ones which may hinder them.

The Absentee

Some groups will include individuals who can only show up on occasion. These Absentees can present problems, for the Host must figure out what to do with their characters when absent. Not everyone gets taken out of action and called back to HQ every other week, after all. It is highly recommended that Game Hosts not depend on Absentees to trigger important plot points.



Rules Versus Play

Albedo is deliberately written to be simple. The numbers stay low, and Confidence or Panic are one's major modifiers. You as Host are the final authority on what happens and what does not happen. Remember that the Players are the stars. Find out what they like to do and make certain they get to do it a lot. Balance their interests with your own. If a rule bothers you, feel free to consider changing it, but remember that all changes will have repercussions. For example, if you give everyone the "Semi-Automatic Expert" Gift for free, expect to see all Players hitting their targets more often. If you make up an "instant kill" rule, expect to see more Characters dying – including Player Characters. Some Players will argue for changes in the rules, but be wary of those who hope to get something "free" because they argued for a rule change in their favor rather than getting what they want the hard way, as advocated by these rules.

Controlling the Environment

The Game Host should be in control of the environment in which all participants meet for the game. Ideally the game should be played in a comfortable space where everyone can be together, with distractions minimized. If there is a television or radio nearby, it should be off; television and radio, by their very natures, clamor for attention. Computers not being used for the game should be idle; one who begins playing with a computer is soon lost to the game. Music can be used for ambient sound, but it should be music without lyrics; instrumental and electronic soundtracks from motion pictures and TV series are often good for setting the mood.

Away-from-Table Time

Some groups like lots of away-from-table communication. A Player might want to post a web-log of their adventures. Some Players will want to email you questions about their characters and about what to do at the next game session.

Like art, the reward you get out of a role-playing campaign is often directly proportional to what you put into it. If you find playing the game is more of a chore, then consider what you can do to kindle interest. Maybe someone else should be Game Host for a while. Maybe you need to examine the theme and take a new direction. Maybe you need to spend time away from the table talking with a problem Player to find out how you both can work towards a better game for all involved.

Gaming Elements

The last word in role-playing game is "game." Unlike fiction, role-playing games have rules that allow the Players and the Game Host to have a common understanding of how the story is to play out. While the rules can answer questions like how far someone can jump, how much weight they can carry, or how many

Judgment Calls

For example, a character may be walking in the dark, when someone sneaks behind them and tries to stab them at Close Range. By some weird turn of the dice, the attacker misses. If the target fails a die-roll to observe the attack, should they still suffer Awe for something they didn't even know happened?

A rigid reading of the rules says the target should, but in this case, as Game Host, you should probably invoke your interpretation to say that no, a target can't suffer Awe from an attack that they didn't even know about.

As you play the *Albedo* game, you'll find lots of special circumstances crop up that the rules don't handle, at first reading. Writing these rules to handle every special case would be impossible.

Remember that the rules exist to be *fair and consistent*. Interpreting them in new and creative ways is one thing that separates table-top gaming from other kinds of gaming



APPENDIX 1: VARIANT RULES

λ44ΕΝΔΥΧ |||: ΓΛΗΥΛΗΖ ΝΥΙΣ

The rules presented in the Basic Rules of Engagement and Spot Rules chapters are the "default settings." As designers, we feel they best express the themes and play-style that are what *Albedo* is all about.

Your campaign may differ. We encourage folks to come up with new rules.

Remember that if you change a rule, you're affecting other rules that depend on that one. What sounds like one little thing may have big changes down the road.

Players are always eager to suggest new changes. Be wary of what they ask for, though. *Albedo* deliberately restricts what Player-Characters can and cannot do.

Many Players will be motivated to ask for a rules-change in their favor, particularly ones that make what's normally the province of a Gift to be "free."

Variant Rule: **Civilian Characters**

It may become necessary for the Game Host to write up civilian Main Characters. Alternatively, one or more Players may have civilians as their Main Characters. They could be embedded journalists, freelance contractors, or refugees from disaster.

Civilian Characters follow a similar process for creation, with a few changes. Civilians lack the intensive training of most army troopers.

- . Choose a Species. Apply Species Skill Marks. Choose one Species Gift.
- . Choose a Homeworld. Apply Homeworld Skill Marks. Choose one Homeworld Gift.
- . Choose a Personality, and increase Attributes appropriately.
- . Choose any three Group Gifts.
- . Choose any one Basic Gift.
- . Choose any one Gift, of any kind. (You can only choose an Advanced Gift if you meet the Requirements.)
- . Add 12 Marks to any Skills, putting no more than 3 Marks into any one Skill.

Variant Rule: **Stunts**

With this rule in play, Player-Characters can regularly go above and beyond what they're normally capable of.

A character can spend *one Attribute Points* and attempt almost any Gift, whether they have it or not, as a *Stunt*. This is in addition to however many points the Gift usually costs (which will often raise the cost to 2, or more).

Also, any time a character needs to do something above and beyond normal means, the character can spend *two Attribute Points* in whatever is most relevant (Body, Clout, or Drive) to attempt it.

This Variant greatly rewards characters who have lots of Attribute points. It also prevents Players from grousing too much that they “don't have the right Gift” to do something.

However, this Variant will require a lot more judgment-calls from the Game Host.

Variant Rule: **Random Generation**

With this rule in play, characters do not start with fixed values in their Body, Clout, and Drive.

- For each Attribute, roll 1d6 and *add* the result.
- Then, for each Attribute, roll 1d6 and *subtract* the result.



For greater randomness, the Game Host may use a d8, d10, or even a d12.

This Variant allows for greater variation of characters. However, this Variant also works like a lottery, rewarding characters more for randomness than for conscious, narrative decisions about their characters. Some Players will want to re-roll, or discard characters with low rolls and try again.

Variant Rule: Hit Location

To lend your game a stronger visual element, you can use this rule of *Hit Location*.

Whenever you make an attack roll, include an extra twenty-sided die – the *Hit Location Die*. Consult the table below to see where your attack strikes the target.

<i>d20</i>	<i>Location</i>	<i>Melee vs. Melee</i>	<i>vs. Longarm</i>	<i>vs. Pistol</i>
1	Far Foot		(Cover)	(Cover)
2	Near Foot		(Cover)	(Cover)
3	Far Leg	(Cover)	(Cover)	(Cover)
4	Far Leg		(Cover)	(Cover)
5	Far Arm	(Cover)		(Cover)
6	Far Arm			(Cover)
7	Stomach	(Cover)	(Cover)	(Cover)
8	Stomach		(Cover)	(Cover)
9	Far Hand			(Cover)
10	Near Leg		(Cover)	(Cover)
11	Near Leg		(Cover)	(Cover)
12	Chest		(Cover)	(Cover)
13	Chest	(Cover)	(Cover)	(Cover)
14	Shoulders			
15	Near Arm			(Cover)
16	Near Arm			
17	Near Hand			
18	Neck			
19	Head	(Cover)		(Cover)
20	Head			

"d20" refers to the roll of the twenty-sided die. "No Cover" shows the location of where the target would be hit, if they were out in the open. "Melee vs. Melee" refers to a target using their melee weapon as a parrying object, denying another Melee attacker access, and thus *is only for hand-to-hand combat*. "vs. Longarm" and "vs. Pistol" refer to the maximum cover advantage a target can have after shooting with the appropriate firearm.

"Near" almost always refers to the target's good hand – the one they use for shooting, holding their weapon, etc. – but circumstances may vary. When in doubt, roll any die: even is the right, odd is the left.

Using Hit Location to Simulate Cover

In some cases, Hit Location replaces the Cover Dice. Instead of using the Cover Dice, the Game Host can rule which locations are Covered, and any result on the Hit Location table that would strike that body part, strikes the Cover. In other cases, such as 100% cover, or with fences and shrubs, or with a target that claims cover when passing through an open space, this technique won't work as well.

Hand-to-Hand Combat

Some people feel that hand-to-hand attacks are more likely to hit the upper body. In that case, with hand-to-hand attacks, roll *two* d20s and use the higher-rolling one as the location.

Modifying Damage Based on Hit Location

In the default system, the damage from the attack is abstract: the more damage inflicted, the more likely it was that the attack hit a target's vulnerable spots. With a Hit Location system, places like the Head and Stomach are thought to be more likely to inflict injury.

To simulate this, as another Variant Rule, any hit to the Head or Stomach rolls an extra d20 for damage.

Called Shot

Sometimes, an attacker will want to put a shot in the target exactly where they want it. This is known as a *Called Shot*. In game terms, an attacker may declare any *Critical Hit* they score to be a Called Shot, striking the target in the Hit Location of their choice. (When combined with "Modifying Damage", above, the shooter can choose to hit in the Head or Stomach, rolling +1d20 dice and thus being functionally identical to the original Critical Hit rules.)

Commentary

This Variant Rule adds detail, which can add to the role-playing experience.



However, Hit Locations also increase the complexity of the game.

Hit Locations are also inappropriate for some kinds of damage, such as G-forces or concussion grenades. Also, these rules fail to compensate for the complexity of many injuries, such as spalling bullets

Variant Rule:
Open-Ended Damage

In the standard rules, damage for weapons is very predictable – the maximum any weapon can incur is the Base, plus one Penetration for each d20.

With this Variant Rule, for *any d20 that shows a 20, roll another d20*. If this extra d20 shows 20, roll yet another die.

This Variant Rule allows for some attacks to cause a fantastic amount of damage. It greatly rewards attacks like Explosions or Shotguns that already roll multiple d20s.

Variant Rule:
New Species

The Interstellar Confederation recognizes over 160 distinct Species. Only a handful are presented in these rules. Your Players might want to make New Species, or you as Game Host might want to add variety to the game.

As a general rule, Attributes should stay within the range of 5 to 13, with the average around 8. The total sum of Body, Clout, Drive, and Skill Marks should be 28.

Species Gift choices should be either Basic Gifts or Dubious Gifts.

Variant Rule:
Recoil

While the source material makes reference that smaller races, such as the Rabbits of the ILR, prefer smaller caliber weapons, there isn't any actual rule that imposes penalties for using such.

With this Variant Rule, a Species suffers minor inconveniences if they attempt to use a weapon whose caliber (6mm, 8mm or 10mm) is larger than the character's Body Rating. If the character's Body is too small, the character spends +1 Drive (or Morale) when claiming Semi-Automatic Expertise, Following-Fire, or Suppression-Fire with the weapon, in any capacity.

While this rule adds a dimension of realism to the game, it also adds more complexity.

Variant Rule:
Tracking Ammunition

In the standard rules, ammunition for weapons isn't precisely tracked. For the most part, tracking each individual bullet isn't realistic – shooters are trained to discharge bullets in groups; in the heat of battle, most folks don't have a precise accounting of exactly how much ammo their gun contains (nor do they have long periods to think about it between their turns in the action sequence, like in a pen-and-paper RPG); and the large number of supporting characters can make tracking every spent bullet for every Supporting Character quite tedious.

However, it can add some dimension to game-play if troops have to count every last bullet. Under this Variant Rule, each bullet spent is tracked as follows:

<i>Circumstance</i>	<i>Bullets Spent</i>
Attack at Range	1
Suppress	20
Claiming Following Fire	+2 each time
Claiming the benefit of Semi-Automatic Expert	+2 each time
Botched Attack Roll	5

APPENDIX 2: SAMPLE CHARACTERS

ΛΥΥΕΝΔΥΧ ΙΙ: ΖΑΝΥΟΙ ΉΛΟΛΗΖΕΝΖ

Sample Supporting Characters

These characters could be with nearly any faction (EDF, ILR, etc.). Naturally, Skills will vary based on Species, and not all abilities are listed here. The Game Host should feel free to improvise more involved characters at need.

Bomb Squad Expert

Skills: Demolitions +2, Information Analysis +2, Listen +2, Pistols +1, Run +2, Sneak +2, Spot +2, Weapons of Mass Destruction +2

Gift: Coolness Under Fire

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7; C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 21/31/41/61

Capitalist

Skills: Bureaucracy +4, Gossip +2, Plan +2, Question +2, Research Analysis +2

Gift: Economics Influence

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7; C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 14/24/34/54

Civilian

Skills: Listen +1, Sneak +1, Spot +1

Attack: Melee (1)

Weapon: Improvised 1-handed (Damage 2+7; C1)

Deflection: 3

Thresholds: 14/24/34/54

Civilian Engineer

Skills: Build +2, Design +2, Information Analysis +2, Listen +2, Repair +2, Run +2, Sneak +2, Spot +2

Attack: Melee (1)

Weapon: Improvised 1-handed (Damage 2+7; C1)

Deflection: 3

Thresholds: 14/24/34/54

Doctor (Military)

Skills: Medical Sciences +4, Question +2

Gift: Doctor

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7; C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 14/24/34/54

Factotum (Military)

Skills: Bureaucracy +4, Question +2

Gift: Factotum

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7; C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 14/24/34/54

Homeguard Trooper

Skills: Listen +2, Longarms +4, Run +2, Sneak +2, Spot +2

Attack: Longarm 4 Marks (d10)

Weapon: LAKW 1-30 (Damage 10+9; C5, S15, M50, L330, X2300)

Deflection: 11

Thresholds: 21/31/41/61

Light Infantry

Skills: Listen +2, Longarms +4, Run +2, Sneak +2, Spot +2

Attack: Longarm +4 (d10 or 5)

Weapon: LAKW 1-56 (Damage 10+10;
S15, M60, L470, X3700)

Deflection: 11

Thresholds: 21/31/41/61

Heavy Infantry

Skills: Listen +2, Heavy Weapons +4,
Longarms +2, Run +2, Sneak +2, Spot +2

Attack: Heavy Weapons +4 (d10 or 5)

Weapon: GAKW 32 (Damage 0+10 Explo-
sion 2m; S5, M20, L80, X400)

Deflection: 11

Thresholds: 21/31/41/61

Military Engineer

S Skills: Build +2, Design +2, Information
Analysis +2, Listen +2, Pistols +2, Repair
+2, Run +2, Sneak +2, Spot +2

Attack: Pistol +2 (d6 or 3)

Weapon: PAKW 4-12 (Damage 8+7;
C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 21/31/41/61

Factotum (Military)

Skills: Bureaucracy+4, Question +2

Gift: Factotum

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7;
C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 14/24/34/54

Spacer

Skills: Freefall +4, Spacesuit +4

Attack: Melee (1)

Weapon: Improvised 1-handed (Dam-
age 2+7; C1)

Deflection: 3

Thresholds: 14/24/34/54

Psychiatrist (Military)

Skills: Bureaucracy+1, Medical Sciences +1,
Question +4

Gift: Psychiatrist

Attack: Pistol +1 (d4 or 2)

Weapon: PAKW 4-12 (Damage 8+7;
C5, S10, M40, L230, X1400)

Deflection: 11

Thresholds: 14/24/34/54

Terrorist

Skills: Disguise +2, Listen +2, Heavy Weap-
ons +4, Run +2, Sneak +2, Spot +2

Gift: Cold-Hearted

Attack: Heavy Weapons 2 Marks (d10 or 5)

Weapon: GAKW 32 (Damage 0+10 Explo-
sion 2m; S5, M20, L80, X400)

Deflection: 3

Thresholds: 16/26/36/56

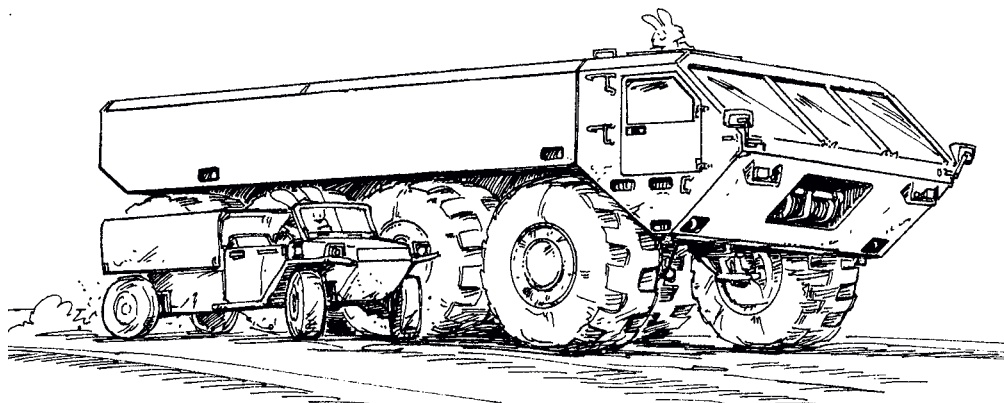
Sample Main Characters

What follows on the next page are sam-
ple main characters:

- **Erma Felna**, aerodyne pilot and hero-
ine of the *Albedo* series, shown here as
she might have appeared in *Albedo* #1.
- **Toki**, a friend of Erma's from her
academy days, an accomplished Ad-
ministrator.

- **Dea-Huthok**, a ConFed Secretary and
frequent aide to Erma and Toki.

... as well as five other samples unique to
this game.



ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME: Auitzotl

Name **Auitzotl the 3rd**

Species **Wolf (Canid)** Gender **Male**

Homeworld **Ktan-Tako (Rural)**

Personality ☐ Extroverted ☐ Sensitive ☒ Emotional ☐ Perceptive
☒ Introverted ☒ Intuitive ☐ Thoughtful ☒ Judgmental

Branch **Surface Ops.** Rank **Lieutenant (07)**

Service **HI** S.P.I. **30**

Gifts **Athletics +2**

Coolness Under Fire

Firearms +1;

Following-Fire Expert

Healthy; Tough

Body

9

Recovery: ____/____

- ☐ Brawl
- ☐ Climb
- ☐ Freefall
- ☐ G-Force
- ☒ Hike
- ☐ Jump
- ☒ Melee
- ☐ Run
- ☒ Sneak
- ☐ Spacesuit
- ☐ Swim
- ☐ Throw

Clout

10

Recovery: ____/____

- ☐ Bribe
- ☐ Disguise
- ☐ Gossip
- ☐ Impress
- ☐ Innuendo
- ☒ Lead
- ☐ Persuade
- ☐ Question

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Height **148 cm**

Weight **43 kg**

Pelt **brown**

Eyes **brown**

Build **regular**



Deflection **11** Recovery **18**

Thresholds

Improvement

Wounded | **28** | = 2×Body + Armor

Crippled | **38** | = 2×Body + Armor + 10

Incapacitated | **48** | = 2×Body + Armor + 20

Devastated | **68** | = 2×Body + Armor + 40

☐ Low
☐ Med
☐ Low
☐ Med
☐ Low
☐ High

Drive

10

Recovery: ____/____

- ☐ Build
- ☐ Bureaucracy
- ☐ Computer Sciences
- ☐ Demolitions
- ☐ Design
- ☐ Forge
- ☐ Heavy Weapons
- ☐ Hyperspace Sciences
- ☐ Information Analysis
- ☐ Listen
- ☒ Longarms
- ☐ Medical Sciences
- ☐ Navigate
- ☐ Physical Sciences
- ☐ Planetary Sciences
- ☐ Pistols
- ☐ Plan
- ☐ Repair
- ☐ Research Analysis
- ☐ Scrounge
- ☐ Search
- ☐ Sensor Operations
- ☒ Sixth Sense
- ☐ Smell
- ☐ Spot
- ☐ Vehicle Operations
- ☐ Vehicular Weapons
- ☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Oshi	Canid	HI	LAKW	3	11	21 31 41 61		/
2 Deras	Ursid	HI	LAKW	3	11	29 39 49 59		/
3 Zyshiri	Procyon.	HI	LAKW	3	11	21 31 41 60		/
4 Ty Darnar	Canid	ENG	LAKW	2	11	21 31 41 61		/

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAMIZEN

Name Bayloo

NAME

Species Crow (Avian) Gender Female

SPECIES

GENDER

Homeworld Deep XIII (Corporate)

HOMEWORLD

Personality ☒ Extroverted ☐ Sensitive ☐ Emotional ☐ Perceptive

PERSONALITY

☐ Introverted ☒ Intuitive ☒ Thoughtful ☒ Judgmental

Branch Surface Ops. Rank Lieutenant (07)

BRANCH

RANK

Service VHALO S.P.I. 31

SERVICE

S.P.I.

Gifts Athletics +1

GIFTS

Astronautics +1

Energetic

Firearms +1; Small

Tough; VHALO Expert

Body

3

Recovery: ____ / ____

- ☐ Brawl
- ☐ Climb
- ☒ ☒ ☒ ☒ Freefall
- ☐ G-Force
- ☐ Hike
- ☐ Jump
- ☐ Melee
- ☐ Run
- ☐ Sneak
- ☒ ☒ ☒ ☒ Spacesuit
- ☐ Swim
- ☒ Throw

Clout

9

Recovery: ____ / ____

- ☐ Bribe
- ☐ Disguise
- ☐ Gossip
- ☐ Impress
- ☐ Innuendo
- ☐ Lead
- ☐ Persuade
- ☐ Question

SUPPORTING CHARACTERS

SUPPORTING CHARACTERS HANAMIZEN

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Murphee	Avian	VHALO	LAKW	3	11	[25 35 55]		[/]
2 Koniph	Avian	VHALO	LAKW	3	11	[15 25 35 55]		[/]
3 Erhart	Avian	VHALO	LAKW	3	11	[15 25 35 55]		[/]
4 Sonnel	Avian	VHALO	LAKW	3	11	[15 25 35 55]		[/]

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Height 88 cm

HEIGHT

Weight 13 kg

WEIGHT

Pelt jet

PELT

Eyes blue

EYES

Build light

BUILD



Deflection 11

DEFLECTION

Recovery 7

RECOVERY

Thresholds

THRESHOLDS

Improvement

IMPROVEMENT

Wounded [16] = 2 × Body + Armor

Crippled [26] = 2 × Body + Armor + 10

Incapacitated [36] = 2 × Body + Armor + 20

Devastated [56] = 2 × Body + Armor + 40

Low
Med
Low
Med
Low
High

Drive

13

Recovery: ____ / ____

- ☐ Build
- ☐ Bureaucracy
- ☐ Computer Sciences
- ☐ Demolitions
- ☐ Design
- ☐ Forge
- ☐ Heavy Weapons
- ☐ Hyperspace Sciences
- ☐ Information Analysis
- ☒ Listen
- ☒ ☒ ☒ Longarms
- ☐ Medical Sciences
- ☒ Navigate
- ☒ Physical Sciences
- ☐ Planetary Sciences
- ☒ ☒ ☒ ☒ Pistols
- ☐ Plan
- ☐ Repair
- ☐ Research Analysis
- ☐ Scrounge
- ☒ Search
- ☐ Sensor Operations
- ☐ Sixth Sense
- ☒ Smell
- ☒ ☐ ☐ Spot
- ☐ Vehicle Operations
- ☐ Vehicular Weapons
- ☐ Weapons of Mass Destruction

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAKAZEN

NAME **Dea-Htuhok**

Species **Fox** Gender **Female**

Homeworld **Dornthant II (Urban)**

Personality ☒ Extroverted ☒ Sensitive ☐ Emotional ☒ Perceptive
☐ Introverted ☐ Intuitive ☒ Thoughtful ☐ Judgmental

Branch **Specialist** Rank **Warrant Officer (S3)**

Service **EM** S.P.I. **28**

Gifts **Charismatic**

Cosmopolitan; Gadfly

Socialization +2

Subterfuge +1

Suspiciousness

Body

7

Recovery: ____/____

- ☐ Brawl
- ☐ Climb
- ☐ Freefall
- ☐ G-Force
- ☐ Hike
- ☐ Jump
- ☐ Melee
- ☐ Run
- ☒ Sneak
- ☐ Spacesuit
- ☐ Swim
- ☐ Throw

Clout

12

Recovery: ____/____

- ☒ Bribe
- ☐ Disguise
- ☒ Gossip
- ☒ Impress
- ☒ Innuendo
- ☐ Lead
- ☐ Persuade
- ☒ Question

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Height **155 cm**

Weight **42 kg**

Pelt **russet**

Eyes **green**

Build **slender**



Deflection **3**

Recovery **16**

Thresholds

Improvement

Wounded | **14** | = 2×Body + Armor

Crippled | **24** | = 2×Body + Armor + 10

Incapacitated | **34** | = 2×Body + Armor + 20

Devastated | **54** | = 2×Body + Armor + 40

☐ Low
☐ Med
☐ Low
☐ Med
☐ Low
☐ High

Drive

Recovery: ____/____

- ☐ Build
- ☐ Bureaucracy
- ☐ Computer Sciences
- ☐ Demolitions
- ☐ Design
- ☐ Forge
- ☐ Heavy Weapons
- ☐ Hyperspace Sciences
- ☒ Information Analysis
- ☒ Listen
- ☐ Longarms
- ☐ Medical Sciences
- ☐ Navigate
- ☐ Physical Sciences
- ☐ Planetary Sciences
- ☒ Pistols
- ☐ Plan
- ☐ Repair
- ☒ Research Analysis
- ☐ Scrounge
- ☒ Search
- ☐ Sensor Operations
- ☒ Sixth Sense
- ☒ Smell
- ☒ Spot
- ☐ Vehicle Operations
- ☐ Vehicular Weapons
- ☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

SUPPORTING CHARACTERS

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Kodea	Vulpid	EM	PAKW	3	3	14 24 34 54		/
2 Elshi En	Macropod	EM	PAKW	3	3	16 26 36 56		/
3 Sadasho	Mustel.	EM	PAKW	3	3	14 24 34 54		/
4 Toshi	Vulpid	SS	PAKW	3	3	14 24 34 54		/

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAKEN

Name **Erma Felna**

NAME

Species **Cat, Small** Gender **Female**

SPECIES

GENDER

Homeworld **Dornthant II (Urban)**

HOMELAND

Personality ☒ Extroverted ☐ Sensitive ☐ Emotional ☐ Perceptive
☐ Introverted ☒ Intuitive ☒ Thoughtful ☒ Judgmental

PERSONALITY

Branch **Aerospace** Rank **Lieutenant (O6)**

BRANCH

RANK

Service **DYNE** S.P.I. **21**

SERVICE

S.P.I.

Gifts **Astronautics +2**

GIFTS

Coolness Under Fire

Energetic; Firearms +1

Impulsive; Overconfident

Velocity Expert

Body **10**

PPDE

Recovery: ____/____

RECOVERY

☐ Brawl
☐ Climb
☐ Freefall
☒ G-Force
☐ Hike
☐ Jump
☐ Melee
☐ Run
☒ Sneak
☒ Spacesuit
☐ Swim
☐ Throw

Clout **7**

AIIPUZ

Recovery: ____/____

RECOVERY

☐ Bribe
☐ Disguise
☐ Gossip
☐ Impress
☐ Innuendo
☐ Lead
☐ Persuade
☒ Question

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Height **140 cm**

HEIGHT

Weight **36 kg**

WEIGHT

Pelt **lt. brown**

HAIR

Eyes **hazel**

EYES

Build **regular**

BUILD



Deflection **11** Recovery **18**

DEFLECTION

RECOVERY

Thresholds

THRESHOLDS

Improvement

IMPROVEMENT

Wounded | **25** | = 2×Body+Armor

Crippled | **35** | = 2×Body+Armor+10

Incapacitated | **45** | = 2×Body+Armor+20

Devastated | **65** | = 2×Body+Armor+40

☐ Low
☐ Med
☐ Low
☐ Med
☐ Low
☐ High

Drive **13**

DRIVE

Recovery: ____/____

RECOVERY

☐ Build
☐ Bureaucracy
☒ Computer Sciences
☐ Demolitions
☐ Design
☐ Forge
☐ Heavy Weapons
☐ Hyperspace Sciences
☐ Information Analysis
☐ Listen
☐ Longarms
☐ Medical Sciences
☒ Navigate
☒ Physical Sciences
☐ Planetary Sciences
☐ Pistols
☐ Plan
☐ Repair
☐ Research Analysis
☐ Scrounge
☐ Search
☐ Sensor Operations
☐ Sixth Sense
☐ Smell
☐ Spot
☒ Vehicle Operations
☐ Vehicular Weapons
☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

SUPPORTING CHARACTERS

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Galdos	S.Cat	DYNE	PAKW	3	11	[21 31 41 61]		[/]
2 Charda	S.Cat	DYNE	PAKW	3	11	[21 31 41 61]		[/]
3 Piar Ann	Canid	DYNE	PAKW	3	11	[21 31 41 61]		[/]
4 Kathok	S.Cat	ENGA	PAKW	2	11	[21 31 41 61]		[/]

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAMIZEN

Name **Lafigalti**

NAME

Species **Rhino (Ungulate)** Gender **Male**

SPECIES

GENDER

Homeworld **Feloth I (Resource)**

HOMELAND

Personality ☒ Extroverted ☐ Sensitive ☐ Emotional ☐ Perceptive

PERSONALITY

☐ Introverted ☒ Intuitive ☒ Thoughtful ☒ Judgmental

Branch **Surface Ops.** Rank **Lieutenant (07)**

BRANCH

RANK

Service **MSH**

SERVICE

S.P.I. **31**

S.P.I.

Gifts **Athletics +1; Congenial;**

GIFTS

Doctor; Firearms +1;

Healthy

Knack: Medical Sciences

Body

12

Recovery: ____ / ____

- ☒ Brawl
- ☒ Climbing
- ☐ Freefall
- ☐ G-Force
- ☐ Hike
- ☐ Jump
- ☒ Melee
- ☐ Run
- ☐ Sneak
- ☐ Spacesuit
- ☐ Swim
- ☒ Throw

Clout

11

Recovery: ____ / ____

- ☐ Bribe
- ☐ Disguise
- ☐ Gossip
- ☐ Impress
- ☐ Innuendo
- ☐ Lead
- ☐ Persuade
- ☐ Question

Height **231 cm**

HEIGHT

Weight **121 kg**

WEIGHT

Pelt **gray**

HAIR

Eyes **brown**

EYES

Build **stocky**

BUILD



Deflection **11**

DEFLECTION

Recovery **21**

RECOVERY

Thresholds

THRESHOLDS

Improvement

IMPROVEMENT

Wounded [**29**] = 2 × Body + Armor

Crippled [**39**] = 2 × Body + Armor + 10

Incapacitated [**49**] = 2 × Body + Armor + 20

Devastated [**69**] = 2 × Body + Armor + 40

- ☐ Low
- ☐ Med
- ☐ Low
- ☐ Med
- ☐ Low
- ☐ High

Drive

DRIVE

Recovery: ____ / ____

- ☐ Build
- ☐ Bureaucracy
- ☐ Computer Sciences
- ☐ Demolitions
- ☐ Design
- ☐ Forge
- ☒ Heavy Weapons
- ☐ Hyperspace Sciences
- ☐ Information Analysis
- ☐ Listen
- ☐ Longarms
- ☒ Medical Sciences
- ☐ Navigate
- ☐ Physical Sciences
- ☐ Planetary Sciences
- ☒ Pistols
- ☐ Plan
- ☐ Repair
- ☐ Research Analysis
- ☐ Scrounge
- ☐ Search
- ☐ Sensor Operations
- ☒ Sixth Sense
- ☐ Smell
- ☐ Spot
- ☐ Vehicle Operations
- ☐ Vehicular Weapons
- ☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

SUPPORTING CHARACTERS HANAMIZEN

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Pyna Jr.	Canid	MSH	PAKW	3	11	[21 31 41 61]		[/]
2 Lyter	Canid	MSH	PAKW	3	11	[21 31 41 61]		[/]
3 Ko Daro	Canid	MSH	PAKW	3	11	[/ / / /]		[/]
4 Dea-Deshi	Canid	MSH	PAKW	3	11	[/ / / 61]		[/]

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAKAZEN

NAME **Theodolu**

Species **Raccoon** Gender **Male**

Homeworld **Irimanti IX (Space Station)**

Personality ☐ Extroverted ☐ Sensitive ☐ Emotional ☐ Perceptive
☒ Introverted ☒ Intuitive ☒ Thoughtful ☒ Judgmental

Branch **Admin.** Rank **Lieutenant (07)**

Service **SS** S.P.I. **30**

Gifts **Administration +1**

Cosmopolitan

Doctor; Natural Leader

Socialization +2

Suspiciousness

Body

6

Recovery: ____/____

☐ Brawl
☒ ☒ Climb
☐ ☐ Freefall
☐ G-Force
☐ Hike
☐ Jump
☐ Melee
☐ Run
☒ ☒ ☒ Sneak
☒ Spacesuit
☐ Swim
☐ Throw

Clout

8

Recovery: ____/____

☐ Bribe
☐ Disguise
☒ ☒ Gossip
☐ Impress
☐ Innuendo
☐ Lead
☐ Persuade
☒ ☒ ☒ ☒ ☒ Question

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Height **128 cm**

Weight **32 kg**

Pelt **silver**

Eyes **gold**

Build **regular**



Deflection **11** Recovery **16**

Thresholds

Improvement

Wounded | **12** | = 2×Body + Armor
Crippled | **22** | = 2×Body + Armor + 10
Incapacitated | **32** | = 2×Body + Armor + 20
Devastated | **52** | = 2×Body + Armor + 40

☐ Low
☐ Med
☐ Low
☐ Med
☐ Low
☐ High

Drive

10

Recovery: ____/____

☐ Build
☒ Bureaucracy
☐ Computer Sciences
☐ Demolitions
☐ Design
☐ Forge
☐ Heavy Weapons
☐ Hyperspace Sciences
☒ ☒ Information Analysis
☒ ☒ Listen
☐ Longarms
☐ Medical Sciences
☐ Navigate
☐ Physical Sciences
☐ Planetary Sciences
☐ Pistols
☐ Plan
☐ Repair
☐ Research Analysis
☐ Scrounge
☒ Search
☐ Sensor Operations
☐ Sixth Sense
☒ Smell
☒ Spot
☐ Vehicle Operations
☐ Vehicular Weapons
☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

NAME HANAKAZEN

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Myras	Raccoon	SS	PAKW	3	11	12 22 32 52		/
2 Ky Shoko	Raccoon	SS	PAKW	3	11	12 22 32 52		/
3 Darhaa	Lapine	SS	PAKW	3	11	14 24 34 54		/
4 Serrak	Raccoon	EM	PAKW	3	11	12 22 32 52		/

ALBEDO

PLATINUM CATALYST

MAIN CHARACTER

NAME HANAZEN

Name Toki

Species Mouse Gender Female

Homeworld Danet III (Research)

Personality ☐ Extroverted ☒ Sensitive ☒ Emotional ☐ Perceptive

Branch Admin. Rank Lieutenant (O7)

Service QM S.P.I. 30

Gifts Administration +2

Congenial; Coolness Under Fire
Grace Under Pressure
Logistics Expert
Socialization +1

Body

5

Recovery: ____ / ____

☐ Brawl
☐ Climb
☐ Freefall
☐ G-Force
☐ Hike
☐ Jump
☐ Melee
☐ Run
☒ Sneak
☐ Spacesuit
☐ Swim
☐ Throw

Clout

11

Recovery: ____ / ____

☐ Bribe
☐ Disguise
☒ Gossip
☐ Impress
☒ Innuendo
☒ Lead
☒ Persuade
☐ Question

Height 116 cm

Weight 24 kg

Pelt silver grey

Eyes green

Build petite

Deflection 3

Recovery 11

Thresholds

Improvement

Wounded [10] = 2 × Body + Armor

Crippled [20] = 2 × Body + Armor + 10

Incapacitated [30] = 2 × Body + Armor + 20

Devastated [50] = 2 × Body + Armor + 40

☐ Low
☐ Med
☐ Low
☐ Med
☐ Low
☐ High

Drive

8

Recovery: ____ / ____

☐ Build
☐ Bureaucracy
☐ Computer Sciences
☐ Demolitions
☐ Design
☐ Forge
☐ Heavy Weapons
☐ Hyperspace Sciences
☒ Information Analysis
☐ Listen
☐ Longarms
☐ Medical Sciences
☐ Navigate
☐ Physical Sciences
☐ Planetary Sciences
☐ Pistols
☐ Plan
☐ Repair
☒ Research Analysis
☐ Scrounge
☐ Search
☐ Sensor Operations
☐ Sixth Sense
☐ Smell
☐ Spot
☐ Vehicle Operations
☐ Vehicular Weapons
☐ Weapons of Mass Destruction

SUPPORTING CHARACTERS

SUPPORTING CHARACTERS

Name	Species	Service	Weapon	Attack	Def.	Thresholds	Status	Recovery
1 Zhoteth	Mouse	QM	PAKW	2	3	[10 20 30 50]		
2 Chana	Rat	QM	PAKW	2	3	[14 24 34 54]		
3 Lui Sa	Mouse	QM	PAKW	2	3	[10 20 30 50]		
4 Myka	Mouse	L	PAKW	2	3	[10 20 30 50]		

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**2692 Madison Road #279
Rookwood Pavilion, Suite N1
Cincinnati, OH, 45208
Sol III (Earth)
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"Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together."

— President Dwight D. Eisenhower
from his farewell address, January 17, 1961

ALBEDO: STRUCTURAL INTEGRITY

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Sanguine Productions in association with Thoughts and Images present "Albedo: Structural Integrity"

Created by: Steve Gallacci

Written by: Greg Porter

Original Game Design by: Jason Holmgren with Michael Arbogast

Additional Material by: Jason Holmgren

Illustrated by: Jason Holmgren with Steve Gallacci (pp. 263-274, 276-282, 292),
Conrad Wong (p. 216, 232)

Art Direction by: Jason Holmgren

Directed by: Jason Holmgren

Executively Produced by: Ted Wadsworth

Edited by: Fred Stanton with Kevin Clark, Jason Holmgren, John Fuller, Greg Porter, Diana Wray

Play-tested by: Bret Jones with Kreea Moore, Lucas Hald, Nathan Jarrett, Daniel Murphy

Thanks to: Bret Jones, Chuan Lin, Edwin Wendell Dean III, Fred Stanton, Pieter van Hiel

DEDICATION

ԴԵԸՐԱՅԻՆ

This one's for Eric Nelson. We will remember you.

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INTRODUCTION

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Why We Fight

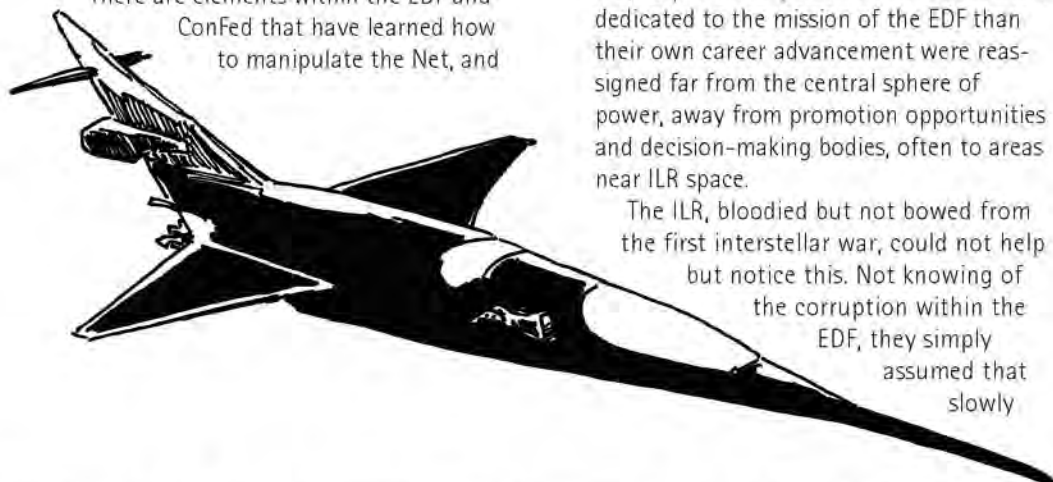
The *Albedo* rules give some background on how the sentient species came to realize who and what they were, and some notes about the first interstellar war, but it does not say a lot about the nature of the current conflict with the ILR.

There are elements within the EDF and Confed that have learned how to manipulate the Net, and

the importance of this cannot be overstated. In a civilization that is essentially paperless and communicates through a distributed network, being able to alter Net information means you can alter history.

In the years preceding the second interstellar war, the corrupt elements within the EDF began moving the old guard out of the way. Experienced personnel who were more dedicated to the mission of the EDF than their own career advancement were reassigned far from the central sphere of power, away from promotion opportunities and decision-making bodies, often to areas near ILR space.

The ILR, bloodied but not bowed from the first interstellar war, could not help but notice this. Not knowing of the corruption within the EDF, they simply assumed that slowly



moving all the most experienced personnel to the edges of ILR space was a stealthy prelude to a full-scale assault on or invasion of ILR worlds. Since the EDF had used extreme tactics like orbital bombardment on ILR worlds in the first war, this was not a pleasant prospect. The ILR geared itself for conflict.

The corrupt EDF elements saw this, just as the ILR saw the EDF actions, and similarly misinterpreted them. Knowing that a war with the ILR would help cement their legitimacy in power, they did nothing to disillusion the ILR. Any ILR military action would provide a reason for curtailment of civil liberties for the "duration of any emergency" and also conveniently remove many of the old-guard EDF personnel through combat attrition (especially if potentially troublesome people constantly got the most hazardous assignments). However, the EDF could not be seen as the *aggressors* if the ConFed worlds were to support EDF actions.

Once both sides had reached a certain level of mobilization, the ILR felt a need to test the EDF's will and intent. This took the form of a fairly underpowered assault against the Dornthant system, one of the central Confederation worlds. The corrupt elements of the EDF deliberately prevented sufficient military response to the attack on Annah, allowing at least six ACVs to strike this planet's cities, causing over a million immediate casualties.

This double misinterpretation of intents turned an ILR saber-rattling exercise into the opening shot of the second interstellar war. There are loyal EDF elements who are aware of exactly what happened on the EDF side, but the corrupt elements have control of the "history" of how it played out. The "official" line is that rogue EDF elements had plotted a takeover of the Dornthantii government, and *their* actions caused the planetary defenses to fail, resulting in the massive destruction that followed. *That is, the people who caused the problem have successfully managed to blame it on those who were trying to stop it.* Public trials

could prove embarrassing, and outright disappearances could be equally risky. Instead, potentially troublesome EDF personnel have been reassigned to distant, hazardous assignments from which they are not expected to return alive. These are also assignments these personnel are unlikely to return from. Erma Felna is one of those troublesome individuals, and she is currently on one of those high-risk assignments, commanding strike ship H2701. Her small, under-staffed ship is currently tasked with raiding facilities in ILR space to cut into the production and transport of war materials. She is not expected to return from this mission (but we know that she will manage somehow...).

Have no doubts about it. The ILR and EDF *are* in a serious shooting war here. However, the motivations of each side are far from clear and while the ILR is more prone to using despicable tactics, the EDF has the blood of its own people on its hands. For the EDF, the goal not simply a military victory but a victory that garners the maximum political and economic benefit for the conspirators at its heart. This goal can be reflected in the unusual mission orders, and in logistics that are inadequate, excessive or simply incongruous (such as no winter gear for a cold planet). These irregularities can be compensated for, but they affect performance or maintenance or operational readiness – perhaps as a means towards a particular result. This could keep a particular unit or even a particular person on a front line instead of coming home, turn an easy victory into a costly one, make certain commanders look good or bad, influence the governments of nearby planets by making a threat look larger, and so on.

Characters are unlikely to be aware of the problems at the core of the EDF, at least early in a campaign, but this rot is something that will eventually affect anyone who has a promising career and whose personality places them at odds with those who are and plan to stay in the heart of ConFed power.



Timeline of Events

Most Game Hosts will want to follow the history that is established in the *Albedo* comic, simply expanding on it or adding events that would not have affected the characters in the series. This means keeping within a rough timeline of possible events. With the exception of relatively small scale 'throw away' operations like Derzon and Chishatta, outright conflict with the ILR does not start until the ILR attack on Dornthant II. During the intervening time between Derzon and Dornthant II, the only action an EDF unit would be likely to see would be counter-terrorism, counter-insurgency, and peacekeeping between local factions. While perfectly valid and interesting campaign settings, these types of operations generally involve small units, often of an *ad hoc* force structure, and are therefore not the focus of this supplement.

Structural Integrity is aimed at providing information and detail useful for the main conflict between the EDF and ILR, though the information is applicable to all campaigns in the *Albedo* universe. Characters are assumed to be part of a larger operation that they can influence by their success (or failure!) but that they do not (usually) directly control.

An *Albedo* campaign is not about *running* the show, it is about *surviving* it!

How We Fight

For the EDF, and to a lesser extent the ILR and independent worlds, after function, the most important characteristics of vehicles

and equipment are interchangeability, redundancy and survivability. The first of these is practical, the second tactical, and the third economic. Even a lightweight asset like the ubiquitous AV-4 has autonomous routines that can bring it home through hostile territory, even if the entire crew complement is incapacitated. Or dead.

And while no one states it this bluntly, it *is* cheaper to replace the crew than it is to replace the vehicle. It is similarly unstated that no one likes the thought of their ride going home without them, and these autonomous functions are very seldom activated, even *in extremis*. While there is a general lack of superstitions among the various species, there is a certain irrational attitude towards vehicles put back into service after the death of its entire crew. These vehicles are, for lack of a better word, considered "unlucky", and for the most part, are disassembled and used as spares rather than simply being repaired and returned to service.

The Extra-planetary Defense Force specializes in rapid reaction, with an emphasis on lightweight, highly mobile forces. Characters are the forefront of this force. Ground forces are often light infantry and drop-ship-carried light armor. The heavy assets such as the Very Large Class Carriers (VLCCs) remain far away from direct conflict. The squadron of capital ships that invariably accompanies these high-irreplaceable assets forms both a defensible perimeter as well as the phalanx of the planetary assault. In general, computers can assess space battles to a very fine degree well ahead of any actual contact and may elect to withdraw without risking an engagement. The EDF is also an all-volunteer force, whose budget comes from the relatively stable supply of funds supplied by the ConFed member worlds. EDF equipment is manufactured by the EDF itself, usually at permanent resource stations that supply VLCCs or in the field as needed.

While the EDF mission is ostensibly to deal with *external* threats, internal political tensions have the EDF dealing with internal threats like insurgency, terrorism and well-organized campaigns of economic and political disruption. *Naturally, the ILR is only too glad to exacerbate these problems whenever they can.* Among the independent worlds, whose alignment with ConFed is a transitory affair at best, avoiding

civilian casualties and disruption of vital infrastructure is of paramount importance. No one in the ConFed or EDF wants a repeat of the damage done at Derzon.

The limitation of collateral damage combined with the lightweight nature of EDF forces leads to a dichotomy between space and ground forces. In space, ultra high velocity weapons with kinetic yields measured in kilotons and nuclear weapons are regularly deployed with no concern for the already-inhospitable environment. Orbital bombardment would reduce any military installation to rubble, but such mass destruction could lead to a short-term death toll in the thousands and environmental impact that could lead to the deaths of millions of civilians. On the ground, infantry, lightweight vehicles armed with point target weapons, and aerodyne gunships able to lay overwhelming precision fire into enemy troop concentrations, even in urban areas. Ground strategies and hardware are designed to minimize civilian casualties and collateral damage.

On the other side, the ILR military is a political, ideological and economic entity. The first two are linked. Lapine manifest destiny requires them to expand, yet they are hemmed in on all sides by occupied worlds mostly aligned with a militarily superior ConFed. To expand, they need military force *and* the political will to use it. ILR forces have a large degree of conscripts, and ILR hardware is built by corporate contractors (the lowest bidder). The ILR prefers wheeled vehicles for their lower initial cost and reduced maintenance and training requirements. Large-scale ILR operations draw people out of the workforce, though the draft usually targets the unemployed first, and ILR equipment funnels money from other government programs into corporate pockets. Any economic hardships caused by diversion of resources to the military are wrapped in patriotism. Complaining about a lack of a particular luxury or a type of rationing "while brave ILR troops are out there risking their lives" is blatantly unpatriotic.

The ILR is more concerned about generating the political response they want within the ConFed and independent worlds than they are about actually holding territory. The idea is to convince independent worlds to un-align themselves with ConFed, by showing that

ConFed cannot do anything for them. It cannot protect them from the ILR, and the ILR just wants the independent worlds to bow out of the conflict entirely, which will tend to level the playing field. The ILR is largely unconcerned with civilian casualties or damage it causes to a planet's infrastructure. They are interested in getting the most political bang for the buck, which means taking control quickly, and making the EDF pay as high a price as possible to take the planet back, both in manpower and political influence. The ILR avoids costly assets that warrant an overwhelming response from orbit, and prefers deployments that can work *within* a civilian population. At the same time, they are not concerned with any damage they do during the defense of a planet. The ILR also prefers lightweight armored vehicles, as they are fast to deploy and relatively inexpensive, but the ILR may equip some of these vehicles with light artillery and mortars. However, they do not concentrate the vehicles for massed fire, as this is too easy to disrupt, nor can they coordinate fire over widely dispersed units due to the heavy EW environment. Instead, indirect fire vehicles are a long-range way of harassing EDF infantry, forcing EDF support units to be further from the front lines, and a force multiplier that can support ILR infantry units in widely separated locations.

For instance, it would not be beyond the ILR to park a few mortar carriers next to a hospital. Even fairly accurate fire from an aerodyne gunship could have enough dispersion to shred part of the building, and in case the pilot wants to get close enough for a few precise shots, there is often an infantry detachment present for just such an eventuality.

ILR troops are on average physically smaller than EDF troops. This limits the weight they can carry. ILR infantry weapons are lighter than EDF counterparts, and they make up for this by using them in quantity. ILR operational doctrine has a "rain of steel" feel to it, especially if you are on the receiving end. Rather than having all their forces equipped with a number of general purpose weapons like an under-barrel variable grenade launcher, ILR infantry has specialists for specific tasks. These specialists are the equal of EDF troops, even if the average ILR soldier is not, but there are far fewer of them to go around.

TECHNOLOGIES

ТЕХНОЛОГИИ

A World Without Baggage

One important thing to keep remembering about *Albedo* is that its inhabitants are a *created* people. They came into the world with their technology fully fleshed out, without having to take into account a moldering obsolete infrastructure. Buildings are assumed to be fully networked. Wireless, wearable voice activated computers are so ubiquitous that *Albedo* has reached the holy grail of being "paperless". There are no competing computer standards, conflicts between English and Metric systems of measurement, or any need to accommodate

COMMAND REVIEW • *АПКНАНД НЕГЕУР*

Our World vs. *Albedo's* Worlds

There are some weapons and weapon technologies that are not used in the *Albedo* universe. This could be because of genetic blind spots in the way the races think, or simply because their young military tradition has not gotten around to thinking of them.

Among the technologies you won't see used in ground combat by either side are nuclear, biological or chemical weapons, though enhanced radiation nukes are used in space combat, and irritant agents are available to but uncommonly deployed by the military.

The Skill of *Weapons of Mass Destruction* is primarily used to evaluate the effects of large explosions, orbital weapon strikes, and ACV strikes both for inflicting them on the enemy and surviving them.

Sonic weapons, poisoned weapons, exploding bullets, weapons designed to leave hard to find or remove fragments in tissue, and mine fields are also absent from EDF and ILR arsenals. Placed demolition charges *are* used by both sides, and the ILR does use trip-wire weapons in the machine pistol class as booby traps. However, standard anti-personnel and anti-vehicle explosive mines as an area-denial tactic are not in use by either side.

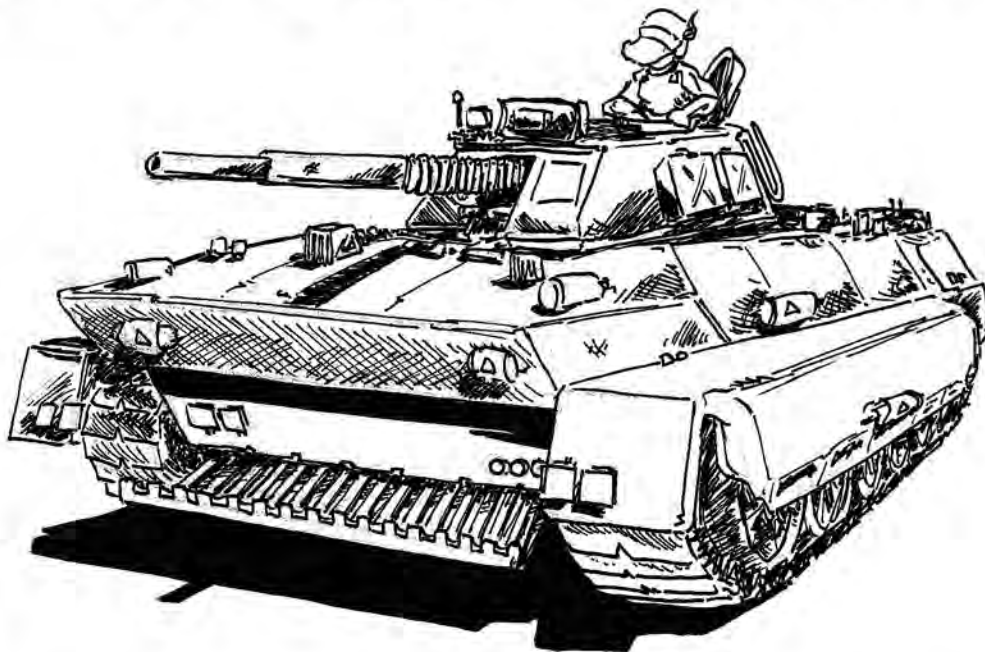
Neither side deploys electromagnetic weapons like microwave beams or EMP devices except as immediate proximity devices, and even these are rare.

legacy technologies like analog phone lines, AM radios, obsolete weapon calibers or several different kinds of data storage media. Technologically, everything is as perfect as if it were made that way. *Which it was.*

Training and experts in a given field are generally involved with new ways to use *existing* tech. Scientific innovation is not nearly as developed as it would be for a species that had a history of technological development. For instance, personal electronics like hand computers have hardly evolved at all. The methods for making them are largely robotic, the program modules developed or supplied by the network. Creativity and innovation is in the form of new ways to use what is already out there. Moore's Law of exponentially increasing computer power does not operate in the *Albedo* universe.

There *are* incremental improvements, but they are slow, and may be as much driven (or limited by) economics as anything else. Aerodynes are powered by CAG fusion reactors. ConFed reactors are generally more powerful for their size than similar units on independent worlds. They are also more expensive. The independent worlds *could* make the better units, but the economic strain would not be matched by a corresponding increase in productivity, nor would increased performance for military aerodynes be worth the increased capital and maintenance costs. So while ConFed tech is slightly better than anyone else has, it is really just slightly better than anyone else *chooses* to make.

At this exact moment in *Albedo* universe, there is *some* genuine technological innovation. Trying to reverse engineer the technologies of the Creator ship found near Ahahn-Tako would be an example. However, the network, for its own reasons, may work behind the scenes to inhibit innovation in particular fields, by manipulating the fortunes of individuals who would otherwise be well-placed to bring about undesired advances (or advances with undesirable consequences!).



The nature of known history puts the EDF and ILR on par in terms of the equipment they use. However, the way in which the two equip their forces gives the EDF a slight increase in functional efficiency. While ILR experts can come up with equally useful designs, ILR weapons are in the end, manufactured for a profit by the lowest bidder.

On the other hand, the ILR *does* feel the need to have an edge, and is a little more willing to endorse experimental programs if they feel the result can be to tactical or strategic advantage, even if only temporarily. This means that EDF soldiers can never get complacent about who and what they think they're going to face.

Armor Tech

The standard armor material is a monomolecular composite that is grown by a standard electrochemical process that has been around since the beginning, though the discovery of the Creator ship shows that there are more advanced materials available. However, no one has managed to reverse engineer that ship's armor material to come up with a method to manufacture it.

Armor can be grown in virtually any size or shape, though flat pieces are easier to work with than curved ones, and simple

curves are easier than complex ones. A VLCC can manufacture pieces of virtually any size needed, but also carries prefabricated slabs that can simply be cut into the proper shape for replacement of planar parts, like the glacis of the aforementioned AV-4. The basic characteristics of armor include a relatively low heat capacity, moderate thermal conductivity, a fairly low density and a fairly neutral reflectance of most forms of EM radiation. The way in which the armor is forged allows adjustments in its conductivity or EM absorption/reflection for specific uses. For instance, a ground vehicle will *reflect* radar in a way that matches "average" ground clutter as well as it can, while a military aerodyne will strive to *absorb* all wavelengths and be as EM stealthy as possible.

Armor is also specialized for particular applications. Exoatmospheric aerodynes may have heat-resistant coatings or structures, and armored vehicles may have reactive armor to help defeat shaped charge warheads. Personal armor is made from or is backed with advanced ballistic fabrics. Combined with monomolecular plates, it can blunt the impact of modern assault rifles, and can make heavier weapon hits more survivable.

Weapons Tech

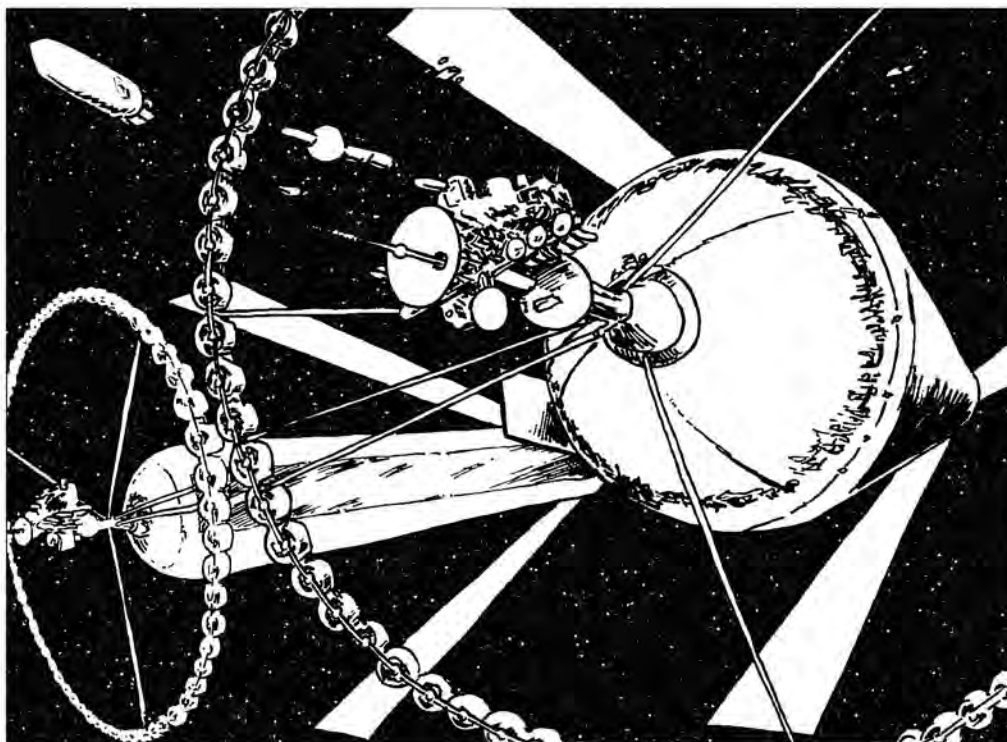
The battlefield of *Albedo* is fairly advanced, but the Game Host and players have to be aware that it is a fairly level playing field, and one in which certain measures and countermeasures are not in balance. For instance, when all troops have eye protection and basic armor that can provide limited life support, both blinding weapons and incapacitating gases are next to useless, and military planners usually reject them out of hand as a waste of resources. On the other hand, while both sides have extremely advanced computational, communications and networking capabilities, both sides also have significant EW (electronic warfare) assets, reducing the effective communication range of small units to not much more than shouting range. Though to be fair, over that limited range, both units and their equipment can pass, share and coordinate data in *extremely* effective ways.

The nature of technology in the EDF and ILR conflict makes heavy assets easy targets. Unless there is a toe-to-toe engagement in space that leaves everyone in orbit crippled or dead, one side or the other will have the high ground, and with that high ground, the ability to use orbital bombardment or

aerodyne standoff weapons to obliterate any target that is tactically and politically worth the collateral damage such weapons will cause to an area. Both sides remember Derzon, and the nature of what the ILR and EDF are trying to do means that neither side has the opportunity, need *or* will to cluster heavy assets in such a way as to make mass destruction a viable option. There may be such static facilities on various worlds, but they would have been built before the first interstellar war. Now that people know what happens to such facilities when someone has orbital superiority, no one is keen to defend them once the high ground has been lost.

Consequently, most of the action is done the hard way; troops on the ground.

Ground weapons are nothing esoteric. Both sides use slug-throwers almost exclusively. The EDF uses a high-tech cased ammunition, while the ILR uses a less-powerful but lighter caseless cartridge. Heavier weapons like vehicle cannons will use metered liquid propellants, usually binary propellants, where neither component is explosive by itself, but only become volatile when mixed in the firing chamber of the weapon. The ammunition supply in a



vehicle will not explode and destroy it, even if it catches fire. Also, the mix of the propellant can be fine-tuned in the field, to compensate for barrel wear, humidity, temperature, gravity, atmospheric density, etc.

Weapon technologies generally *not* interchangeable between the ILR and EDF, mostly because the ILR doesn't want them to be. Military weapons as a rule will have integrated electronics. EDF rifles will almost always have light-amplification telescopic sights and heads-up displays to indicate threat direction and other symbolic information passed between a squad's local network. ILR weapons will not have electronics as sophisticated as their EDF counterparts.

Vehicle weapons are even more tightly integrated with their electronics. Fire control computers are the norm, as are stabilizers linked by computer to accelerometers, thrusters and even predictive models based on the pilot or driver's past behavior and assessed level of skill.

Guided missiles, smoke, irritants, and non-lethal weapons are also part of each side's arsenal, and if all else fails, the combat knife can be used. Bayonets are unknown.

On the largest scale, there are orbital bombardment weapons and ACVs. A direct hit by an orbital bombardment weapon on any armored vehicle will turn it into a pile of smoking parts that covers an area *significantly* larger than the original vehicle. Any static fortification can in time be reduced to rubble, and while ground installations can mount similar weapons capable of hitting orbital targets, ships in orbit can always withdraw and send in ACVs, which have the same effect on ground installations that orbital bombardment weapons have on armored vehicles.

ACVs (Autonomous Combat Vehicles) are the ultimate *Albedo* expression of "force equals mass times velocity squared". The "velocity squared" part is why a supersonic rifle bullet is so devastating compared to a relatively slow projectile like an arrow, and a heavy bullet of a particular velocity is more damaging than a lighter one. An ACV is a bullet the size of a truck, whose speed is measured not in meters per second but in tens or hundreds of *kilometers* per second.

The kinetic energy of this "bullet" can be measured in kilotons or megatons, depending on how big it is and how fast it is going. Against a planet, it is like a non-radioactive nuclear explosive detonated at ground level. Against a capital ship, the impact, radial shock wave and conversion of momentum into heat will punch a white-hot hole 50 meters wide completely through anything but a VLCC, and spray molten metal and unrecognizable carbonized plasma out the other side. The defense against ACVs is to *not get hit by one*, typically by intercepting it with your own ACVs at long range, or disrupting its guidance system at close range with particle beam weapons. This is easier said than done, since ACVs are simply chunks of metal with a thruster and guidance module. Unless you actually hit its sensors, the heavy metal nose can absorb anything short of a hit by another ACV.

Unconventional Warfare

The benefits of a fully-networked high-tech army such as the United States touts in its Future Force Warrior concept really only works if your opponent *doesn't* have the same tech base. In *Albedo*, both the ILR and EDF operate on a more or less equal technological footing, though they operate in different ways. One important unconventional warfare asset is electronic countermeasures. The first thing to go in any military situation is long-range communications. Vehicles can and do carry equipment that can easily punch a signal through to an overhead orbital vehicle or to any other vehicle within several kilometers (who then relay it further as needed). Units within line of sight can often communicate via coded laser pulses, and while these cannot be jammed, atmospheric scatter can be used to detect the position of any laser transmitting unit. Units without vehicles have a much greater difficulty because powerful comm gear is not light and light gear is not powerful. Individual radios have a huge range under ideal conditions but under battlefield conditions can only reliably reach 50-100 meters while the officer radio is only good for about 500-1000 meters.

Company HQs and platoons who are not motorized have a communications expert to carry a more powerful radio system. This is not quite as good as a vehicle radio but it can punch tactical updates and orders out and receive them back every few minutes over the vehicle ranges. This is also a platoon or company's link to aerodyne support.

Whichever side in a conflict has the orbital high ground can blanket an area larger than the biggest metropolis with scrambling signals that render all but short-range communicators useless. When the ILR holds an area, they immediately co-opt the local broadcast net (mostly the equivalent of cell-phone towers) to do the same. The EDF could counter this jamming, but only at the cost of destroying the entire civilian communications infrastructure, plus the businesses, government buildings and residence complexes that have this equipment mounted on their roofs.

The net result is that high-speed data communications are limited to a range of a few hundred meters in any combat zone. The slightly more powerful radios a squad leader has can reliably pass data this far, and with a tactical computer, an *ad hoc* network between adjacent squads can pass messages from one end of a chain to the other, but the limited bandwidth available keeps this from being an "open channel". Individual squad members would have to pass requests to their squad leader, and if more vital communications are not in process, pass a request or communication down the line.

Medical Tech

Anything short of brain destruction can be fixed, eventually. Virtually anything in the torso can be regenerated, and missing limbs can be replaced by cybernetics that perfectly mimic function and appearance. There is no drive to use cybernetics or other forms of enhancement to increase function beyond normal levels — part of the same cultural ethic that does not allow use of combat robots, a desire to keep things from becoming a biologic adjunct to a combat machine.

Cybernetics are shielded to prevent electronic detection and to prevent them from being affected by EW to the same degree as other military electronics, but they can be

readily detected at contact range as easily as any other chunk of structural monomolecular material.

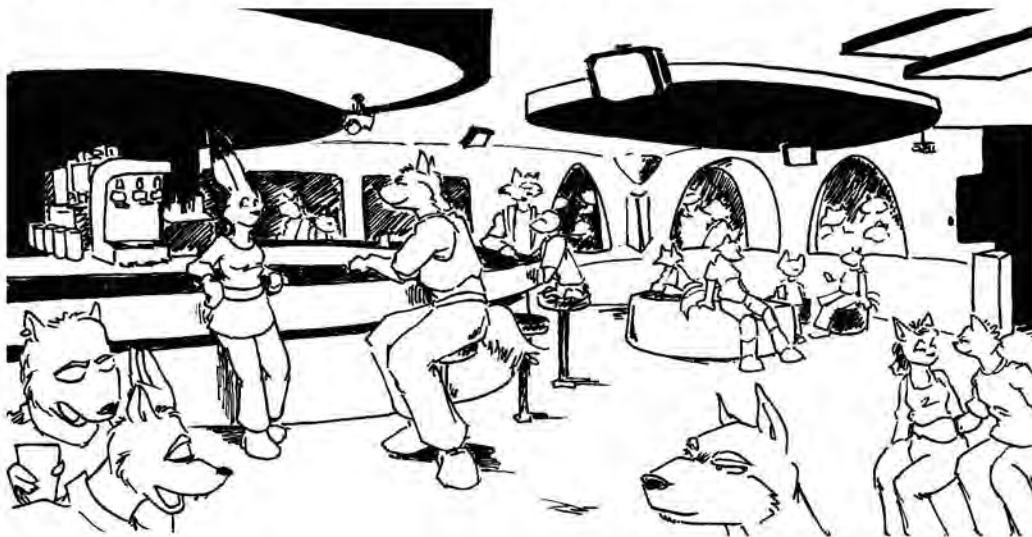
Medical technology can and *has* been abused, mostly by independent organizations or the ILR. Virtual reality interfaces can provide sensory input nearly indistinguishable from the real thing, allowing for torture that leaves no physical marks but that still scars the mind for life. Life support packs can put healthy people into comas, and there are drugs that can, if not countered, permanently disassociate the neural linkages that are our personalities, skills and memories. Just because these are horrible things to do does not keep them from being done. It just keeps them from being *common*. Fortunately, instances of abuses like this are virtually unknown within the Confederation.

Robotics Tech

Since the network is smart enough to be an artificial intelligence, robotic behavior is fairly sophisticated. Robots can be used for automated deliveries, ship maintenance, Explosive Ordnance Disposal (EOD) work, hostile environment exploration and so on. While capable of operating autonomously for many tasks, robots still work best under skilled direction (i.e. a Robotics Expert). In the EDF, EOD and other specialized robots are battalion-level assets.

Social Tech

Albedo is full of highly social species that by and large like to mingle. The diversity of species means that opportunities to mingle with one's own species are more limited, and extremely welcome in most cases. The personal hand computer that no one would dare leave home without serves the function of communications, network access, day planner, address book and personal entertainment device. Either with a hand computer or a building or ship's internal network, it is easy to look for people with a common set of interests, or post a specific profile that other people can look for. So, a passenger on the boring trip out to the hyperspace limit can either mingle the old fashioned way, or they can ask the Net, "Are there any unattached ungulates who



wouldn't mind some friendly company for a while?" Within seconds, a listing of how many there are and where they are on the ship at the moment is available. This search can be scaled to a city, or even a planet, and then fine-tuned to reduce overwhelming responses down to a select few.

Extreme Tech

The two most obvious examples of extreme technology in *Albedo* are capital ships and gravity-wave detectors. VLCCs are small cities, with virtually everything one would find in a groundside facility. With a crew of 5,000 and the ability to drop an entire division of infantry and support vehicles planet-side, they are an investment of resources that neither ILR or EDF risks in combat. Even lesser capital ships are extremely valuable assets. An unwritten rule of the service is that a captain who loses his or her ship doesn't get another one — at least not one as large or larger.

Gravity-wave detectors are the main long-range sensor available to starships and orbital installations. Jumping into local space is the sudden introduction of thousands of tons into local space, with a pronounced tug in the local gravity environment.

As the ship moves through space, it creates gravimetric ripples which can be detected. Bigger ships or stations with larger/better arrays can get a better fix at longer range, but even a smaller ship can

detect a ship jumping at a range of several AU. Smaller objects like an ACV can't be detected easily, even at shorter ranges.

A gravity-wave detector is simple in principle, but everything needed to make it work is complicated, large, and expensive. At its heart, a gravity-wave detector is a spinning, ultra-pure mass of quartz, somewhat less than a meter across. Any stress on the quartz generates a tiny piezoelectric signal, which can be measured by sensors surrounding the chamber it is housed in. The introduction of new mass into local space generates gravitational ripples which cause minute stresses in the quartz. Correlated with the rotation rate and position of the quartz at the instant of detection, this gives a rough bearing and distance to the source of the disruption. Similarly, the movement of existing masses within the radius of detection can also be measured.

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Observation and Distance

With *Albedo's* technology, inside a solar system, there is no detection system that works faster than the speed of light, and there is no weapon or delivery system that travels faster than light. This quirk of physics means that at large distances, you can't know where something *is*, just where it *was*. For example, if a ship is detected at a distance of eight light-minutes (about 1 AU), that's where it *was eight minutes ago*. Space combat involves a lot of stealth, prediction models, and just a little luck.

The trick is to do all of this in a ship under varying acceleration, in the radiation environment of space and heavy EM environment of a ship's reactors and other electronics. The gravity sensor has to be heavily shielded, cooled to absolutely constant temperatures near absolute zero, and even then, a ship usually has to stabilize its own acceleration profile for a few seconds to take a reading. It also helps if you have a gravimetric database of the solar system in question, just so you can isolate and rule out all the existing bodies in your sensing range.

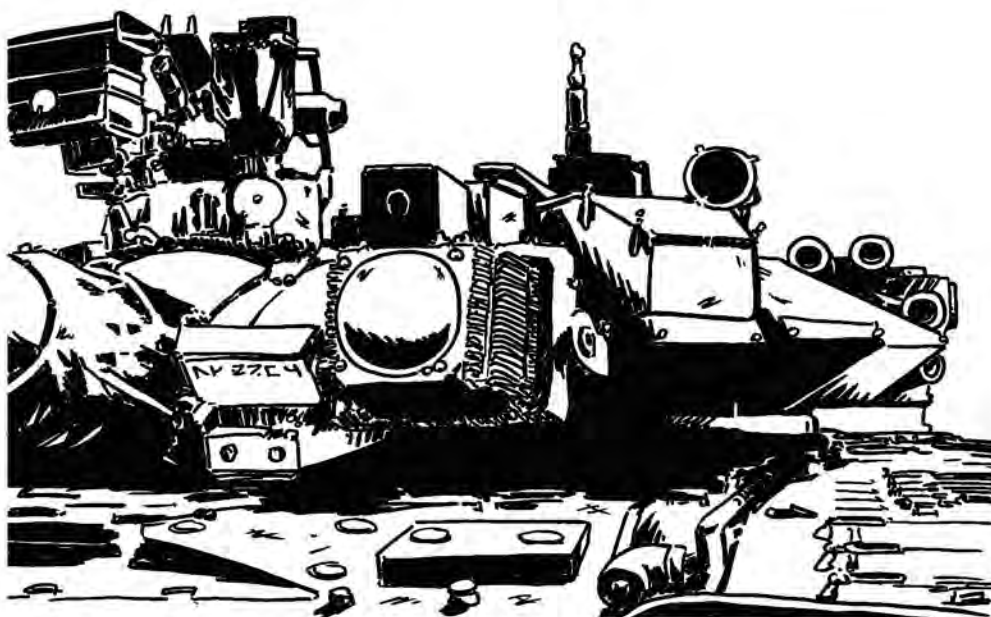
All capital ships will have at least one gravity-wave sensor, and larger ones will have several. This improves the range, the precision and the mass discrimination. Planets and large orbital stations will have many sensors set tens or hundreds of kilometers apart. A planetary array can spot ships (especially jump events) out to about 5 light-hours. Capital ships can spot out to about 1 light-hour.

The size and complexity of an array also determines how mass-sensitive it is. A large array has a sensitivity of perhaps 100 tons per light-minute of range, a large ship's system might be 300 tons per light-minute and a minimum system might be 1,000 tons per light minute. A planetary array could spot the arrival of a ship 30,000 tons or larger at maximum range (36AU), while a large warship's array could pick up an

18,000 ton ship at its maximum range (7AU) and a minimum system could pick up a 60,000 ton ship at the same range. The mass discrimination ability is the same as its minimum detection mass at a given range. So, a planetary array at a distance of 20 light minutes (sensitivity of 2,000 tons) could determine the mass of an item to within 2,000 tons of its actual mass.

There is no known method for hiding gravitational signature. While radio silence can be maintained, and fusion reactors can be shut off, mass still has gravity. Even if stationary, a mass will be moving relative to the detection array, so it will still be detected.

Major ConFed worlds and a few of the more well-heeled independents have gravity-wave "transmitters". Think of it as an array of 30,000 ton semaphore flags. Actually, configured chunks of nickel-iron asteroid with high-acceleration engines, a sort of super-ACV. Their position and velocity relative to each other and their home planet can be used to send low-bandwidth messages to any ship capable of detecting them. It is cumbersome, but it serves much the same purpose as Earth's ultra-low frequency transmitters for sending messages to submarines. It is an unjammable means of quickly getting short, coded messages to military units faster than is possible by any other means.



VARIANT RULES

FANEANZ RUIZ

The basic *Albedo* rules cover all the really important bits of the world and the way things work. The following Variant Rules clarify and expand on the core rules. As with all Variant Rules, use these to enhance the drama of the game, not to complicate issues.

Variant Rule: High-Ranking Officers

The basic rules are not perfectly clear on how a starting character and supporting characters are integrated into a service, the Table of Organization and Equipment (TOE). How the Main Character and Supporting Characters fit in depends on where you start in the rank structure. If you start off as an O6, there's no problem. You are leading a fire team and your 4 supporting characters are the members of that fire team.

The basic rules sort of assume your character will start as an O6 or S3, an Independent Fire Team Leader with 4 cadet ranks (Cadet 1st through 5th) as your supporting characters. In the Surface Battalion TOE, this position is only available in Air Recon (Rapid Response) though it is common for Freefall Infantry teams, the Administration Branches, and Specialist Branches. Surface Branch officers may also be Independent Fire Team Leaders when serving as security, Homeguard trainers and advisors, or when circumstances leave the EDF shorthanded. The Game Host will need to take these factors into consideration when advising players on character construction and when designing a campaign.

However, it is quite possible (and often preferable) to start as an O7 (squad leader) or even O8 (platoon or wing leader), which puts an entirely different cast on things.

As a Squad Leader or aerodyne pilot, all the members of your squad/crew are your supporting characters, which means that for an 8 person squad you will have 7 supporting characters for an O7 main character. This situation is actually fairly common.

If you *start* as an O8 platoon leader, you may either have the four squad leaders in the platoon as your supporting characters

(all O7's) who will in turn have their own supporting characters (the squads) or 3 of the squad leaders can be Main Characters and the remaining squad members are your supporting characters. The former is *not* recommended for combat units but works well for support positions in Surface Branches and in all Specialist and Administrative Branches.

If you start as an O8 flight leader, you will have only your vehicle crew as supporting characters because all aerodyne pilots are Main Characters, whether other player or Host controlled.

You may also be promoted to Company/Squadron Commander or even higher. In all cases of higher advancement, the supporting characters remain the immediate command staff and other leadership positions are Main Characters under other player or Host control.

In all cases of rank above Fire Team Leader, however, an officer will need subordinate officers that are capable of some degree of independent action and while not quite Main Characters, they do need more capabilities than a standard Supporting Character.

Adjutant Characters

Collectively, all lesser officers who are not Main Characters will be referred to as *Adjutant Characters*. Most officers of O7 rank or higher will have 1 Adjutant but some may have more. The TOE lists each unit type and the required minimum rank of the various positions. In most cases, this position is called the *Assistant Squad Leader* (ASL).

An Adjutant is built like a Main Character with certain exceptions. The first exception is that they have no Homeworld skills or gifts (but can take them as improvements). They also have only 1 initial free mark per rank level over O5 or S2 (an O6 or S3 would have 1 free mark), not the 10 that normal Main Characters receive. All Adjutants also receive 1 free mark in Lead, and since Main Characters are not *required* to have Lead marks in order to hold a command, the

Adjutant might have *more* Lead marks than the Main Character. An Adjutant *does* get a Free Gift. An Adjutant is assumed to have the minimum SPI needed for the rank to do their job and the minimum ranks are listed under the squad type. However, an Adjutant will never have less SPI than Clout + Drive + Personality + Gift modifiers, nor will they ever begin the game with greater rank than the main character (though they may have the same rank in a different Branch in some cases). Adjutants use the Main Character experience track and can improve all marks, attributes, and SPI normally.

EXAMPLE: As a 2nd Lt, Auitzotl would begin a campaign in charge of a squad, meaning he would have an Assistant Squad Leader (ASL) built using the Adjutant rules and 6 other supporting characters built using the Standard Supporting Character rules (see below). Auitzotl chooses Oshi as his ASL. The minimum rank for an infantry squad ASL is Cadet 1st class, so Oshi's minimum SPI is 15 (a corporal equivalent). His actual SPI is his Drive + Clout + Personality + Gift modifiers. Oshi is a Canid and neither his species nor his free Gift affect his SPI, so his SPI minimum is adjusted to 20. This means he is an O6 (3rd Lieutenant). Because of this, he gets a free skill mark in addition to the +1 Lead mark that all Adjutants get.

Most players will note that Canines are the species most easily made into 3rd Lt ASLs. This reflects the source material.

It is possible for Supporting Characters to be promoted to Adjutants, using the Variant Rule "Supporting Character Experience System" or Game Host fiat. If a supporting character is promoted to an Adjutant, that character resets their experience track to zero but immediately gains the Free Gift and use of Clout and Drive, including that from Personality. They do not get the free mark(s) (even Lead). The SPI rating is *not* changed for the gift or personality if the promotion is SPI (merit) based. If the promotion is by Game Host fiat (see below) then the SPI is adjusted to the *minimum* level necessary for the rank.

Adjutants can have their own Supporting Characters and in fact, this is usually the



point at higher command levels in the non-combat branches. The Adjutant directs their subordinates using their abilities, but under the main character's command. Adjutants will even have their own Adjutants at higher ranks! However, combat unit Squad Commanders and higher should always be Main Characters in level of marks and gifts even if played by the Game Host. Experienced Adjutants may meet this qualification through accumulated Gifts and skills.

Supporting Characters that a Main Character controls through an Adjutant will start the game with Trust towards both the Main Character *and* Adjutant.

Trust in the Adjutant translates into trust in the Main Character. However, loyalty does not translate through the Adjutant except within a squad or flight.

EXAMPLE: Loyalty to a fire team leader translates to the squad leader, but loyalty to the squad leader does not translate to the platoon leader.

Characters who are loyal to a Main Character at the point an Adjutant is "inserted" between them and the Main Character (through promotion for instance) *will* retain their loyalty.

Note that character can get a promotion without getting a higher level of command if they are not otherwise eligible or if no command is available. Often, a promotion does not actually entitle one to a higher command level. In these cases, one might be tapped to be a 2nd in command but this position can be turned down if desired.

A question about in-game promotion is "what happens to my Supporting Characters?" If you are promoted from a fire team leader to a squad leader, this is no problem, a squad is simply formed around you.

You gain 3 new supporting characters (who are Neutral towards you), one of which will be an Adjutant (your ASL) unless one of your fire team members is eligible for promotion to ASL (if they are a Cadet 1st class or better) in which case that Cadet (who must be the highest ranked Cadet) becomes the ASL.

However, if you get bumped up to a platoon command or to flight commander, the situation is more complicated and will have to be worked out with the Host. For combat commands of Platoon level and all aerodyne commands, the character keeps his or her squad/crew and the other squad leader/crew leader spots are filled by Main Characters. These Main Characters may be new faces who may not know you or people you have worked with before. The Main Characters could be controlled by the Host or (preferably) by other players.

Main Characters who are commanded by a Player Character are still controlled by the Game Host. Such characters do have to obey the commander's orders but there is no guarantee they are going to like the commander. Their personalities may let them develop trust in the commander, but it is possible their loyalties lie elsewhere. All sorts of interesting permutations are possible. This situation is a very good chance for role playing as well as a call for some creativity on the part of the Game Host.

For non-combat platoon level commands, the ASL becomes one squad leader and the Main Character receives 3 new Adjutants who are the leaders of the other squads. You design and control these characters as your own. However, they and the men and women they command as their supporting characters are Neutral to you initially.

All combat squad leaders (and Independent Fire Team Leaders) and all platoon leaders and higher are Main Characters in all EDF branches. This high level of competence is the primary strength of the EDF. When a character advances to higher commands, he or she will form a command staff (a command squad) or an administrative staff (squad) which he or she will carry with them as they advance in rank and command

level. When this HQ unit is first formed, most of the members will likely be new to the character but the Main Character can take his or her ASL and any other supporting characters who are qualified for command positions into the HQ unit.

It is very possible that promotion to Company commander will sever any direct connection with most of a Main Character's original subordinates (that is, they will no longer be actively controlled in the field).

The EDF strongly believes that the behavior and abilities of subordinates reflect the abilities of the commander. Therefore it should be a condition of promotion from Squad Leader to Platoon Leader that one's ASL is ready for promotion to squad leader. This rule encourages players to 'help' the ASL along and applies all the way up the chain of command. Note that a character can get a promotion in rank without a promotion in command, however. A Lt Commander can lead a Platoon for instance.

On a possibly more sinister note, promotion is tied to SPI and SPI is tied to personal behavior to a significant degree and therefore to conformity of some level. Tying promotion to the promotion eligibility of



one's subordinates encourages officers to monitor the behavior of subordinates for anti-social actions.

If combat casualties or promotions or force reorganization opens a vacancy that someone *has* to fill, there is another option for advancement. The Host may assume that a "rising tide floats all boats". If a commander at a certain level gets promoted or removed from action, *someone* has to take his or her place. Ordinarily it is EDF policy to promote from within if at all possible, especially in the heat of battle. Promotions (and SPI awards) are simply made as necessary (with the rule being the least SPI given out free the better) to arrive at a workable new command structure.

These SPI are 'loans' however and any SPI that the character earns first have to go towards 'paying off' the loan before the character's SPI can increase again. If anything happens to cause a loss of SPI while the 'loan' is outstanding, the promotion and SPI loan can be revoked.

EXAMPLE

Example 1: Auitzotl is a squad leader with some experience and an SPI of 38. His ASL Oshi began with an SPI of 20 and now has 23. Auitzotl's platoon takes some major punishment and the platoon leader is KIA. Someone has to take over the platoon. The other squad leaders have less SPI than Auitzotl, so he gets tapped for platoon leader. He gets a +2SPI 'loan' so he is eligible for the promotion and his ASL Oshi gets +7SPI so he can become the new squad leader. If both do well (don't lose any SPI), eventually, they will be 'confirmed' in the new position (once they have earned enough SPI to pay off the 'loan').

Under ordinary conditions, Auitzotl would not be eligible for promotion to platoon commander until he has 40 SPI and Oshi has 30 SPI. Auitzotl is therefore very interested in the career of his ASL, which is exactly what EDF wants.

EXAMPLE

Example 2: Auitzotl has worked hard and had a successful career. His promotion to Platoon Leader was eventually confirmed and he has accumulated 55 SPI. He is ready for promotion to Lt Commander but nobody in his platoon has 40 SPI yet, so he has no replacement and is therefore 'stuck' at Platoon commander until someone is eligible to take his place.

Eventually, squad leader Hodochi reaches the magic 40 SPI. Auitzotl gets the next company command slot. This may be his existing company or it may be an entirely new company formed from units new to Auitzotl. In either case, Auitzotl forms a new HQ squad. He keeps Oshi with him as his HQ squad ASL (which may 'force' a promotion in his old squad) and he takes Zyshiri as his aide. His other squad members are not eligible to fill any other slots in the HQ squad and are 'lost' and replaced with new ones. They may be encountered later as a game event but they are not part of what Auitzotl does in the game. Except in an emergency, Auitzotl is no longer a direct combatant. If the company is his old company, any Main Characters remain. For either old or new, all other platoon slots are filled by Main Characters controlled by either another player or by the Host.

Summary of Ranks

It is important to remember that all EDF surface personnel are technically 'officers' but most are confined to the Cadet ranks (O5 and lower) and will stay there for the duration of their enlistment. They do not have the necessary 'drive' (literally) to be a command grade officer. The Warrant Officer ranks apply only to Emissary, Exploration, and Research & Design fields.

Remember that you and your supporting characters do not have to be the same officer type. Some can be regular officers, while others can be warrant officer ranks. In order of SPI, here are all the Surface Ops ranks on one table:

Grade	Rank	Min. SPI
016	Chief of Surface Operations	240
015	General	200
014	Brigadier General	160
013	Sr. Commander 1 st class	130
S7	Master Warrant Officer	120
012	Sr. Commander 2 nd class	110
011	Sr. Commander 3 rd class	90
S6	Chief Warrant Officer	80
010	Commander	70
S5	Warrant Officer, 1 st class	60
09	Lieutenant Commander	50
08	Lieutenant, 1 st class	40
S4	Warrant Officer, 2 nd class	40
07	Lieutenant, 2 nd class	30
06	Lieutenant, 3 rd class	20
S3	Warrant Officer, 3 rd class	20
05	Cadet, 1st class	15
04	Cadet, 2nd class	10
S2	Warrant Officer, 4 th class	10
03	Cadet, 3rd class	5
S1	Warrant Officer, 5 th class	5
02	Cadet, 4th class	3
01	Cadet, 5th class	1

Standard Supporting Characters

To clarify the basic rules: All personnel are Player Characters, Main Characters, Adjutant Characters, or standard Supporting Characters. Main Character generation is covered in the basic rules and Adjutant Characters are detailed previously. The procedure for Standard Supporting Characters is outlined here for clarity.

Supporting Characters have a Species with appropriate skill marks and species gift, a Homeworld (though they do not get Homeworld skills or gifts, they may take them later as improvements), a personality (which has no game mechanic effect unless the character gets promoted to an Adjutant), and Body, Drive, and Clout ratings based on their species and species gift (only).

The Drive and Clout have no game mechanic effect (unless the character becomes an Adjutant) except to limit Base Morale (see below). Body is used to determine thresholds in the usual way and is expended for certain exertion activities (detailed elsewhere). Standard Supporting Characters have a Recovery of 10.

Standard Supporting Characters have Morale which they use for Pushing, Risking, Retrying, and other skill modifications and which they lose when they take Awe. This Morale consists of a Base Morale which is inherent to the character, recovers like attributes, and which may improve with experience. EDF personnel all begin with a Base Morale of 1. Civilians with no military or stress training in their background have a Base Morale of 0. Some poorly-trained troops (such as local militia) may also have a Base Morale of 0.

Standard Supporting Characters have an SPI rating equal to Species Clout plus Species Drive plus Species Gift modifier (if any). The character's rank is based on this SPI score. They may gain or lose SPI through play but this will be rare.

Standard Supporting Characters have a Service and Branch which provides them with Gifts and Skills just like Main Characters.

Supporting Characters who 'belong' to a Player Character have an additional +1 skill mark in any skill. This is a bonus to allow PC-controlled Supporting Characters to be a little more interesting.

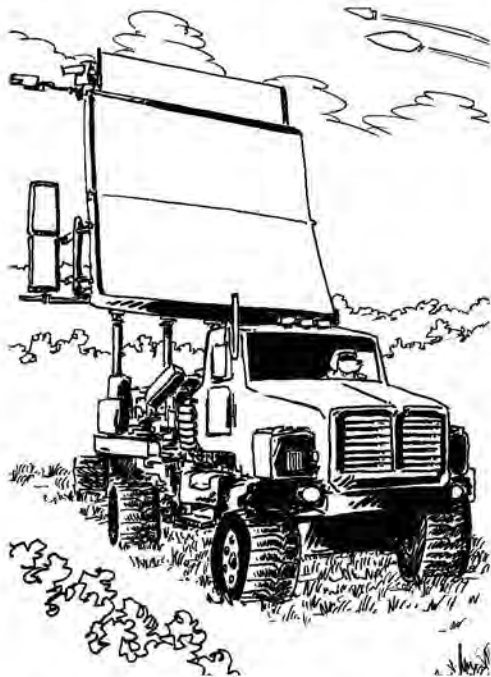
As a further variant rule: Supporting Characters of a PC may have their wounds and other damage effects tracked like Main Characters. This allows them to return to action from minor injuries much faster but makes them much more subject to trauma and major injury.

Supporting Character Guidelines

A collection of supporting characters should show personality and variety. Coolness Under Fire is the best gift by far for beginning combat characters but too much 'cool' is boring. No more than half of all Standard Supporting Characters in any unit should begin with Coolness Under Fire (though it is okay for all to get it eventually with experience).

More than any other MOS, Infantry must be able to handle the physical demands (see "Carrying Capacity", p. 229) which in practical terms means that a Body of 7 is the absolute minimum for Supporting Characters and even that will not work for all MOS.

Supporting Characters (Adjutant or Standard) in the surface branches and aero-



dynes should use the Military Occupation Specialty (MOS) character design system listed under the TOE rules (q.v.). Main Characters can use the MOS charts or the charts from the basic rulebook.

Other Supporting Character Notes

The sample supporting characters on page 162 of the basic rules give the important stats, but as the note at the top of the page says, it does not take into account species particulars.

These sample characters are *not* to be used as supporting characters for Main Characters. They are simply convenient profiles for encounters a player character may have. The sample supporting characters assume significant experience in most cases and in order to build them, the Supporting Character Experience system must be used.

Supporting Character Experience

Standard Supporting Characters use the experience track, just as Main Characters and Adjutants do (see page 135 of the basic rules). However, Supporting Characters get different improvements.

For a Low Improvement, a Supporting Character may either gain +1 Mark in any Homeworld skill (but only once per skill!) or gain +1 Base Morale or +2 SPI. This means

that at this point, you may have to add some detail to the Supporting Character (the nature of their Homeworld).

EXAMPLE

Example 1: Deras is entitled to a Low improvement. He is from a Rural world. He can take a +1 Base Morale, a +2 SPI, or a +1 in any Rural World skill. He chooses +1 Scrounge. He cannot ever take another +1 Scrounge as a Low Improvement but he could take a +1 in another Rural skill as a Low Improvement.

EXAMPLE

Example 2: For a Medium Improvement, a Supporting Character may either gain +1 to any Service or Species or Homeworld skill in which they have no more than 5 marks or +1 in any skill which they already have at least 1 mark but no more than 3 marks or +1 Leadership or gain +2 Base Morale or +4 SPI.

EXAMPLE

Example 3: Deras is entitled to a Medium Improvement. He considers several options. He could take a +1 Heavy Weapons [a service skill in which he has 5 or less marks], +1 Scrounge [a Homeworld skill in which he has at least 1 mark because of his Low Improvement], +1 Spot [in which he has 1 mark, which is less than the 3 maximum], or +1 Leadership, or +2 Base Morale or +4 SPI. Deciding he is not really the leader type, he forgoes the officer training seminars and concentrates on his Scrounging for another +1.

EXAMPLE

Example 4: Deras is really experienced and is entitled to a High Improvement. He took Tough as his original species gift for being an Ursine. He takes Very Tough as his improvement.

For a High Improvement, a Supporting Character has access to the same improvements as a Main Character or Adjutant or +4 Base Morale. *Hey, if a supporting character makes it through 18 missions, he or she deserves a generous reward!*

SPI and Career

SPI gains are important, as they can allow Supporting Characters to eventually be promoted. And, bringing out the best in your subordinates (qualifying them for promotion) looks good on a Main Character's record when *they* are being considered

for promotion! In fact, is it often essential for promotion to a higher command level.

Albedo is not about personal combat competence. *It's really about being a good leader.* A Main Character who is a combat monster at the expense of leadership ability will come out on the short end of the stick compared to a moderately combat-competent Main Character who can get their Supporting Characters to work to their full potential.

Morale

The basic game deals with morale in a simplified manner which does not accommodate for more experienced supporting characters.

Base Morale is the morale a Standard Supporting Character has that is independent of any outside source and which recovers on its own just like character stats. Most SSCs start with a Base Morale of 1. Civilians with no military or similar stressful background will have a 0 as will poorly trained troops, especially young ones.

Base Morale can be increased with experience but cannot exceed the *lowest* of Clout or Drive (species base modified by species or other gifts).

Bonus Morale is a modifier to Base Morale that applies when the SSC is under the command of someone they trust or are loyal to (only one bonus or the other applies). An SSC under the command and control of someone they Trust will have a +1 bonus while someone under the command and control of someone they are Loyal to will have a +3 bonus. This person can be anywhere in the chain of command so long as the character believes that that person is looking out for them.

Planning Expert Morale Bonus is a modifier to Base Morale, only applicable once per mission, that results from the SSC being briefed for an operation by someone with the Planning Expert Gift. Trust and Loyalty are irrelevant though both bonuses may be taken if both are applicable.

Ribbons and Medals

Also known as "fruit salad" or "chrome", for the most part, medals are bragging rights,

rites of passage and symbols of recognition that someone else went through the same hell that you did. In game terms, any Medium or High Improvement that increases SPI can be accompanied by a medal.

There are four "valor medals", which range in criteria and rarity from about that of the United States' Bronze Star at the low end to the Congressional Medal of Honor at the high end. Valor medals are requested by a soldier's immediate superiors (one or two grades up), but may also be referred to the appropriate Admin personnel by analysts preparing post-battle reports, where it is clear in hindsight that a particular action or actions were key, and "above and beyond".

Meritorious Conduct Medal

For "bravery above and beyond the call of duty" or "duty under exceptional circumstances". For this and the other valor medals, keep in mind that the *normal* call of duty and *expected* level of bravery involves getting shot at and keeping a cool head while it happens. The circumstances that lead to the award would involve significant risk to the recipient, and had a measurable effect on the local battle, saved a life, or both. It could also be awarded for managing to perform ordinary duties under extraordinary circumstances.

Legion of the Blue Star

Awarded for "outstanding achievement carried out with exceptional bravery". It is for a battle-changing or multiple life saving action under extraordinary circumstances.

Legion of the Nova

This is for "outstanding achievement affecting the outcome of a campaign" or "an act of exceptional heroism making multiple outstanding achievements possible". This award is relatively rare and usually goes to the leader of a group that turns the tide of a battle or campaign through an exceptionally difficult accomplishment.

Legion of the Nebula

This is the highest valor award, and the most likely to be awarded *posthumously*. It is awarded for "outstanding accomplishments which affected the course of a campaign or war and which were undertaken and accomplished with little or no expectation of survival". Living recipients are

usually individuals, though posthumous award is sometimes given to entire units (like a starship crew).

The amount of time between the heroic deed and an award is proportional to its importance. The Legion of the Nebula might not be awarded until years after a war is over. It is also true that politics can play a part in the awards, especially if there was significant media coverage of the heroic event as or shortly after it happened. Everyone likes to rub elbows with a hero.

There is only one bullet's worth of difference between an idiot and a hero. The EDF does not reward heroism by itself. There has to be an accomplishment in there somewhere, and it is generally not medal-worthy for a person to do heroic things that simply make up for the consequences of their own previous bad decisions.

Distinguished Service Ribbon

The DSR is for non-combat contributions to a battle beyond the normally expected level of accomplishment. Veterans call this the "Desk Sitting Ribbon", and Admin personnel seem to recommend each other for a lot of these. Combat troops don't grant much importance to these, but they are sought after by Admin types for their personnel files. Between otherwise equal candidates for Administrative promotion, DSRs can make the difference.

Wounded in Service Ribbon

This is also called a "Red Star" and simply signifies the recipient has been wounded in battle (lost 1 or more Body due to enemy action). It is the equivalent of a United States Purple Heart.

Direct Combat Badge

Referred to as the DCB, it signifies that the recipient has been in at least three battles or campaigns where they were under enemy fire, with the usual implication that one performed up to EDF standards in those circumstances. This is the dividing line between green troops and "veterans". Until you have a DCB, you're the "new guy", and certain informal gatherings or rituals may be off-limits. Those without the DCB also tend to get the worst duties, like "New guy, you're on point today..."

Campaign Service Ribbon

The CSR is the only ribbon that doesn't require more than just "being there". Every major campaign will have its own CSR, and virtually everyone taking part in that campaign will get one. CSRs for particularly bloody or important campaigns will have more cachet than "easy" or obscure ones.

Unit Citations

The EDF does not personalize its hardware. Loyalty is to the EDF and one's brothers-in-arms, not to a particular vehicle or organizational division. There is no tradition like the "82nd Airborne" or specialized badges for the "USS Nimitz" or nose art for a bomber crew. Both EDF and ILR rather unimaginatively give their vehicles and units bureaucratic alphanumerical designations, and leave it at that. The only time units are recognized as a whole is for things like the Legion of the Nebula, and even then the emphasis is on the crew as individuals, not that they were the "crew of DL-1121-3".

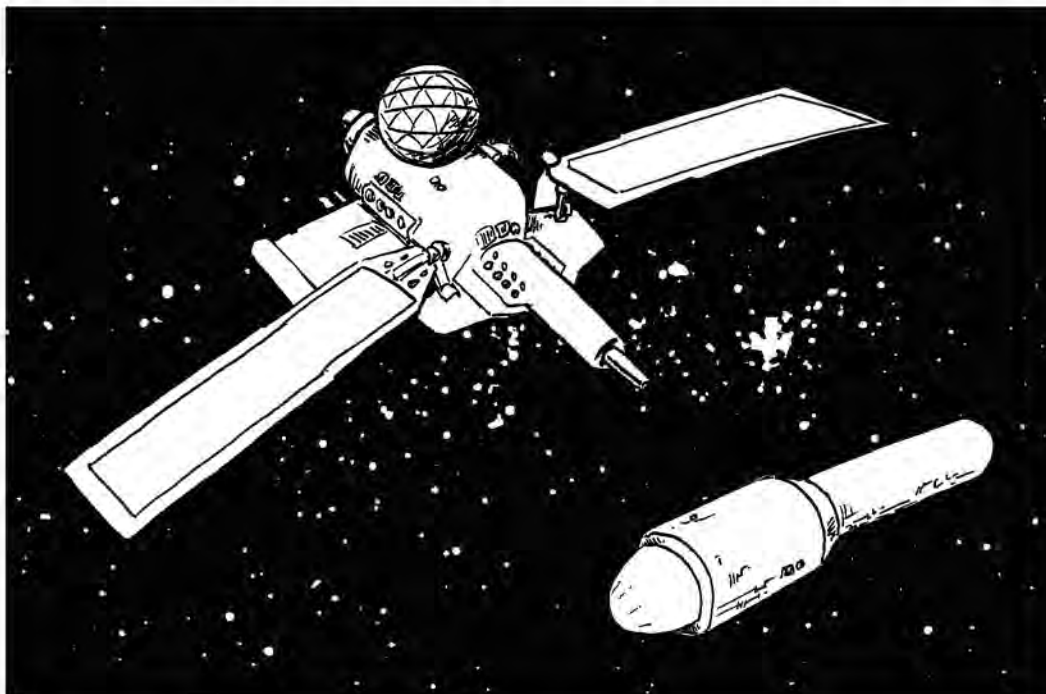
Awards in Play

Awards are generally a *persona*/thing, known to a character and their companions. They are in the record for anyone to see, and might be mitigating circumstances in certain disciplinary actions, but the awards themselves are generally only worn on dress uniform. However, soldiers will generally find a way to show they have a Red Star or DCB somewhere on their combat armor, just as a matter of pride, and may have allusions to CSRs they have strong personal feelings about. Personalizing of one's combat armor is neither officially allowed or prohibited, but as long as it doesn't make the wearer more visible in combat, one's immediate superior usually won't take issue with it.

These sorts of adornments take the place of good luck charms, which soldiers in the *Albedo* universe really have no concept of (nor any other superstitions).

Spaceship-to-Spaceship Combat

Starship battles are not the focus of the *Albedo* role-playing game. First is a matter of game practicality. Even the smallest capital ship (a corvette) requires an O9 in



the commander's acceleration couch, and corvettes don't count for much on the grand scale of things. Second is the nature of ship combat. When it comes to combat, it really boils down to whose ACVs get the most hits. A single ACV hit will obliterate corvettes, blow destroyers in half, cripple cruisers, and badly damage dreadnaughts and VLCCs. Even ACVs intercepted at close range can pepper a ship with fragments capable of through-and-through perforations of the hull. Starship hulls are quite strong, but not because they are armored -- because they are structures the size of a skyscraper that are capable of 1g maneuvers without collapsing.

If characters are on a ship that is involved in a fight, whatever happens is largely Game Host fiat. *It's unlikely the Game Host will flip a coin to see which half of a destroyer is obliterated if the characters are on board.* There are some things that simply aren't survivable.

For character involvement, starships are a way to get from here to there, and are a place to go home to after liberating an enemy-held mining colony, or exploring an intriguing planetoid. It's unlikely that characters will have anything to do *during* a fight except bite their nails. Or claws. Or talons.

Vehicular Combat

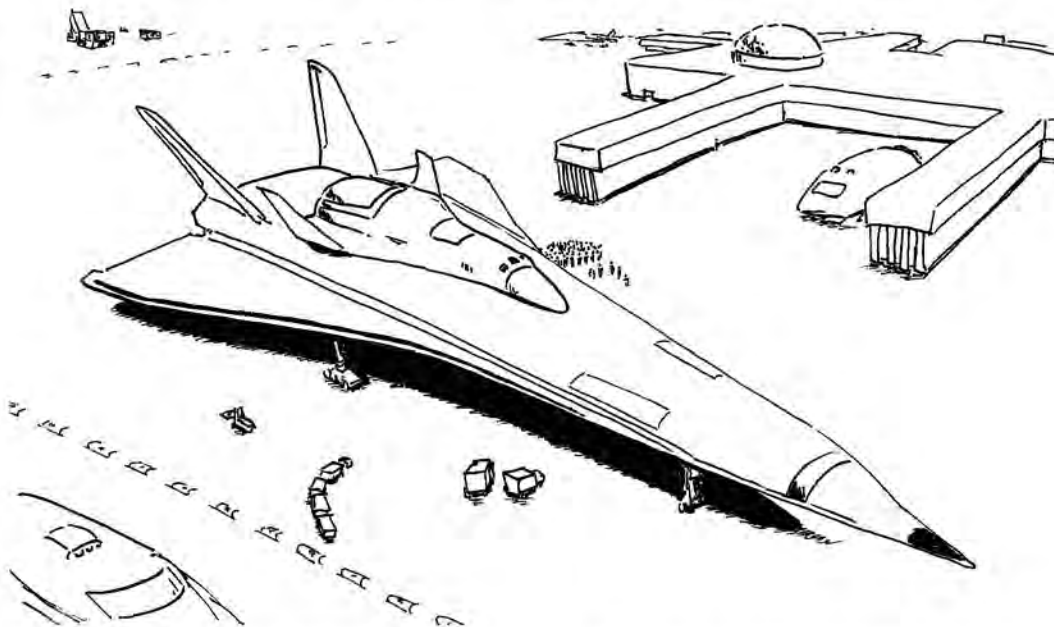
You may need a few modifiers to the basic combat rules when you encounter mechanized enemy forces or are in command of a few of your own. Some of the notes below you'll figure out immediately, a few use new vehicle characteristics listed in the Build & Repair section.

New Terms

There are a few new terms involved with vehicles and vehicle combat. These are not really anything new, but are just an extension of mechanics you are already familiar with.

The first is "die shift". Vehicles are large and inherently easier to hit, and things that would normally be to their benefit are reduced in effect. *A vehicle will have a Size, and most of the time this becomes an equivalent die shift for things relating to vehicle size.* What it means is that for each point of die shift, all affected rolls have their dice reduced by one type, using the following progression: d12, d10, d8, d6, d4, none. If you roll multiple dice, the shift applies to all of them.

If a die shift affects a character's use of a personal skill, then their marks are reduced by the level of shift. For instance, a



5 die shift turns a d12 roll into nothing, but a character with 6 marks in a skill can use their skill like they had 1 mark in it.

EXAMPLE

Example: A vehicle that has suffered a die shift of 1 to its main gun means that the user loses a mark off their skill when they use it. If the character had 3 marks in Vehicle Weapons for a Rote of 4, they would be counted as a Rote of 3. If they Pushed their skill, the die shift means they would roll 2d6 instead of 2d8.

Just remember that die shift subtracts from personal skills, and shifts the type of passive die rolls. A vehicle that has d10 for cover and d8 for range, but a 1 die shift because of its size, will instead get d8 for cover and d6 for range. A tank that has 1 die shift of damage to its tracks reduces the maneuver rating of the tank by 1 die type, and the skill of the driver by 1 mark.

The second term to remember is maneuver. Vehicles can move fast enough that they are harder to hit, and get an extra die or dice to reflect that, with a maximum possible maneuver of 2d12 (two 1d12 results, not the sum of the results). A vehicle will have a maneuver rating, which reflects the *maximum* level of maneuverability it has. This will be adjusted by any die shift for the vehicle's size and if it is moving less than full speed.

Maneuver is a function of vehicle performance, not skill, and so a Maneuver die roll of "1" is not considered a Botch. However, Maneuver can also be used as a Rote. A Maneuver listed as "d8(4)" is either a d8 roll or a Rote of 4, and which one is used is up to the driver/pilot of the vehicle.

Vehicles are easier to hit. *They're big.*

Any reasonable vehicle will have at least a 1 level die shift. For a vehicle with a size of 1, instead of getting d8 for 25% cover, it gets d6. Instead of d12 for being at an enemy weapon's Extreme range, it is d10. A 100% concealment is still 2d12, but of course it takes *more* cover to provide a vehicle with 100% concealment.

EXAMPLE

Example: A Maneuver of 2d12 on a vehicle large enough for a 2 die type shift would roll 2d8 for its Maneuver capability (each d12 gets a 2 die shift down to d8).

Most ground vehicles have a one die type shift, small aerodynes would have a one or two die type shift, medium sized aerodynes would have a two or three die type shift, and this includes most of the larger gunships. Only the largest aerodynes would have a four die type shift, and woe be to the person who actually misses one of these when shooting at it. Their companions will never let them live it down.

EXAMPLE

Example: Auitzotl spots an ILR scout car ziggling across a distant intersection during a mop-up operation. The range is Long, which is normally 1d10, and the urban zone concealment modifier for the range is 50%, which is another d10, and it is moving a little more than half its maximum speed, which for this vehicle is a Maneuver die of d8 (or Maneuver Rote of 4). However, it's a vehicle, big enough to have a 1 level die shift, so the scout car rolls d8, d8 and d6 (or use Maneuver Rote of 3) for its defense instead of d10, d10 and d8. If the driver of the scout car were an Armored Vehicle Expert and was evading, he would be able to negate the 1 level die shift and the car would roll d10, d10 and d8 (or use Maneuver Rote of 4) for its defense.

Effects of Skill

For a vehicle engaging in evasive maneuvers, a high level of Vehicle Operations skill can make you harder to hit. The pilot or driver can apply their skill in any way allowed as defensive dice (or Rote), but the maximum result or Rote is the same die type or Rote used in the die-shifted Maneuver.

EXAMPLE

Example: If the ILR driver in the previous example had 3 Marks in Vehicle Operations, he could add this to his vehicle's defensive roll, which we'll say is d8, d8 and d6(3), the d6(3) being the die-shifted Maneuver of the scout car (Rote of 3). The ILR driver could use a Basic roll of d8, Push to 2d8, Risk to d10, Breeze to 2d4 or Rote to 5. Given that he is limited to a maximum result of d6(3), the driver's best bet would be to Push and roll an extra d6. So, if the ILR driver engaged in evasive maneuvers at this speed and Pushed their skill, they would roll d8, d8, d6, d6, d6 for defense.

The Gift of Armored Vehicle Expert (q.v.) can improve the protection of armor in a vehicle.

Speed and Maneuvers

Perceived motion is relative. Something very far off could be going quite fast, but pass across your field of view slower than an object that is much closer. The important thing is how hard the target is trying to avoid being hit. If a pilot or driver is

doing everything in their power to make their vehicle harder to hit, they can add its Maneuver modifier to any other defensive dice they get to roll.

If the vehicle is just moving at more than half speed (no evasive maneuvers), there is a 1 level die shift, and if the vehicle is just moving at any reasonable pace, there is a 2 level die shift. Any vehicle moving more than a quarter of its maximum speed always gets at least a d4 for movement. Vehicles within one turn of coming to a stop or on the turn they just started moving generally do not get a movement modifier, and are considered helpless targets for Penetration purposes (+1d20 for Penetration). The defensive benefits of Velocity Expert or Armored Vehicle Expert do not apply during this vulnerable interval.

For everyone except the vehicle operator, engaging in evasive action makes doing anything difficult. And as for the vehicle operator, *they* are distracted by the maneuvers they are doing. Even with compensators and dampers linked to computer controls, targeting is more difficult. For systems integrated into a vehicle, the effective range is increased by one level, and so targeting at Extreme range is usually not possible. For non-integrated systems (like firing from the back of a careening truck), the effective range is



increased by two levels, making it impossible to hit things at Long or Extreme range. Fire that would be beyond an effective range of Extreme is impossible.

Characters may not use the Aim action in an evading vehicle.

These penalties are reduced by 1 level for normal maneuvering (non-evasive), regardless of speed. So, integrated systems can compensate perfectly, but non-integrated systems will still have a 1 range band penalty. In general, if you want to hit, don't evade. Rely on range and cover to make yourself harder to hit instead. It is generally not possible to lay sustained autofire into a target from an evading vehicle. *They simply aren't in your sights for the entire combat round.*

"Hey, I'm trying to work back here!"

Aerodynes are capable of accelerations that can be *physically* punishing, to the pilot and most especially to any passengers. Even ground vehicles can engage in violent maneuvers that can toss around the unwary. If a pilot or driver engages in evasive maneuvers to get the maximum maneuver modifier, the part of the maneuver rating in parentheses is the target number for everyone on board to match with their G-Force skill (this number is about the same as the average for the die type rolled).

Being strapped into a proper ground vehicle seat will drop the target number by 1, and a proper acceleration couch will drop the target number by 1. A pilot's outfit has compression bands that alter blood flow to avoid blackouts under extreme g-stress, and will drop the target number by an additional 1. Free-fall infantry and Rapid Response infantry armor may have similar compression bands, since they may be riding in a wildly dodging aerodyne on their way to the insertion point. A Velocity Expert can reduce the felt G-force, and will reduce the target number by 1 for themselves and all vehicle occupants. Rapid Descent Expert reduces the personal target number by 1 but does not help anyone else.

As with many rolls, characters should always use their Rote G-Forces, if their Rote is enough to meet the target.

If the result of the test is a tie, the character will suffer 1 Awe but is otherwise unaffected. Characters who pass the test with a tie or better do not have to retest during that particular series of maneuvers, but after a period of calm flight they would have to retest for a new set of evasive maneuvers.

Failing to meet the target number while strapped in means the character suffers 1 Awe, and must spend a Body to avoid blacking out for 1d6 rounds. For characters who are just along for the ride, it might be better to just suffer the blackouts (choosing to not suffer an Awe or spend a Body), but this often requires leadership on the part of a character to keep supporting characters from panicking.

A character who fails the roll and is *not* strapped in will suffer 1 Awe and take an attack with 0+5 damage, rolling 1d20 for each full 2 points in the target number. The Deflection of worn armor applies normally against this.

EXAMPLE

Example 1: Erma Felna has four marks in G-force and is a Velocity Expert. This gives her a Rote in G-force of 5. With an acceleration couch, g-suit and her ability as Velocity Expert (a total of -3 on the target number), she can easily Rote her way through any d12 evasive maneuvers (which have a GForce target number of 6), and she can drop the target number for all of her passengers by 1, with an additional 1 for their acceleration couches.

Her own situation reduces her target number to 3 (base of 6, -1 for her G-suit, -1 for acceleration couch, -1 for Velocity Expert). The acceleration couches and her Velocity Expert talent reduce the target number for her passengers to 4. So, if she has to pull a barrel roll at 600kph with a cargo hold full of airsick greenies, their target number is a 4. They may still have problems hitting this number, and may suffer Awe or black out. If someone were walking around in back when Erma has to make a sudden evasion and failed their GForce roll (a target number of 5,

since they don't get their acceleration couch), they would take a O+5 hit with 2d20 Penetration. They get bounced around the cabin like a furry pinball until the character makes a G-Force roll or Erma resumes level flight.

EXAMPLE

Example 2: Theodolu is driving an AV-4 when some ILR infantry with heavy weapons open up on him. Not wanting to have his new (and strictly non-regulation) paint job shot up, he engages in evasive maneuvers with only a muttered "hold on!" to notify the passengers. At top speed, an AV-4 has a Maneuver of d8(4), which means that anyone strapped in [-1 to target number] has a target number of 3, and anyone unlucky enough to be moving around when he manhandles the steering yoke has a target number of 4. Most of the supporting characters in the back will probably want to spend a Morale to Risk their normal G-Force roll of 1d4 to 1d6. Theodolu gets the d8 defensive roll for the AV-4's maneuverability in addition to any other dice rolled for range or concealment. It might be worth it, it might not.

Damage to Vehicles

Vehicles use the same rules for damage and armor as people. However, while people can suffer blunt trauma effects, vehicles can't. Vehicles have one special ability when it comes to damage. If the first damage number does not *exceed* the vehicle's Deflection rating, the shot likely bounces. You lose 2d20 off any Penetration dice that would be rolled, and if this would result in zero Penetration dice, the shot simply glances off the armor.

The vehicle armor acts as 100% cover for everything in the vehicle. If there are Penetration dice remaining and armor is penetrated, the weapon's first damage number is reduced by the Deflection of the armor.

This limit also applies to explosive weapons, which have comparatively low damages, and get most of their combat effect through Penetration dice. An explosive with a Damage less than a vehicle's Deflection gets 2 less Penetration dice. Contact and close range hits

can still do significant damage since they still have multiple Penetration dice, but hits at the fringes of the blast radius will have no effect (no Penetration dice).

A target that is helpless, like a stationary vehicle, or one that has just started moving or about to come to a stop (like a landing aerodyne) does get an extra d20 applied against it, and would also get an extra d20 applied on a critical hit.

EXAMPLE

Example: So, a MPKW 2-18 pistol with a damage of 8+7 will seldom do anything more than bounce off a vehicle with a Deflection of 12. Unless you had 3d20 Penetration dice (normal + helpless + critical hit), you would have no chance of doing any damage. It may scare the people inside, but the veterans will know that there are scarier things than loud noises, and save their adrenaline for when they can start to see daylight through the hull. However, if you did have 3d20 Penetration dice to start with, your 1d20 Penetration to anything on the other side of the armor would add to a damage of -4 (the Damage of 8, minus the Deflection of 12).

You can, if you want, apply this rule to characters or foes who have 100% concealment because they are inside buildings or other enclosing cover. If the first damage number of the weapon cannot penetrate any Deflection value of the cover, then actually doing damage to someone behind it is nearly impossible with direct fire weapons ... which is why grenades are standard issue.

Blowthrough

One negative trait of high-powered kinetic weapons is *blowthrough*. Only energy deposited in a target can deal damage. If the bullet or shell goes completely through a target, any remaining energy is lost. This is not that big a deal with infantry weapons. However, for heavy vehicle weapons, they can end up going through a light vehicle and do little more than leave a pair of holes with glowing edges and a bit of spalling.

While you would use the rolled total for determining special effects like hit location, the actual damage total (after

armor) on a vehicle from a kinetic hit is usually not more than the vehicle's Deflection + Body plus the results of the Penetration dice. Yes, a heavily armored vehicle can take more damage from a penetrating hit than a lightly armored one! The hits spray hot bits of molten armor around inside the vehicle. Thicker armor means more globs of hot metal splashing around...

EXAMPLE

Example: The ILR's LH 60-1 cannon has an tremendous Damage of 69+25, while a D-32 aerodyne only has a Deflection of 8 and 28 Body (for Thresholds of 56/66/76/96). Using normal rules, the cannon would Devastate the D-32 on a single hit. However, The LH 60-1 is a straightforward armor-piercing kinetic weapon, so the *maximum* amount of damage that can be done is the D-32's Deflection + Body (36) plus the Penetration dice result. This would be an average of 75 on a penetrating hit, and a maximum of 81 for a 1d20 Penetration roll. This is serious, but *not* enough to completely take out any aerodyne system in one hit. Furthermore, hits that don't Penetrate only do 36 points, which do not even reach the first threshold.

Big vehicles can come home full of holes but still be quite functional. Note that the blowthrough rule *does not* apply to explosive weapons. These leave *big* holes in anything they penetrate.

EXAMPLE

Example: The IKW-112 cannon is an explosive weapon with a damage of 15+15. On a direct hit to a D-32, it gets a damage of 15, +5d20 Penetration dice. On average it does about 75 points, about the same as the LH 60-1, but it can max out a 5d20 Penetration roll at 110 points, more than enough to Devastate the D-32!

Vehicle Armor

Civilian vehicles, even if armored, are generally armored in a symmetrical fashion. For instance, a dignitary in an armored limousine has no idea where a potential attack might come from, so the limo needs equal protection on the bot-

tom from buried explosives as it does on the sides from a roadside ambush.

Military vehicles on the other hand, generally have a "front towards enemy" philosophy. The listed Deflection rating of a military vehicle represents its *forward facing* armor. All other facings are likely lower than this amount. For a side hit, the Deflection is reduced by 2, and for a rear, top or underside hit, it is reduced by 4.

EXAMPLE

Example: An AV-4 variant with a listed Deflection of 15 has a Deflection of 15 on the front, 13 on the sides, and 11 everywhere else.

Vehicle Hit Locations

If the base damage of a weapon *exceeds* the Deflection on that facing, you roll d20's for penetration and additional damage as normal for the weapon type or circumstances of the attack. This includes any extra d20's roll because of previous vehicle damage. To avoid needing a hit location table, *where* a vehicle takes a hit will depend on the *total* damage you *apply to the vehicle*.

It requires a Routine leadership action to direct Supporting Characters to make a called shot. If you succeed in the called

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Open-Topped Vehicles

Some vehicles like armored trucks have an open top. Others, like mortar carriers have large armored panels that must be open to use the weapon, and sometimes you just have things like open roof hatches on an armored personnel carrier. Attacks from a superior height or with indirect fire weapons have the potential to go through an open hatch or land in an open area, completely bypassing the actual Deflection of the vehicle. This is determined on a case-by-case basis. For instance, an armored truck might have an open-top passenger bed, and an indirect fire hit that is a passenger location would bypass Deflection. The same for a weapon hit on a mortar carrier. In cases where it is not certain or not clear, a critical hit will usually do the trick if there is normally a 50-50 chance or better of it happening. Only at Game Host fiat do you get the chance of randomly putting a round into a single open hatch.

shot, you hit as though your damage total met the appropriate criteria and the vehicle takes effects as if you had. If you miss the called shot, you miss the vehicle.

Damage totals and hit locations are related as follows:

Damage Total is Odd: Generic Hit

If the damage total is *odd*, the vehicle takes a *generic* hit. The damage effect is generalized and not confined to one specific type of vehicle system. The vehicle takes Body appropriate to the level of the wound, and suffers die shift penalties to everything that isn't mobility or weapon-related (like sensors, communications, computers, etc.).

For efficiency's sake, vehicle components are packed in pretty tight. What a generic hit means is that several subsystems were probably hit, but the effect is not centered on any particular one.

Damage Total is Even (Divisible by 2): Mobility Hit

If the damage total is *even*, the vehicle is hit in a *mobility* system. This could be wheels, tracks, ducted fans, thrust venturis, engine, transmission, etc. Any penalties suffered only apply to maneuvering and other vehicle movement.

Damage Total is Divisible by 4 Mobility Hit and Weapon Hit

If the damage total is *divisible by four*, you get a mobility effect *and* a *weapon* effect. One weapon system suffers damage penalties appropriate to the level of damage done. This could be damage to the weapon system, or it might be a sensor-blinding effect. Shooting up vision ports and shattering external sensors can affect weapon function nearly as much as a hit to the weapon itself.

Damage Total is Divisible by 8 Mobility Hit, Weapon Hit, and Crew Compartment Hit

If the damage total is *divisible by eight*, it is a *crew compartment* hit as well as a weapon and mobility hit. If it is a passenger carrying vehicle, the operating crew is affected on front hits, otherwise the passengers are affected. For non-explosive weapons striking a fully occupied vehicle, one person in the affected area takes a hit with the damage of the weapon reduced by the Deflection of the armor, which *can* turn out to be a negative number. If the vehicle is not fully occupied, a hit to the passenger area has a chance of hitting an "empty seat" proportional to the number of unoccupied slots.

EXAMPLE: So, if you shoot an LRCKW (damage of 24+12) at a vehicle with a Deflection of 15 and hit a full crew compartment, someone in the crew compartment will take a hit with a damage of 9+12 from the shrapnel and the residual energy of the projectile. With a damage of 24+12, this weapon would hit the crew compartment on a penetration roll of 8, 12 and 20. Even though rolls of 8 and 12 do not penetrate the Deflection and generate extra damage, the base damage total of 24 is divisible by 8. A penetration roll of 20 gives a damage total of 56, which is evenly divisible by 8 as well.

Note: People struck through 100% cover that is penetrated by weapons should also have the damage reduced by the Deflection of the cover.

If the weapon was explosive (including shaped charges), *everyone* in the affected area takes the damage. Explosive damage rolls Penetration dice based on whether the first damage number exceeded the vehicle's Deflection. If it did not, you lose two d20's off the number of penetration dice rolled (and reduce the first damage number by the vehicle's Deflection). If the first damage number *does* exceed vehicle armor, the round detonates *inside* the vehicle *after* getting through the armor, and you should realize by now that this will be very, *very* bad.

Damage Total is Divisible by 16: Vital System Hit

Last, if the damage total is *divisible by sixteen and armor was penetrated by at least one of the penetration rolls*, you hit something absolutely vital. In addition to all the other effects, the vehicle shuts down, at least temporarily. An AV-4 may have a gas turbine, a battery bank and ten independently powered drive wheels, but if you put a bullet in the main power bus, none of the electrical power is going to get where it is supposed to. This can be a "soft kill", where the vehicle may be largely intact, but loss of a particular vital system renders it combat ineffective.

It is a repair task with a difficulty equal to the Body Damage done by the hit with a Labor in Hours (not days) equal to the Body Damage done by the hit. If it was merely a wound, it is a simple patch to get going again (difficulty of 1, 1 Quality-hour). Assuming you know how to repair things...

You must get a successful penetration to have this result, otherwise any weapon with a damage evenly divisible by 16 could do it, even without penetrating armor.

EXAMPLE: If we used the previous vehicle and weapon example, you can't actually get a soft kill with only 1d20 for penetration, since no penetration roll of 16 through 20 generates a damage total divisible by 16. However, if you had 2d20 for Penetration and succeeded on both, you could get a soft kill result.

To keep track of a vehicle's status, you really only need to monitor its Wound status, just as you would for a person. You have three tracks for the subsystems of the vehicle, and one for the Body. Wounds, Crippling and Incapacitating effects cause loss of vehicle Body just as they do for characters (1 for a Wound, 3 for Crippling, 5 for Incapacitated), and if a vehicle's Body ever drops to zero from cumulative damage effects, it just stops working and can be considered totaled.

The die shift a vehicle takes to a damaged system is the same as the Body done by that level of damage. However, you only count the highest die shift taken.

EXAMPLE

Example: A vehicle that takes a Crippling mobility effect after taking a Wounding mobility effect will have lost 4 Body and have a 3 die shift on Mobility.

Wounded

A vehicle Wound does 1 Body and applies a 1 die shift to use of the affected system. Hits on a vehicle with any Wounds get +1d20 Penetration.

Crippling

A Crippling effect does 3 Body and applies a 3 die shift to use of the affected system. Using a Crippled mobility system at full effect (maximum Maneuver, full rate of fire, etc.) will do 1 Body to the vehicle per turn. A mobility-Crippled vehicle can be limped along at low speed for quite a while. Hits on a vehicle with Crippling damage get +2d20 Penetration.

Incapacitated

An Incapacitating effect does 5 Body and applies a 5 die shift to use of the affected system. Using an Incapacitated mobility system at any level of effect will do 1 Body to the vehicle per turn (2 Body if used at its current maximum speed). A mobility-Incapacitated vehicle can be limped along, but is on its last legs and *will* give out in the near future. Hits on a vehicle with Incapacitating damage get +3d20 Penetration.

Devastated

A Devastated result to a general location kills the vehicle, and to mobility or a weapon, renders that system unusable – the vehicle can only be scrapped, not repaired. Note that a vehicle with multiple weapons will have the largest remaining weapon and all central fire control wiped out by a Devastated result.

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Sniping at Vehicles

The most Penetration dice a person could get firing at a vehicle is 5d20: a base of 1d20, +1d20 for stationary (helpless) and +1d20 for a critical hit, and +2d20 for the Gift of Sniper Master. Even with a light weapon, this allows for shots through vision devices, into engine intakes, and so on. With heavier weapons, these extra Penetration dice can be devastating to a vehicle.

Example Vehicle

See page 266 for the details of this vehicle:

APCL-8

Armored Personnel Carrier

Top Speed: 80 kph amphibious

Maneuver: d8 (4) Deflection: 13

Size: 1 Thresholds: 36/46/56/76

Crew: 1+8 Body: 18

Armament: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

8mm remote ☐☐ ☐☐☐☐

MG turret Damage:
General 1 2 3 4 5
Mobility 1 2 3 4 5
Armament 1 2 3 4 5

The most severe of any damage that applies to a given system is a die shift to use of that system. If an operator's skill cannot get at least a die-shifted Rote of 1, it means that they do not have the skill to overcome the limitations of the damage, and at least for them, the system is non-functional.

For example, Crippling result on a vehicle's Mobility does 3 Body, and is a 3 level die shift to any use of the vehicle's mobility. If the driver does not have sufficient skill to have a Rote of 1 after a 3 level die shift, then they cannot make the vehicle move at all. With a Crippling result, this vehicle now ignores the effects of other Crippling results and Wounds. However, such hits still accumulate Body damage to the vehicle, which can eventually render it non-functional, even with no further penalties on rolls.

Even if a vehicle or subsystem is "incapacitated", a *skilled* operator (able to get a Rote of 1 after a 5 die shift) can keep a badly damaged system going just long enough to land an aerodyne or get an armored vehicle under cover before abandoning it.



EXAMPLE 1

Example 1: Theodolu is *not* happy. Not only did one of his supporting characters crack his head open on the ammo locker when Theodolu engaged in evasive maneuvers, an ILR kinetic dart ventilated the side of his AV-4, ripping through a data line and severing a power cable to two of his road wheels. His vehicle has suffered a mobility Wound. Mark off 1 Body and mark through the 1 on the Mobility row. The on-board computer compensates as best it can, but his Maneuver drops from d8 to d6. Looking at the vehicle power plant table, we can guess that his top speed is reduced by twenty-five percent, which for this vehicle would be from 80kph to 60kph. Fortunately, Theodolu managed to nip his vehicle down an alley before the ILR squad could lob another dart at him. *Unfortunately, it's a blind alley...*

EXAMPLE 2

Example 2: After a few rounds of battle, an APCL-8s profile might look like this:

APCL-8

Armored Personnel Carrier

Top Speed: 80 kph amphibious

Maneuver: d8 (4) Deflection: 13

Size: 1 Thresholds: 36/46/56/76

Crew: 1+8 Body: 18

Armament: XXXX ☐☐☐ ☐☐☐☐

8mm remote ☐☐ ☐☐☐☐

MG turret Damage:
General X 2 3 4 5
Mobility X X 3 4 5
Armament 1 2 3 4 5

Then someone trying to use the remote turret has no penalty, since the general overall damage does not affect weapons fire, but someone trying to drive the vehicle has a 2 level die shift. This means that you need a starting skill of at least 2 marks to do anything at all with the vehicle, and this would be at a Rote of 1.

[For the example of how to *repair* this vehicle, see page 242.]

Loss of Mobility

Mobility penalties are die shifts to the Maneuver rating of the vehicle, but in practical terms, the top speed of the vehicle is reduced by about 25% per die shift. So, a vehicle that starts with a d4 Maneuver will

have *Maneuver* drop to zero after a 1 die shift, but the top speed of the vehicle probably drops by 25%, and someone with a Rote of 2 (dropped to 1 by the die shift) can still get the vehicle up to this reduced top speed. If the operator has the skill to overcome any die shift from damage and get the vehicle moving, it can always move at up to 25% normal speed. An AV-4 with its tracks blown off can still move across open ground, just *very* poorly, and with a good chance of getting stuck unless you have a very skilled operator.

Damage thresholds for vehicles are figured identically as for characters, but vehicles tend to have a lot more Body for their inherent size, plus additional Threshold amounts for very heavily armored vehicles, and can therefore take a lot more hits before going down. For instance, an Aero C-3 aerodyne has generally poor armor, but with a Body of 16, it means you have to get 32 points of damage through for it to even notice. This amount is barely possible for an AW 191 carbine (damage of 8+9) to do. It is more likely if it can get +2d20 or more to roll for Penetration, which is easily possible if the C-3 is ambushed as it slows down for a landing.

Shock & Awe

Having friendly vehicles nearby is a great morale booster. Having friendly vehicles providing fire support will subtract 1 Awe from any effects infantry would ordinarily suffer. This subtraction is *per occurrence* that a soldier would normally take an Awe effect. This effect only lasts as long as the supporting vehicles are showing no impairment from damage taken.

Being in an armored vehicle also helps, both for the crew and any carried infantry. As long as enemy weapons have a damage less than the Deflection of the vehicle, crews and passengers fully under armor suffer nothing more than annoyance at being shot at. However, this benefit ends the instant the armor is penetrated by enemy fire to the extent that the vehicle or any occupant loses Body. Once the illusion of invulnerability is broken, it is not regained for the duration of the combat.

Hiding a Vehicle

A vehicle can hide just like a person, gaining a 25% cover and concealment bonus. Air vehicles can only 'Hide' while hovering or parked on the ground (and therefore count as 'Helpless' (take +1d20 Penetration if hit). If the operator has Armored Vehicle Expert (for ground vehicles and aircraft sitting on the ground) or Velocity Expert (for aircraft which are actually in the air), he or she can also negate 1 level of size as if they were evading. They are not *actually* evading, but are simply using any available cover in a more intelligent manner.

It takes 6 Quality-hours of Labor to prepare a hiding place (using Vehicle Operations or Build skill). A prepared Hiding place takes no extra time to enter or exit but the entry and exit points are usually limited. To use existing terrain for Hiding is a vehicle operations test of Intermediate difficulty which is always rolled (d8) because there may not be anything near you when you need it and even the most inexperienced driver will find a place by chance eventually. The size die shift for a vehicle will always apply to skill use when trying to hide your vehicle (it's harder to hide a big vehicle).

Prepared positions cause no modifications to perception (see below) but improvised hiding affect perception and sensor operations under the same rules as Hiding involving a person.

Note that most defenders Hide their vehicles and can spend time to prepare several hiding places (which EDF troops call 'Rabbit Holes') in an area of operations.

Fog of War

Any time an explosive weapon goes off on or near the ground, it stirs up huge amounts of dust and debris, along with the smoke from its own detonation. Any area in the blast radius (out to where 1d20 is rolled for penetration) is immediately counted as 100% obscured for mortars, rockets and general high explosives, and 50% for grenades. This will drop by 25% per turn outdoors, and 25% each 2 turns indoors. Wind or rain or a non-dusty substrate can make it dissipate faster or be less obscuring. A mortar shell going off on a grimy city street churns up more dust than

one that embeds itself in grassy turf before detonating.

An explosive that detonates somewhere in the LOS between you and an enemy will provide half the normal benefit, since it unlikely the cloud of debris will completely block your view, but odds are it will still partially block your line of sight.

Aerodynes can generate this same effect by hovering over any area that has dirt and dust that can be stirred up, and they may cause obscurement even if they don't want to.

Perception

The peoples of the Albedo universe have had all their perception abilities radically shifted towards the Human norm as part of the anthropomorphizing process. Species which had significant super-human senses retain some enhancement but only at very high skill levels do abilities exceed what is possible for humans. On the other end, all species have had sub-par Human senses improved to Human standard. For instance, everyone has stereoscopic color vision with significant peripheral range.

Being able to see or otherwise sense things is one of the most important things in any combat, and is often taken for granted. A character's Spot skill is the one most commonly used for this purposes, though Listen, and rarely Smell can also be used.

The engagement range for any scenario is

going to depend on the local conditions and the *best* spotting score among the sides involved (no one starts shooting until *someone* spots the enemy). Spotting the enemy *before* they spot you is critical in combat, more important than weapons skill or any other single factor.

For any given encounter, there is going to be a default level of difficulty to see/sense things at the expected engagement range. For ease of use, this can match the stats of an EDF carbine:

Spot Range (EDF Carbine)	Target Number
S15	2 or d4
M50	3 or d6
L330	4 or d8
X2300	5 or d10

Targets beyond Extreme range can only be spotted if they are large (reduce effective range) or if spotting gear is used (telescopic sights divide the range by the power of the sight).

For a group as a whole, use the fixed number. If it is an important play involving a single character, you can use the fixed number or the die type. The basic idea behind these perception rules is to give the Game Host a feel for the battle area as a whole, not to bog things down with lots of individual rolls.

If you can beat this number with a Rote use of your Spot skill (which is at least a 2), then you have full awareness of what is going on within that range at all times during combat.



Sixth Sense Skill, for those who have it, serves as a 'floor' or minimum for any perception dice rolls. It does not change the Rote but it does prevent Botching when rolling and ensure that a perception effort is usually at least as good as the Rote. Characters using Sixth Sense are noticeably edgy, however.

Example : A character with one mark in Sixth Sense has a Rote in it of 2. No *die roll* involving perception will be counted as rolling less than 2.

A Rote use of Spot requires no time and represents your general situational awareness. You use your Rote value because you are *really* concerned about doing it right, and spotting absolutely *everyone* who is trying to kill you. Rote value also lets you see how well supporting characters as a whole can assess the situation. Odds are that they will be blindsided by any well-planned attack, but once characters spot things, other modifiers will take over and give everyone a passable chance to figure out what is going on. If you can't do it by Rote, you have to roll on Spot skill, however you deem best for the situation.

Diving For Cover is a Popular Choice

Generating a perception score other than by Rote is an action. This takes a turn, but if you are successful, you maintain awareness of the threat you were looking for until it goes to a longer range or alters the target number in some other way. At this point you get a free Spot roll to maintain line of sight. If you fail, you lose them.

Any character who sets a Watch get a free perception roll if they wish but remember that one has to specify what one is watching for (movement is popular) and what one will do when one's Watch is triggered ('shoot' and 'hide' are popular). Watches can be triggered on ties (character's choice) but a firm ID is only made on a success. You could end up shooting a friend or civilian if you elect to react to ties.

Beyond this, there are plenty of things that can modify the base target number.

General Situation	Target Number
Battle Management Software	-1
Concealment	+1 to +3
Quantity of Targets	-1 to -3
Target is obvious	-2

Personal Situation	Target Number
Wounded	+Awe
Under fire	-1
Total awareness	-1
Watching	-1
Sneak skill	Special
Hiding	Special

Example : Even if you only have a Spot of 1, if you have the support of battle management software[-1], there are several enemy out there[-1] and they're shooting at you[-1], then the target number is 1. Your Rote of 2 lets you spot everything that meets those criteria within 330 meters. Anything outside this range or set of criteria, you may have to roll for. For instance, if there is a lone soldier trying to sneak around for a flanking shot, you get the advantage of your battle management software, but the soldier is not part of a group and is not shooting at you (yet), so your target number is a 3, which you *can* beat with your default d4 on Spot. You just have to roll for it instead of getting it automatically.

That requires that you spend a turn looking around or that you be on Watch.

Battle Management Software

Your helmet's display and weapon sight are linked to those of everyone else in your squad and any squads within radio range in the cluttered EM environment of the battlefield. Any target that anyone else sees is automatically classified and patched through to your display. If there is someone 100 meters behind you and to the left, and a member of a fire team 50 meters away spots them, then *you* spot them. The only downside of battle management software is that you do not get the bonus until you are *in* a battle. It doesn't help you spot an ambush; it just helps you keep track of the enemy once the shooting starts. On the small scale, no one gets the battle manage-

ment software bonus until *someone* spots things the old fashioned way.

Concealment

Concealment is a catch-all that represents obscurement, darkness, smoke, bad weather, you name it. Each 25% concealment is a +1, but 100% actual concealment is always a "you don't see me" situation. If there are multiple types of obscurement, they add their concealment. So, a 50% for darkness, combined with 25% actual cover would be a 75% concealment modifier. While you can normally only get 50% cover when firing a longarm, a sniper in proper cover *can* get 75% cover (though in the *real* world they are usually under 100% cover and you don't detect one unless you step on them).

Some forms of concealment can be negated or reduced by standard technology. A night vision device will offset darkness, for instance. The general level of obscurement sets the scene more than anything else. If it is dusk in a light forest, then nothing is going to happen past 150 meters, since that is the range where these two conditions add up to 100% concealment. Anything that happens outside that range is beyond what the characters can do anything about except by firing blind and getting lucky.

Quantity of Targets

If there is a lot of what you are looking for, odds are higher you'll spot at least one of them, and that will help you spot the rest. An enemy squad would be -1, a platoon -2, and a company -3.

Target is Obvious

Ordinarily, anyone in a combat situation is presumed to move about and generally act in such a way so as to *avoid* notice. Uniforms are colored to blend into terrain, men and women move carefully and the weapons give off minimum visual signatures. However, sometimes, a target is obvious because it does or is doing something that stands out. Moving and shooting at the same time, wearing bright or contrasting uniforms, using tracer ammunition, firing a weapon at night without a flash suppressor (which is common), moving casually around in the open, etc., are all examples of obvious targets. Characters who want to ap-

pear "normal" in non-combat environments are going to be obvious targets too.

Size of targets

A column of enemy vehicles is easier to spot than a similar number of infantry. Small vehicles would be -1, large ground vehicles or small aerodynes would be -2 and large aerodynes would be -3. This is the same as the size modifier of the vehicle.

Wounded

If you suffer Awe during a turn, this affects your situational awareness. The Awe points you take make it harder to notice other things going on. The exception to this is that you get a free chance to spot whoever just did that to you, in case it isn't already obvious. You may end up passing out or panicking before you can pass this information on, but that's life.

Under Fire

Being the focus of enemy attention really clarifies your senses. If nothing else, the muzzle flashes and angry metal bees going by tell you where to look.

Total Awareness

If your Listen, Smell and Sixth Sense scores total to 6 or more, the extra acuity these senses provide can give you an overall bonus. This may not even be consciously recognized. You may not be aware of an "enemy smell", but the tickle in the back of your mind keeps you more alert than if it wasn't there. In some circumstances smell or listen or both may not function (such as in a vacuum (neither), in a sewer (no smell) or in a loud environment (no listen) and in these cases only the functioning senses (if any) applies to check for the total of 6 or more. Characters with a total score of 12 or more for Listen, Smell and Sixth Sense may take this bonus twice, making it really hard to sneak up on such a person.

Watching

If you are Watching are particular spot or small group of spots, you are much more likely to notice the appearance of what you are looking for. Straight visual Watching is a -1, while using a vision enhancer like a scope or binoculars reduces the effective range, but limits you to Watching a smaller area.

Sneak Skill

If you have Sneak skill (and are using it!), you can add your marks to the target number someone else has to spot *you*. However, you cannot add more marks than the normal target number for that range.

Remember that you cannot take *any other action* during a turn in which you are Sneaking other than use one particular movement skill. If you are Hiding, you do not move; the difficulty of all your own Listen and Spot rolls increases by 2, but the difficulty for others to find you increases by 2+Marks in Sneak Skill.

Example: A squad is moving down a rainy city street and has a likely engagement range of about 30 meters. This means the default for any possible scenario involving only a few hostiles (no quantity modifier) is a target number of 3 before the shooting starts (2 for the range, and +1 because of the rain). Characters with a better Spot skill may notice things by Rote, but everyone else is going to have to roll for it, and may not actually spot any hostiles until someone actually fires at them.

Auitzotl is constantly looking around. He cannot really Watch, since he doesn't know where to look, but he is Spotting every turn as the squad moves carefully down the street. Auitzotl has 1 mark in Spot, but 2 in Listen and 2 in Smell and 2 in Sixth Sense. This gives him the bonus for total awareness, so he only has a target number of 2, which he can do by Rote with his Spot of 1 if he chooses to act on ties. He does, but his action is not to shoot, but to alert the rest of the squad. He automatically assesses the situation the instant he gets in visual range, and speaks a quick command into his helmet mike. On the next turn, everyone in his squad gets the battle management software bonus, even if the shooting hasn't started yet, so their target numbers are now 2 instead of 3. Once any shooting starts, it drops to a target number of 1, and everyone will know exactly where the hostile or hostiles are at. If Auitzotl didn't have these keen senses and experience, he would only be rolling 1d4 to hit the target number of 3 instead of automatically getting it by Rote. The game host would only have Auitzotl roll

when it was important, not every turn he is out on patrol.

On the other hand, any potential hostiles trying to spot Auitzotl and his friends only have a target number of 2, since they are looking for a squad, not one or two people.

Listen and Smell

These do not have the same degree of importance as sight, but in some situations can be equally valuable. Listen can pick up the sound of enemy movement even under total visual obscurement. Smell can detect things that are completely hidden (upwind), or even things that aren't there anymore. Listen used alone is going to be a +1 modifier, and Smell is going to be a +2 modifier, and both will be situational. Weapon fire is usually a -3 modifier to detect (it's loud!), and most conditions that mask sight are only half as good at masking sound (you can hear a gunshot in a building you can't see into). Weapons that are sound-suppressed are only -1 to detect. Neither smell nor hearing gives enough information to target a weapon with except under the most unusual circumstances, but if visual spotting *is* possible, a successful Listen or Smell can help pinpoint where to look.

Setting Perception

Characters may set their perception for an encounter by using any of the usual methods of skill score determination. That is, they may choose to roll before well before an engagement starts to represent their level of alertness, and keep that result until they choose to pay Drive or Morale to re-roll it, or a minimum of 1 Drive or Morale to reset it to Rote. Normally, you do not get to re-roll or reset the number until hostilities start and the adrenalin starts flowing. And you can work this into play. The supporting character who rolls a '1' was out late last night carousing and is hung over, or the guy who rolled maximum is wired because he had a bad dream or sense of déjà vu about the current situation.

This rule is primarily used to speed play and to determine who is 'on' for the encounter ("Yeah, all right, I got point..."). It saves time and eases play and bookkeeping during an encounter.

Consolidated Perception Table

Condition	Terrain	5m	10m	25m	50m	100m	150m	200m	300m	500m
Active Sonar	—	25%	25%	25%	25%	25%	25%	25%	25%	25%
Active UV Lighting	—	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brush	Uneven	0%	0%	0%	0%	0%	0%	0%	0%	0%
Building Interior	Even	50%	100%	100%	100%	100%	100%	100%	100%	100%
City Lights	—	75%	75%	75%	75%	75%	75%	75%	75%	75%
Collapsed Building	Impassible	0%	0%	0%	25%	50%	75%	100%	100%	100%
Daylight	—	0%	0%	0%	0%	0%	0%	0%	0%	0%
Desert Sand	Uneven	0%	0%	0%	0%	0%	0%	0%	0%	0%
Dusk	—	25%	25%	25%	25%	25%	25%	25%	25%	25%
Flooding Rain	Uneven	0%	25%	50%	100%	100%	100%	100%	100%	100%
Full Moonlight	—	50%	50%	50%	50%	50%	50%	50%	50%	50%
Hail	Uneven	0%	0%	25%	50%	100%	100%	100%	100%	100%
Hard Rain	Uneven	0%	0%	25%	50%	100%	100%	100%	100%	100%
Heavy Snow	Uneven	0%	0%	0%	25%	50%	75%	100%	100%	100%
Hills	Uneven	0%	0%	0%	0%	0%	25%	50%	75%	100%
Infrared (heat only)	—	25%	25%	25%	25%	25%	25%	25%	25%	25%
Light Forest	Uneven	0%	0%	0%	25%	50%	75%	100%	100%	100%
Light Snow	—	0%	0%	0%	0%	25%	25%	50%	75%	100%
Low-Light Enhancing	—	25%	25%	25%	25%	25%	25%	25%	25%	25%
Marsh	Uneven	0%	0%	0%	25%	50%	75%	100%	100%	100%
Mountains	Impassible	0%	0%	25%	50%	100%	100%	100%	100%	100%
Plains	Even	0%	0%	0%	0%	0%	0%	0%	0%	0%
Remote Viewing*	—	+25%	+25%	+25%	+25%	+25%	+25%	+25%	+25%	+25%
Sandstorms	Uneven	0%	25%	50%	100%	100%	100%	100%	100%	100%
Snowstorm	Uneven	0%	25%	50%	100%	100%	100%	100%	100%	100%
Soft Rain	—	0%	0%	0%	0%	25%	25%	50%	75%	100%
Space Station	Even	100%	100%	100%	100%	100%	100%	100%	100%	0%
Swamp	Uneven	0%	0%	25%	50%	100%	100%	100%	100%	100%
Thick Fog	—	0%	25%	50%	100%	100%	100%	100%	100%	100%
Thick Forest	Impassible	0%	0%	25%	50%	100%	100%	100%	100%	100%
Underground Darkness	—	100%	100%	100%	100%	100%	100%	100%	100%	100%
Urban Zones	Even	0%	0%	0%	0%	25%	50%	75%	100%	100%

When stacking modifiers, use the *worst* one. *Exception: remote viewing adds 25% concealment to the target.

These are averages and most effects should not be used if an actual detailed map or miniatures are used. Also, elevated positions (like a skyscraper or mountain ridge) and artificially long sight lines (like down a highway) will change these numbers but such effects are up to the Game Host's imagination and player initiative. Long range engagements will be rare in high cover areas such as cities but are common in the countryside or (especially) when interfacing between countryside and city.

Called Shots

Aiming at a specific part of a vehicle allows a character to single out a weapon system or mobility hit. You cannot aim for a generic hit. Aiming at a specific part of a vehicle is like any other specific targeting. In general, against a vehicle you will lose any size bonuses to hit and count the location aimed at as a person-sized target. Also, if you do hit what you were aiming at, the damage is only to that part of the vehicle. If you go for a weapon effect and succeed, you do *not* get a crew and a mobility effect as well. However, if you are using an

explosive weapon, you probably hit at least one member of the weapon crew on any weapon called shot.

If a vehicle has more than one of a given system, you have to choose which one you are aiming at, and only the one aimed at is directly affected.

EXAMPLE

Example: If you shoot at the weapons of a vehicle that has two turrets, you have to choose which one you are shooting at, and any penalties that apply from the damage should really only apply to that turret.

A called shot that misses by 1 hits the vehicle using the normal random location system (which may hit the intended area!). Any miss by more than 1 is a miss. Any visible crew may be targeted as a person sized target with appropriate cover and concealment modifiers and modifiers for the vehicle's motion (if any) but they do not suffer additional penetration dice for the vehicle being stationary (if any). Any hits striking the cover (the vehicle) check for damage to the vehicle.

It takes 1 point of Morale or Drive to do a called shot on any enemy vehicle that has demonstrated it is aware of your presence. Supporting Characters will not make called shots at all without an officer to direct them. It takes a cool head to spend the extra time to lay a bead on something that big that is out to do you harm.

Vehicle Duels

Aerodynes at two clicks isn't a dogfight, it is a matter of who hits whom how often and how hard. On the other hand, two aerodynes doing nap-of-earth down city streets trying to get the jump on each other is a vehicle duel, as would be a chase between land vehicles down those same streets, or even trying to outmaneuver an enemy aerodyne with your AV-4.

This is handled in a quick and fairly abstract way. Each turn, each driver or pilot gets die rolls equal to the Maneuver of their vehicle, and their skill with operating the vehicle (Vehicle Operations).

A novice pilot (d6 skill) in a high-performance vehicle (d12 Maneuver) rolls the same dice as a hot pilot (d12 skill) in a slow vehicle (d6 Maneuver). However, the skilled pilot can Push to 2d12, for a roll of

d12,d12,d6, while the novice can only get d6,d6,d12. *Skill trumps vehicle performance.*

All of these dice are adjusted by the size of the vehicle. An Armored Vehicle Expert or Velocity Expert gets their die types bumped up one level. Whoever gets the high roll can choose the order in which both vehicles move and fire on *that* turn. Ties would be broken by whoever has the most marks in their vehicle operations skill. Further ties are broken by Sixth Sense, and if it still a tie, both sides act simultaneously.

If *all* the winner's dice beat *all* the loser's dice, this is a critical success. For a vehicle duel, this means the winner gets to act twice, once before the loser's action, and once more after it. This does mean that the winner may move and shoot twice in the same turn. It represents getting the drop on or maneuvering in such a way that you have a great (but fleeting) tactical advantage.

Everyone else on the vehicles acts normally, though passengers and gunners can be Watching for an opening to fire, which can correspond with the pilot or driver's weaving into position for their own kill shot.

The initial range for a vehicle duel is usually no more than the minimum extreme range for the longest ranged weapons of whoever rolled best. If one side is unarmed, it is no more than the minimum extreme range of the longest ranged weapon the other vehicle has.

EXAMPLE

Example: Erma Felna has six marks in Vehicle Operations *and* is a Velocity Expert. If she is piloting an aerodyne with a Maneuver of 1d12 and a Size of 2, and only does a Basic skill roll, she rolls d10 and d10 in a dogfight to see who acts first (she has d12 for her skill and d12 for Maneuver, loses 2 die types for the size of the aerodyne, and gets 1 die type back because she is a Velocity Expert). If she wins the roll and is outgunned, she can choose to move first and try to get under cover, or failing that, increase the range. If she has the advantage, she can close the range and fire before the enemy can evade.

Over the course of a 6-second turn, each 10kph in speed difference between vehicles



is about 17 meters in range gained or lost. For sake of convenience, round it to 20 meters.

EXAMPLE

Example – If Erma's aerodyne has a top speed of 750kph and the enemy craft has a top speed of 600kph, the 150kph difference means that each turn Erma tries to close the range she will get 300 meters closer, and each time she tries to escape she will get 300 meters further away. This of course presumes she is in the open where she can use her top speed to best effect. If dodging down urban streets, her safe top speed will be considerably less.

If someone doesn't want to engage, then that person automatically loses the sequencing roll, which may or may not have any real effect. If a tank wants to duel with a cargo aerodyne, and the cargo aerodyne doesn't want to play, it can simply zoom out of range in a turn or two...

Dueling Terrain

If a vehicle duel's "terrain" has obstacles that limit the speed or maneuverability of the combatants, the Game Host can set a level of difficulty for them. A low number is a terrain or situation that is only slightly restricting, while a high number is very limiting.

Terrain	Difficulty
Open terrain	1
Slightly cluttered (nap-of-earth flying)	3
Cluttered (nap-of-earth over wooded hills)	6
Very cluttered (nap-of-earth between buildings)	9
Absolutely cluttered (flying through buildings)	11

To "be safe", no dice rolls for sequencing or dodging enemy fire can exceed 13 minus this number. So, open terrain is a zero, and you can get up to a 12 as a die result. Absolutely cluttered terrain is a 12, and no vehicle can move fast enough to get *any* kind of maneuvering bonus. In this case, since sequencing die rolls have a maximum result of 1, who goes first is based on marks in Vehicle Operations with ties broken by Sixth Sense.

EXAMPLE

Example – If you are engaged in a chase on the ground through "very cluttered" terrain, all die rolls for sequencing have a maximum result of $13 - 9 = 4$. This tends to flatten out the effects of high skills, since now no one can roll better than a 4.

If a pilot or driver wants to exceed the safe speed, they can roll their Vehicle Operations and Maneuver dice as normal for any type of terrain clutter they wish, adjusted by any die shift for the size of the vehicle, and just declare that they are "going for it". To successfully pull this off, their sequencing roll has to beat the difference between the terrain types.

EXAMPLE

Example – If you wanted to count cluttered terrain [modifier of 6] as only slightly cluttered [modifier of 3], then you succeed if any die in your sequencing roll beats a 3.

You *can* do this by Rote if you are good enough, but remember that any die shifts do affect your Rote. Whoever is being chased decides if they are going for it first, and then the pursuer has to option to do the same.

Operators suffer 1 Awe for every point by which they exceed the safe speed. It takes guts to exceed a speed you know is safe, especially when the consequences of failure are much the same as for a bug hitting a windshield. As the vehicle shudders from being pushed past its safety allowances, all passengers will suffer 1 Awe from such maneuvers. Coolness under Fire and other traits *will* reduce Awe suffered.

EXAMPLE

Example – If you wanted to count cluttered terrain [target 6] as only slightly cluttered [target 3], you will suffer 3 Awe.

Success means that you have adjusted the cap on your die results because of terrain limitations on *that* turn. It also means that

COMMAND REVIEW • FANMAZ RULES

Bounding Overwatch

Remember that a character cannot Sneak and Watch at the same time. This generates the need for *bounding overwatch*. Characters move in small groups by Sneaking while a support group (the covering group) Watches or Spots (usually from Hiding) for attacks against those sneaking. Then the Sneaking group stops and Hides and Watches while the other group Sneaks to a new position for Hiding and Watching. In game terms, bounding overwatch limits a group's movement to half the lowest Sneak Rote in the group ... but it is also a tried-and-true method of advancement, both in the real world and in *Albedo*.

you are gaining ground on or getting away from the other vehicle by 10% of your top speed, since you're exceeding the safe speed, and they aren't.

Small, fast vehicles have the obvious edge in these situations. They have a higher Maneuver to begin with, and less of a die shift to rolls because of their size.

Failing to make the roll when exceeding safe operating generally means the vehicle has run into something, and will take damage as though it fell onto the appropriate object (trees would roll fewer d20s than buildings, for instance). Just use a "distance fallen" of 10 meters for every 30kph of speed the vehicle had. A vehicle's Deflection applies normally.

EXAMPLE

Example – If Erma's aerodyne clips a building while she is going 300kph down a city street, her aerodyne will take damage as though it had fallen 300 meters! This would be a damage of 0+40, with 5d20 rolled for Penetration. This could range from scraped paint on a lucky roll to catastrophic damage on a bad one.

Characters with high skill will of course try to push enemy pursuers past the limits of *their* skill, hopefully causing them to slam into obstacles with the appropriate consequences.

Infantry Rules

Here are a few clarifications and additions to the standard arsenal of rules available to the average soldier.

Following Fire

You may claim Following Fire with a semi-automatic weapon. You may not following fire at more targets in a round than you have skill marks.

Semi Automatic Expert

You must decide whether to use the 3 bullets and claim the benefits of the Gift *before* you determine if a hit is scored, not after.

Semi Automatic Master

You may not use Following Fire *after* using Semi Automatic Master, though you may use Semi Automatic Master for a following fire attack.



Skill Use by Round

Whenever a particular method of generating a skill score is chosen for an action, that same method will continue to apply until the next round unless the character spends for a retry. Any costs for pushing or risking or botching are only paid once. This is especially important for Close Combat.

Suppression Fire

Suppression Fire attacks *do* check for Botches on each attack made, even during an opponents turn. However, only the *first* attack made can cause Drive/Morale loss. Subsequent Botches simply count as a minor weapon jam and stop the Suppression fire. The character may resume shooting on his or her next turn without penalty.

Grenade "Hot Potato"

Thrown grenades normally go off at the end of the *next* turn after being engaged (not the current turn). The grenade may be

picked up and re-thrown by someone else and may even be re-thrown by the character! It requires a Spot check vs. 2 (modified as normal); it takes 1 Drive and inflicts 1 Awe to pick up and throw a grenade. It is also a moderate Throw task (vs. 3 or d6). Characters may retry failed rolls including botches but each retry increases the difficulty level by the cost for a retry. If a character fails a roll and cannot make a retry, the grenade goes off on contact. Characters may take 1 Awe to hold a live grenade to throw right before it goes off to prevent a throwback but it is a Routine leadership test for a supporting character to do this (though he or she could direct himself in this manner...)

Close-Combat Mass Melee

The Awe loss from close range attacks apply only once per opponent and each opponent is counted as a separate event for countering by Coolness Under Fire or Cold Hearted.

COMMAND REVIEW • APKNAB NERFUP

The Nature of Leadership

Leadership skill is a vital measure of command and control of others under stress. It is a precious, valuable, and relatively rare commodity. In practical terms, it allows supporting characters to act on their own judgment and initiative as if they were Adjutants or Main Characters. With this in mind, Lead skill has no Group Gifts that modify it. Characters can only have Lead marks by buying them directly. Otherwise, all the Admin and Emissaries staff would be better combat commanders than the actual battle leaders!

Gravity

In the basic rules, gravity is covered only with regards to falling and terminal velocity. Some of the inhabited worlds in known space have gravity far enough from the norm to have considerable effect. Also, ships under thrust may exceed or be far less than the standard 1g.

The biggest change characters will have to deal with is encumbrance. All their gear *and* their body weight is adjusted by the difference in gravity. Round gear and personal weight to the nearest kilogram. Any difference between

normal and gravity-adjusted body weight applies to their encumbrance total.

EXAMPLE: Auitzotl has a weight of 43 kilograms. In a 1.1g environment he weighs 47.3 kilograms (round to 47), a 4 kilogram difference. He adds 4 kilograms to the total weight of all his gear, in addition to increasing the total weight of that gear by 10%.

In a .9g environment, he gets to reduce the total weight of his gear by 10%, and then *subtracts* 4 kilograms from that amount.

Being able to work and move properly in an altered gravity environment is a use of G-force skill, but for most purposes Rote use is sufficient, as all EDF personnel have at least basic training in a variety of gravitational regimes.

Damage at Range

For simplicity's sake in the basic rules, all ranged weapons do full damage at all ranges. *This is not actually the case.* Damage drops for projectiles *in an atmosphere*, as drag slows them down and reduces their kinetic energy. At Long range, most weapons lose 2 points off both damage and penetration, and 4 points off each at Extreme range, and this can conceivably drop damage to negative values.

EXAMPLE:

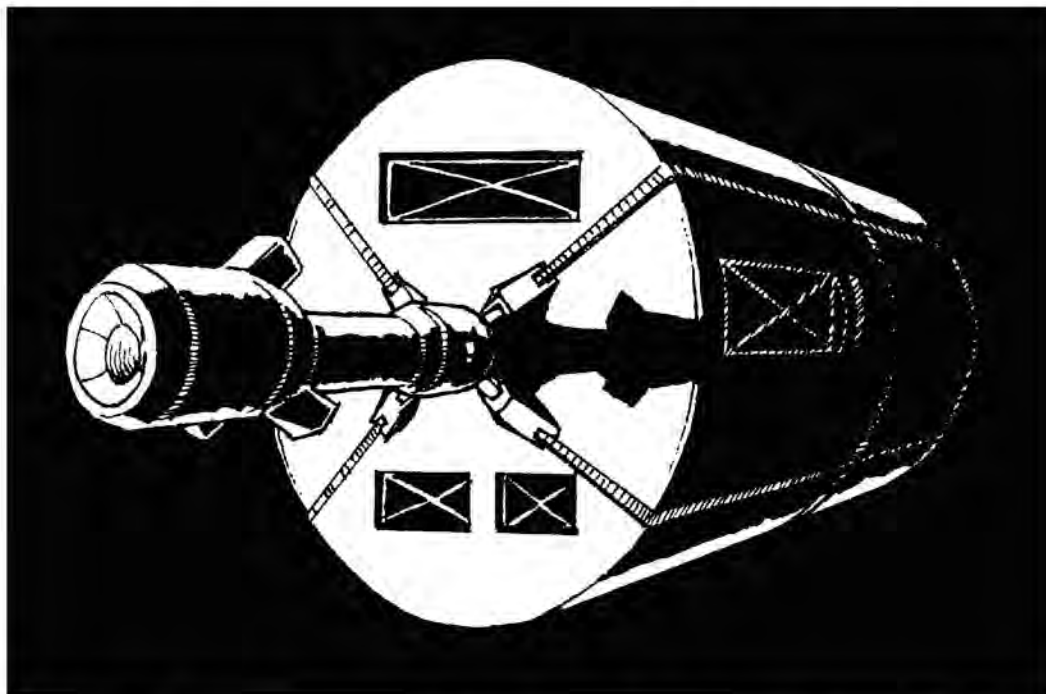
So, a PAKW 4-12 pistol will drop to a damage of 6+5 at Long range, and 4+3 at Extreme range.

A successful penetration can *still* do some significant hurt. Even a nearly spent rifle bullet can still kill a person, but the average damage done will be less than for a short range hit. This rule *never* applies to explosive weapons, which always do full damage at all ranges, and kinetic weapons in a vacuum environment keep their full damage at all ranges.

Suppression Fire

To clarify, a Suppression Fire zone is always triangular — one of the points is always the firer, and no side of the triangle can be longer than the weapon's Short range (Medium if you're a Suppression Fire expert). Clip-fed weapons cannot do Suppression Fire as well as belt-fed weapons, simply because they empty their clips so quickly. Clip-fed weapons increase the effective range by one band. So, a normal Suppression Fire at Short range would have all targets count as Medium range if the firer was using up the limited ammunition in a clip-fed auto-rifle.

All hits from Suppression Fire count as Following Fire, *but only to the extent of your skill.* A Suppression Fire Expert *who is not also a Following Fire Expert* can Suppress a



triangle whose sides are Medium length, but they can only claim following-fire advantage (that is, getting an extra to-hit roll) against targets within *Short Range*.

Danger Space

Danger Space is a variant of Suppression Fire where the shooters are trying to lay down bullets into a *distant* area, often without hitting anything at shorter ranges. For instance, a slightly elevated position might let you shoot over friendly troops to fill an area, or at longer ranges, bullets can be arced so that they miss close range targets, and last, aerodyne gunships can fill large areas on the ground at well beyond the 50-60 meter Medium range of their weapons.

Making a Danger Space Attack is an action that is declared and executed in the normal sequence but the targets get to react to it. They can perform a Hide action or move 2 meters to better cover. A leader must coordinate individual troops to do a Danger Space attack (it takes an action), but an individual can use a personal or computer-linked weapons for this type of attack on their own initiative.

A Danger Space attack is a matter of weapon control and statistics. You are not aiming at anyone in particular (so no Following Fire is allowed). You are just trying to fill an area with bullets, and hope the density of bullets is high enough to hit something.

COMMAND REVIEW • APKNANB DECEUP

Military Jargon and Danger Space

Plunging fire is gunfire aimed so as to fall on an enemy from above, sometimes with indirect-fire weapons like howitzers, but sometimes from an elevation, other times taking advantage of a bullet's descent in gravity to fall behind walls. *Volley fire* is the simultaneous discharge of many weapons at a target zone – the signature tactic of the computer-controlled weapons of the EDF gun-ship. *Covering fire* is a Danger Space created to deny an enemy avenues of attack against your own troops (for example, an aerodyne using machine guns to cover deploying troops.) Another term for Danger Space is *beaten zone*, especially for a Danger Space maintained for several minutes as a defensive measure.

On the plus side, you add:

- iii. The average Rate of everyone engaging in the Danger Space fire, rounding any fractions down. This will never exceed the total from steps 2 and 3.
- iii. A factor for the rate of fire of the slowest weapon in the group doing the Danger Space fire, and how many weapons are firing.
- ii. A factor for the type of mounting and fire control available.

Situation	Target
Semi-auto (6)	+0
Full-auto, clip fed (25)	+2
Full-auto, belt-fed (50)	+3
Rapid-fire (300)	+5
Each doubling of weapons firing	+1
All weapons are computer-linked	+1
All weapons are vehicle-mounted	+1
All shooters have Suppression Fire Expert	+1

The numbers in parentheses are how many rounds are expended during a round of Danger Space fire, and if you don't have enough, it doesn't matter as long as you are closer to the amount you need than the next lower amount.

An individual with a pistol contributes nothing to a Danger Space attack made by soldiers with assault rifles. The one with the pistol can be ignored. He may fire, but will contribute nothing to the total."

Computer-linked weapons are those with automatic aiming servos controlled by a computer at a single weapon station using Vehicular Weapons skill. *Vehicle-mounted* weapons are those which are permanently mounted to the vehicle for stability in aiming, though tripod-mounted weapons usually qualify as well.

You *can* get both bonuses at once (like a twin heavy machinegun turret), or only one (like a pair of pintle-mounted weapons fired by individual gunners).

Example: If you have two infantry with belt-fed support weapons, those two factors add up to 4, so the average marks these gunners apply cannot exceed 4, for a maximum possible total of 8.

Then you subtract a factor for the range and the size of the area you are laying the Danger Space into. The closer the range, the more shots you get into the area you are trying to fill, and the smaller the area you are filling, the more concentrated the fire. If you are firing vehicle weapons *and* the vehicle is evading, you increase the range by one band, and apply a -2 penalty to reflect that your weapons simply will not be pointed at the target for the whole combat round. If firing *handheld* weapons from a vehicle, increase the range by *two* bands and apply the -2 penalty.

Circumstance	Modifier
Firing vehicle is evading	-2
Close range	-2
Short range	-3
Medium range	-4
Long range	-5
eXtreme range	-6
Small area (size of a house)	-0
Medium area (size of a large intersection)	-3
Large area (size of a city block)	-6

The "small" area is what you would use to target a single vehicle, a fire team or tightly deployed squad. "Medium" would be a dispersed squad or a few vehicles, and "large" would be an area occupied by a dispersed platoon.

The result you get is the "number of marks" in the attack, which is always rolled as a regular skill. If there are zero marks or less, there is no effect. If there are 1 to 5 marks in the attack, you do a Basic skill roll against the defenders. Botches have no effect other than being a waste of ammunition. However, if there are *more than* 5 marks in the attack, the Game Host can simply declare that anyone who is not under 100% cover is *automatically* hit at least once. Vehicles apply their size modifier to this, so for instance a vehicle with a size of 1 would be automatically hit if you had 4 marks in the attack. Each mark *beyond* that needed for an automatic hit (6) counts as a critical hit, worth an extra d20 Penetration. You only roll one hit, but it actually represents getting hit several times.

EXAMPLE

Example: If your numbers add up to "7 marks", then any people in the open are *automatically* hit once, and this hit is with +1d20 on Penetration. A vehicle with a size of 1 would take +2d20 on Penetration.

These extra Penetration dice mean that even weapons which do not or cannot individually get through armor can still clean off external sensors, bludgeon a person into unconsciousness, or actually start shredding the armor off a vehicle (especially the improvised kind). These extra hits can be especially important with small-arms against vehicles, since the extra Penetration dice can offset the -2d20 Penetration penalty for vehicle armor that is otherwise too tough to get through.

For reference, 5 marks in this calculation represents about 1 bullet for *each* square meter of the target area. Statistical distribution may leave gaps big enough to miss a person, so they still get 1d12 defense against the 1d12 attack. Each ± 1 mark doubles/halves the bullet density. So, "6 marks" means about 2 bullets striking each square meter in the target area, and at this level and higher it is possible but increasingly unlikely there will be any holes in the pattern of fire that would actually miss an exposed person, so dice in defense become useless. For reference, a person has a frontal surface area of about one square meter.

Defenders automatically get the chance to dive for any cover within 2 meters of their position when attacked by Danger Space fire. If defenders are not subject to automatic hits, then everyone in the area, friend or foe rolls d12 for defense, plus any partial cover die. Vehicles apply their die shift (and thus roll d10 or less); maneuver or concealment does not apply.

Note that at shorter ranges with few weapons, Danger Space is not as good as what a Suppression Fire Expert could do ... but if you don't have a Suppression Fire expert, you do what you can.

Simply being in a Danger Space area causes Awe: typically 3 points less than the marks in the attack. Targets with 100% cover suffer a maximum of 1 Awe, provided that cover is sufficient to stop the weapons being

used, otherwise they suffer +1 Awe in addition to any effects from being hit by the fire.

EXAMPLE

Example: A D-9 gunship mounts eight HAKW 1-100 guns and two VAKW guns. The HAKWs are fired with one Danger Space roll. If the target area is the size of a large intersection at Long range and the gunner has a Rote of 6 with the weapons, you have:

- Skill [5]
- Rapid-fire guns [+5]
- Three doublings [+3]
- Computer-linked [+1]
- Vehicle mounted weapons [+1]
- Long range [-5]
- Medium area [-3]
- Total: 7**

This gives the gunner "7 marks", or one automatic hit against every exposed target in the area, with +1d20 Penetration on that hit. There is not a single spot the size of a person in that entire city block that isn't taking *at least* one bullet, making any sort of dodging irrelevant. Only those who dive under complete cover are spared, and even they are Awed by the volume of fire coming down.

The VAKWs would be fired the same way, and if dispersed over a similar area would have 5 marks or a d12 roll, which would hit a good fraction of any exposed defenders. Keep this up for several rounds and the casualties will be almost total.

Gunships are rightly feared, and the only reason they do not completely rule the field is that they cannot carry enough ammunition to sustain their carnage. A single combat round of fire from this gunship expends *three thousand* rounds of ammunition! If this were delivered into the smallest Danger Space area, it would be 30 bullets per square meter, with Penetration of +4d20 more than normal.

Keep in mind that any land vehicle that mounts a twin machinegun turret will get the multiple weapon and vehicle weapon bonuses. This would commonly be the 8mm and 6mm twin MG turrets used by the EDF and ILR, respectively.

Like Suppression Fire, anyone who does anything except Hide in the Danger Space area is subject to an automatic attack as long as the Danger Space is maintained.

An Indirect Fire Expert can make or direct others to make a Danger Space attack over friendly troops or obstacles to lay a beaten zone further downrange. Unless you already have a height advantage, this can only be done at Long or Extreme range, and the damage and penetration of the weapon used are both reduced by 4.

Steel Rain

There is not a lot of artillery in *Albedo*, but there *is* enough of it to worry about. In addition, characters have ready access to grenade launchers, which can be used in an indirect fire mode.

New Gift: Indirect Fire Expert:

This Gift is a Basic Gift that covers the proper use of weapons fired to a location that is not directly seen by the firer. Weapons under the direction of an Indirect Fire Expert (which can be a single weapon fired by the Expert or a weapon under his direction or a battery of weapons under his direction firing at the same target) hit on ties instead of scattering.

Indirect Fire Expert is also required to direct a Danger Space Attack at an unseen beaten zone or over intervening obstacles that would normally be hit.

An indirect Fire Expert can also spend a Drive to allow the person observing for him or for himself to successfully make Navigation skill rolls on a tie as they relate to Indirect Fire.

Indirect fire weapons use Heavy Weapons or Vehicle Weapons skill, depending on whether it is handheld or vehicle mounted. To provide directions to a third party to accurately aim indirect fire weapons is a use of Navigation skill, normally a Routine task, but if there is anything tricky involved, like bad weather or a need to avoid certain targets in the zone, it can be an Intermediate task. A spotter with Navigation allows the spotter (who *can* see the target) let the gunner (who *cannot* see the target) fire using only the concealment or visual cover modifiers the *spotter* is affected by.



Indirect fire lands the turn *after* it is fired. That is, you fire it and make your roll, but the defenders make their roll on the following turn. *This could be good.* You could time it to land just as the enemy infantry makes their dash from cover to cross the street. *It could be bad.* You could be few seconds off the mark and fire it while they are in the street, and it doesn't land until they are under cover again.

Large projectiles like mortars are likely detected by someone on your side the instant they are fired, with information passed through channels to alert the most probable targets, giving them time to seek cover, if not leave the immediate area. Small projectiles like grenades are almost impossible to spot unless you are Watching for them, but if you can spot them, your battle software can probably tell the general area they are aimed at. Grenade launchers and mortars have a distinctive sound, so even if you are not Watching for them, you can choose to act as you feel appropriate when you hear one fired. *It might be headed your way, it might not...*

Massed indirect fire is six or more rounds landing in an area on a given turn. This can be one aim point, or several aim points that form a line. In the case of one aim point, the *least* skilled gunner rolls to hit, and the grouping is treated as *one* explosion with +1 meter to the radius and +1 Awe to the effects. In the case of a line, two endpoints are chosen five burst radii apart (so a 2m explosion would be a line 10 meters long). Damage is measured as a blast distance from the line, not a point.

Dispersion

Thrown grenade dispersion is covered in the main rules. For dispersion from weapons like grenade launchers or mortars, if you miss by 1, the shot is off by 6 meters. The shot just barely lands within a useful distance of the aim point. Missing by 2 or more means that at best it lands in ear-ringing range (6 meters per point missed by), but is unlikely to actually hurt whoever it was aimed at unless it was a *large* barrage. If the dice rolled to hit are even, it overshoots. If odd, it undershoots, and on a Botch it *really* undershoots. Numbers also divisible by 3 deviate to the right,

and those also divisible by 4 deviate to the left. A roll of 12 that manages to miss is a simple overshoot.

For weapons capable of semi-automatic fire (specifically, the GAKW), if a burst is fired using indirect fire, they can either all be designated to land on target, or be "walked". The grenades will land 6 meters apart in a direction chosen when the grenades are fired. On a hit with the first grenade, assume the remaining two land 6 and 12 meters further away. You have to decide to walk your shots *before* you fire.

EXAMPLE

Example: Emphiro has 2 marks in Heavy Weapons and is using a grenade launcher in an indirect fire mode. He ends up needing to beat a target number of 5. He Pushes his skill to roll 2d6, and gets a 4 and a 5. The 5 is a near miss, which is off by 6 meters. For a normal grenade with an explosion of 2m, this means it loses 4d20 off its penetration roll. Since the roll was odd, and is not divisible by 3 or 4, it is a simple undershoot that plows up the dirt 6 meters short of where he aimed. He looks at his sight, thumbs in a slight compensation, and reaches for another grenade. If he had fired a three round burst from a semi-auto grenade launcher and said he was walking the shots away from his position, he could have put the second on target, since the first hit landed 6 meters short. The third would have landed 6 meters long.

Indirect fire weapons have certain inherent advantages and requirements. We've already noted the time delay and how that can work for or against you. While mortar crews are trained specifically in indirect fire tactics, normal infantry supporting characters will use direct fire with their grenade launchers unless specifically directed otherwise.

You can get a direct hit on ties with artillery or indirect fire if you are an Indirect Fire Expert.

Indirect fire can shoot *completely* blind, such as over buildings. This *always* counts as an extreme range shot, but if you know *where* the target is hiding, they only get a cover modifier based on where you want the grenade to land, not the cover they have from your direct fire. If you are shooting

blind but there is the possibility of negating their cover with a good shot, they only get 1d12 for 100% concealment instead of 2d12.

Shooting at a target you can't see directly requires some sort of advance intelligence or remote sensing. It is a routine Navigate or Sensor Operations task to send coordinates and other targeting information to a weapon other than the one you are using. A spotter with a pair of binoculars or a remote camera can send firing solutions to someone else who cannot actually see the target.

A target can pre-designated for an indirect fire mission. This usually requires 2 Quality-hours of time by an indirect fire gunner and someone with Navigation skill, and is only an Intermediate task. While it can mean firing completely blind, the difficulty is normally a maximum of 2d8 at Long range and 2d10 at Extreme range. This benefit is kept only as long as the indirect fire unit stays emplaced. Once they pack up and move, the process has to be repeated.

Most EDF indirect fire weapons, including rifle grenades, can be set with a time fuse accurate in milliseconds, an impact fuse, or a ground proximity fuse that can be set anywhere from 1 to 4 meters. The accuracy of the proximity fuse varies with the radio-reflective characteristics of the ground.

Airbursts, whether timed or proximity-detonated can be used to negate up to 25% cover if used properly. For instance, if someone is hiding in a slit trench, they have much less protection against an airburst than a

COMMAND REVIEW • JPNKNAK NRGUUP

Stray Bullets

Not every bullet fired in a Danger Space attack lands in the target area, and you do not necessarily get your weapon's maximum rate of fire for the combat round. Vehicle maneuvering may throw your aim off, you might not have started the attack with a full clip and ended up emptying your weapon halfway through, and so on. The "bullet leakage" outside the target zone means that the EDF will not generally use Danger Space fire if there is the potential for friendly fire casualties. If you want to model this, apply a leakage zone of up to double the target radius, with one-quarter (round up) the marks of the main attack.

ground burst.

If an indirect fire weapon is spotted when it fires, it not only means the projectile is detected, it means the nearly exact location of the firer is also known. If the people you are shooting at also have indirect fire weapons, this could become very interesting, starting about 3 turns from when you fired (1 turn for them to notice, 1 turn to shoot back if they're on the ball, and 1 turn for it to get there).

Grenade Tricks

The EDF variable grenade, as used in a grenade launcher, can be creatively programmed. Specifically, you can use the weapon's laser rangefinder to determine the exact range to the target, and use that distance to program an exact detonation time for the grenade after firing. This allows you to get proximity hits on aerial targets, or to detonate grenades *above* an enemy, rather than against the cover they are hiding behind. This can possibly negate some cover an enemy might have, or allow a hit on ties against aerial target when ties would normally be a miss. Supporting Characters will not normally attempt creative grenade tricks without an officer to suggest it.

Rigging Booby Traps

Characters can rig grenades and other devices with tripwires. A booby trap is a single-use attack roll using the Demolition skill of whoever placed it to trigger if someone meets the activation condition. This is a target number of 4 (an Intermediate task), and can only be done with a Basic skill roll (it is not a standard tactic). The person placing the booby trap can lose 1d20 off the penetration of an explosive weapon to get an extra mark on their skill. That is, you set up something that is more likely to go off, but is less likely to do so exactly where and when you want it to. A standard setup (no loss of Penetration dice) means that it is set up to go off instantly, within a meter of the person setting it off.

In addition to rolling whenever someone triggers the booby trap, any improvised device like a grenade requires a Routine task when placing it (target of 2). A Tie means you have time to get out of the blast radius before it goes off. A Failure is a recoverable

error. A Botch means your device triggers while you are still in its designed blast radius.

Once the device is placed, it simply waits for someone to come by, at which point it uses the Demolitions die roll used to place it. A failure to detonate means that the person who passed through the area simply failed to trigger it. A Botch means they triggered it, it didn't go off *and* they spotted it. A tie means the booby trap goes off, but with 2d20 less Penetration.

EXAMPLE

Example: Chara hides an ILR grenade under some debris and runs a trip wire across the hallway. Chara only has 1 Mark in Demolitions, so she sacrifices 2d20 of the grenade's Penetration to put together something she hopes will work (giving her 3 marks, for a Basic roll of d8). With a lack of Demolitions skill, she doesn't know what height is best for the trip wire, or the best delay setting for the grenade based on its position and where the tripwire is. Provided she doesn't blow herself up while placing the grenade, she gets a 1d8 roll for each person who passes.

The target number for tripping the booby-trap is 4. On a roll of 5, 6, 7 or 8, the grenade goes off and catches the person in the 3d20 Penetration range for the grenade. On a 4, it goes off late and only gets 1d20 Penetration. On a 2 or 3 they step over the trip wire without setting it off, and on a 1, they hit the tripwire and snap it without triggering the grenade.

Detecting a booby trap uses Search, Demolitions, Sixth Sense or Spot skill, whichever is highest. The basic difficulty for spotting a booby trap is 3 + the actual score in Demolitions of the person who placed it has. If the Rote score in the highest of these would succeed, suspicions will be aroused when entering the booby-trapped area, even without spending an action to look around. However, it will still take an action to actually spot the device or its trip mechanism.

EXAMPLE

Example: Since Chara had only 1 real mark in placing the booby trap, it is a target number of $3 + 1 = 4$ to spot it.

EDF policy discourages booby-traps and mined explosives, especially in civilian habitations. Terrorists, insurgents, and ILR troops have fewer reservations.

Homing Weapons

Some weapons have inherent course correction ability. As these are most often weapons that also have explosive potential, it means they can miss, but still detonate within a useful distance of the target. Explosive weapons with homing capability can sacrifice 2d20 from their penetration roll to get +1 on the best die rolled to hit, for a maximum of +2 to a die roll. In the event that such a weapon is used against a civilian vehicle with a readily spotted signature and no inherent EW capability, the penalty is only 1d20 per +1 to the roll, with a maximum of +4 to a die roll. Using guided weapons against civilian air transport is an easy task for even marginally skilled troops.

This rule is especially applicable to weapons used against airborne targets, which would otherwise be limited to contact hits only.

Homing weapons will have a particular method of operation, and will not get their bonus against targets that do not meet the targeting criteria. In fact, lacking an appropriate target when firing is a sure way to confuse a homing munition, as it seeks fruitlessly for something to head towards.

Many homing weapons are sophisticated enough to be programmed before firing to only seek specific target characteristics, or to ignore specific target characteristics. So, a missile that homes in on radio emissions could be told to ignore signals from small aerodyne radars or to only go after signals common to giant landing aerodynes.

Electro-Magnetic Pulse

EDF, ILR and to a lesser extent civilian technologies are naturally resistant to low levels of electromagnetic interference, simply because of the widespread use of optical circuits. The military gear used by ILR and EDF forces is designed to work in an environment crawling with jamming signals and

electromagnetic interference, and is hardened against any effects likely to be found in the ambient environment. However, this does not make them invulnerable to *directed* short range effects. And since every piece of sophisticated hardware relies on even more sophisticated circuitry, something that damages or temporarily disables electronics can be a powerful weapon.

Any device or weapon capable of generating an EMP will have a damage and penetration value, just as other weapons do. These values *only* affect electronics and computerized or computer-assisted devices. This can range from the night vision sight on a rifle to the intermix compensator on a fusion reactor.

For ease of use, there are three levels of protection an electronic device can have against outside interference, and this is identical to Deflection for armor. Civilian devices have a Deflection of 6, military devices and civilian vehicles have a deflection of 12, and military vehicles have a Deflection of 16. In general, civilian electronics have a damage threshold of 10/20/30/50, and military electronics have +10 on the thresholds.

The biggest difference between EMP damage and normal damage is that the self-diagnostics, redundancy and re-routing algorithms in virtually every device mean that effects are generally temporary. That is, you *do not* keep track of wounds for devices from EMP damage. *If you use the rule at all*, it applies separately every time, and only permanent effects need be dealt with.

A Wound on an electronic device is a re-

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EMP in Game Play

Because it doesn't actually stop someone from fighting, neither side has any major deployment of EMP bombs, and so these rules are not something that is going to come up in play very often. A gun with its electronics fried can still kill you, and a crack gunner without access to a targeting computer can still hit you. Freefall Infantry can use them as a decompression-safe means of disabling enemy electronics. Virtually every EMP device short of an enhanced fusion warhead requires near contact to the target to have any chance of working.

boot. The induced spike through the various inputs acts like a Botch. For a soldier, communications are garbled, vision enhancement is full of static, directional displays and range-finders give inaccurate readings and medical monitors may send unusual results to any monitoring systems a squad or platoon leader might have for the individual ("what do you mean, he's pregnant?"). Any sophisticated electronics on a solder go down for one turn. A simple generalization of this is to reduce the user's skill by 1 Mark for their next action. (If this reduces Marks to zero, the individual is in way over their head.) One or two minor functions on a soldier's integrated systems may actually be disabled. A suit's outside temperature monitor may have been fried, or communications circuits now have an annoying hum or hiss in them. A vehicle will take 1 Body. There is no inherent permanent effect, but there are fried circuits that have to be repaired, and this will take time.

A Crippling effect means *something* broke. The character, equipment or vehicle takes the effect of a Botch, and the effect does not go away. For vehicles, the location rolled for the hit indicates the general nature of the malfunction.

A weapon enhancement might be kaput, a hand computer might be fried (though its non-volatile data is recoverable), or comm links might be down. On a vehicle, a particular fly- or drive-by-wire system might be offline, a particular sensor could be down, or an electronic linkage of some unknown nature might have been compromised, like the landing gear. Vehicles lose 3 Body from the hit, like for any other Crippling damage. Crippling effects can be fixed by damage control in the field.

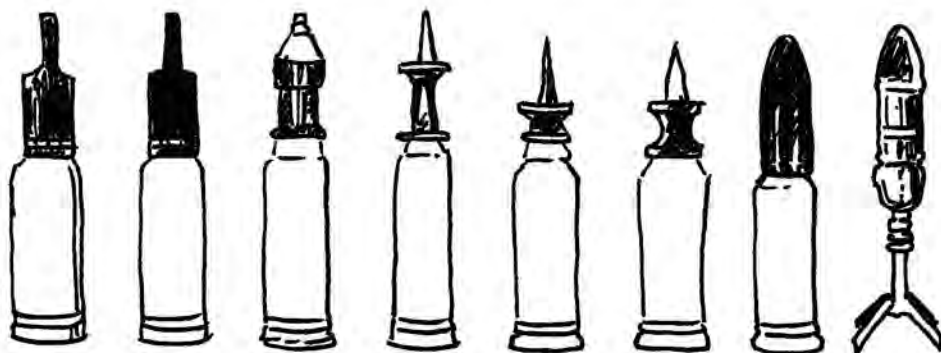
An Incapacitating effect is a widespread

system failure, followed by a failure to reboot. Something major no longer works at all. A mechanical system may be virtually intact, but still completely non-functional, as much as a car would be if you yanked out the electronic ignition. An Intermediate task check is needed to reboot the damaged system, which takes at least a turn, and only the most basic functionality in the damaged system or subsystem comes back on line. Vehicles lose 5 Body from an Incapacitating electronic hit. Incapacitating effects require major repairs beyond the scope of most field damage control.

A Devastating EMP result completely fries all sophisticated circuits in the affected device or vehicle. This result is virtually impossible to get on modern military hardware, and is what might be expected from an EMP-enhanced fusion explosion, or being at ground-zero of an EMP device's detonation.

Statistical Hits

Sometimes, for the sake of plot development, you want to get an idea of hits or casualties, and don't want to roll a huge amount of dice to figure it out. For instance, if a gunship lays down a barrage on an enemy formation. The easiest way to do this is to assume that the attacker rolls average, and the defenders roll average. Cross-reference the attacker's die type(s) with the defenders, and read the result. The rows and columns cannot cover *all* the possible die combinations, so you use the *best* die rolled, and if they get more than one die of *more than* half this level, count it as 2 dice of the highest type. If you have three dice of the same type, count it as 2 dice of the *next* highest type. If the attacker wins on ties, shift their best die up



by one type. The color result represents the percentage range of targets that are affected by the weapon.

EXAMPLE

Example: A defender with d12 and d6 would be on the 1d12 column, while a defender with d12 and d8 would be on the 2d12 column and a defender with d6, d6 and d6 would be counted as 2d8.

Attacker's Dice	Defender's Dice									
	1d4	1d6	2d4	1d8	1d10	2d6	1d12	2d8	2d10	2d12
1d4	25%	10%	10%	10%	10%	10%	5%	5%	5%	5%
2d4	50%	25%	25%	25%	10%	10%	10%	5%	5%	5%
1d6	50%	25%	25%	25%	25%	25%	10%	10%	10%	5%
1d8	50%	50%	25%	25%	25%	25%	25%	10%	10%	10%
1d10	75%	50%	50%	50%	50%	50%	25%	25%	25%	10%
1d12	75%	50%	50%	50%	50%	50%	25%	25%	25%	25%
2d6	75%	75%	50%	50%	50%	50%	25%	25%	25%	25%
2d8	75%	75%	75%	50%	50%	50%	25%	25%	25%	25%
2d10	90%	75%	75%	75%	50%	50%	50%	50%	25%	25%
2d12	90%	90%	90%	75%	75%	75%	50%	50%	50%	25%

Penetration	Deflection								
	8	9	10	11	12	13	14	15	16
1d20	50%	50%	50%	25%	25%	25%	25%	25%	10%
2d20	75%	75%	50%	50%	50%	50%	50%	25%	25%
3d20	90%	90%	90%	75%	75%	75%	50%	50%	50%
4d20	90%	90%	90%	90%	75%	75%	75%	50%	50%
5d20	90%	90%	90%	90%	90%	90%	75%	75%	50%

EXAMPLE

Example: An aerodyne with a brace of auto-cannons cuts loose with some Danger Space fire into some ILR infantry surrounding an AA position on top of a parking deck. The gunner has a roll of 1d10, and the defenders are counted as 1d12. Consulting the table above, approximately 25% of the defenders are hit by the burst of fire. Given the damage of a VAKW, odds are good that 1 in 4 of the infantry suffer Devastating hits – the Shock and Awe inflicted will probably drive the survivors to panic or to surrender.

If you have to deal with things like massive numbers of automatic hits and multiple Penetration dice vs. armor for a large number of targets, use the second table. The percentage result is the chance of at least one Penetration against the armor for the listed number of Penetration d20's rolled. This table is mainly useful if even a single Penetration will incapacitate someone, like heavy machinegun fire vs. infantry. So, if 50% of targets are hit with Danger Space fire, and you can see that better

than 90% of those hit will be incapacitated, it gives you a quick idea of how long (or short) this engagement is going to be.

This is not something that should be done to main characters or supporting characters. You probably should not be using massed fire against them anyway, but if you do, their results should be individual, not a matter of just being a statistic. Their individual circumstances and initiative can and should make a lot of difference.

Species

There are over 160 distinct species recognized by the Confederation of Worlds, but only 19 are in the basic rules. The following guidelines should help you to correct that oversight. These rules will not generate the basic species, but will let you create new ones that are on the same footing in terms of ability.

The 19 species listed in Albedo are simple on the face of it. They have a total of 28 points between their attributes and skills, and

one Gift. But if you look closer, you will see that Clout and Drive do not vary much from the 6-8 range. The main difference is Body, and the rest is Homeworld, Personality and Branch of Service.

To design a new species, you can just assign a Clout of 7, Drive of 6, and then have a

Body and skill bonuses that add up to 15, or use the following system.

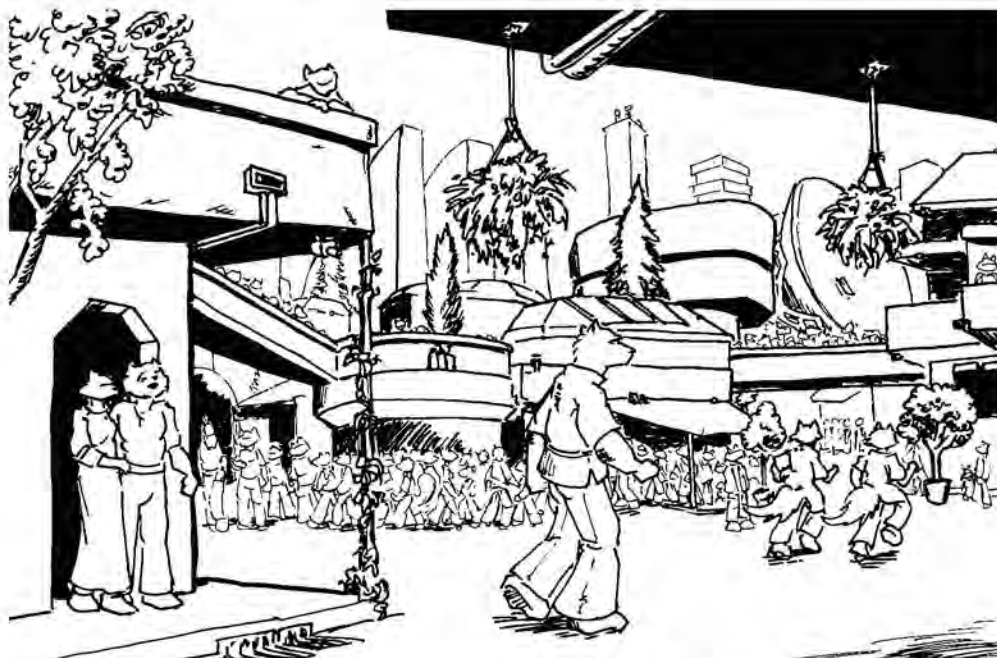
A species will be defined as one of five size ranges, and then will have modifiers to attributes based on other factors.

Aspect	Body	Clout	Drive	Basic skills	Possible Gifts
Size					
Very Small	4	7	6	+7	Energetic Fast Small
Small	6	7	6	+5	Small Fast
Average	8	7	6	+3	
Large	10	7	6	+1	Large Tough
Very Large	12	7	5	0	Healthy Large Tough
Diet					
Omnivore	-1	+1		+1 Sneak +1 Hike	Belligerent Conformist Energetic Indefatigable
Herbivore	+1		-1	+1 Run +1 Hike	Conformist Cosmopolitan Grace under pressure Indefatigable
Carnivore				+1 Brawl +1 Sneak	Belligerent Energetic Overconfident Strong
Daily Cycle					
Diurnal				+1 Impress, +1 Spot	Charismatic Congenial Indefatigable Natural leader
Nocturnal				+1 Smell +1 Listen	Conformist Indefatigable Quick loading Suspiciousness
Environment					
Arboreal				+1 Climb +1 Jump	Ambidextrous Charismatic Overconfident Velocity expert
Subterranean		-1	+1	+1 Brawl +1 Smell	Belligerent Coolness under fire Indefatigable Suspicious

Aspect	Body	Clout	Drive	Basic skills	Possible Gifts
Activity					
Active				+1 Run +1 Brawl	Energetic Healthy Impulsive Velocity Expert
Sedentary	+1		-1	+1 Listen +1 Spot	Conformist Grit Healthy Tough
Speedy				+1 Run +1 Spacesuit +1 Swim +1 Vacuum Suit	Ambidextrous Energetic Fast Impulsive
Mean					
					Belligerent Cold-hearted Grit Tough
Social					
					Charismatic Congenial Gadfly Young
Stoic					
					Conformist Cosmopolitan Indefatigable Old

This is the basic template. The skills represent the total number of marks that species gets for free with no more than 2 marks in any one skill. This 2 mark limit may be modi-

fied later in the process. The very largest creatures have to delete one of the skills they get for free for their physical characteristics, which is next.



Characteristics

After you have the basic size of the species, choose two characteristics. No two characteristics can be on the same line.

These characteristics have convenient names, but you should not assume that your species exactly matches the typical image associated with the name. Think of them as *mostly* appropriate tags to apply to collections of traits.

Example: A "diurnal" species has +1 Spot and +1 Impress. This just means they are used to operating in daylight and rely mostly on sight. Used to visual displays as part of mating, they have a natural ability to project a good self-image.

Most of the time, any movement skill like climb, swim or jump can be substituted for "+1 Run". With Game Host approval, social Gifts of similar nature may also be substituted, like being Congenial instead of Charismatic.

Once you have all this information figured out, you have the template for the species. Not all species are created equal. If you duplicate possible Gifts, you do not get anything extra to compensate.

Physique

Characters will vary in size and weight based on species, but a generalization is below:

Body	Height	Weight
3	90cm	15kg
4	96cm	21kg
5	104cm	29kg
6	114cm	39kg
7	126cm	51kg
8	140cm	65kg
9	156cm	81kg
10	174cm	99kg
11	194cm	119kg
12	216cm	141kg
13	240cm	165kg
14	266cm	191kg
15	290cm	219kg

Only count Body adjustments for Old or Young towards weight (not height), and add +1 Body for Strong *or* Very Strong for weight purposes, and another +1 Body for Tough *or*

Very Tough (e.g. Very Strong and Very Tough would only be +2 Body for weight purposes).

Example: You have an idea for a character who is a Wolverine (a Mustelid, the largest member of the weasel family).

We'll say our character, Gulo, is of Average size:

Body: 8 Clout: 7 Drive: 6

Possible gifts: none at this point

Wolverines get +3 in basic skills. We figure wolverines are feisty and good in a fight, and we look up some data and see that they can climb, have a pretty good sense of smell and hearing and a lot of endurance. So, out of these possibilities, we decide to start with basic skills of:

+1 Smell

+1 Brawl

+1 Climb

Then, we apply creature type modifiers. Wolverines are mostly nocturnal carnivores, so we choose both of those types, and the "Mean" row seems right for other possible gifts. So, we end up with a basic wolverine template of:

Body: 8 Clout: 7 Drive: 6

Increase all skills: **Choose one gift:**

+2 Smell

+1 Climb

+2 Brawl

+1 Sneak

+1 Listen

Belligerent

Energetic

Overconfident

Strong

Indefatigable

Conformist

Suspiciousness

Quick loading

Cold-hearted

Grit

Tough

Cybernetic Enhancements

Cybernetics in *Albedo* is simply a replacement technology instead of an enhancing one. However, it is not perfect, and there *are* liabilities. Even with advanced batteries, cybernetic limbs require regular charging, anywhere from once a week to once a day, depending on the level of use. This is a problem, but not one sufficient to pull an experienced soldier from active service. A flexible solar overlay that can be worn on the back of combat armor can supplement and eventually recharge a limb's battery, and a minute or two plugged into a

vehicle or civilian outlet will provide a full recharge. The EDF *does* encourage infantry with cybernetics to retrain for mechanized or aerodyne service, where there is always going to be a ready power source.

Starting characters are discouraged from having cybernetics, as they will have plenty of opportunities to have limbs violently removed in play. However, if the Game Host allows, accepting the liabilities of a cybernetic arm or leg has two compensations. First, the character gets +1 mark in any skill, something they picked up during their rehabilitation. Second, if hit locations are used, the character never suffers *actual* Wounds from being hit in the cybernetic limb. There is pain (and Awe) and the effect on the character's ability to function is much like a flesh and bone hit, but the character loses no Body, nor are extra d20's applied to future hits to the biological body because of previous damage to cybernetics. If hit locations are not used, this effect is ignored.

Carrying Capacity

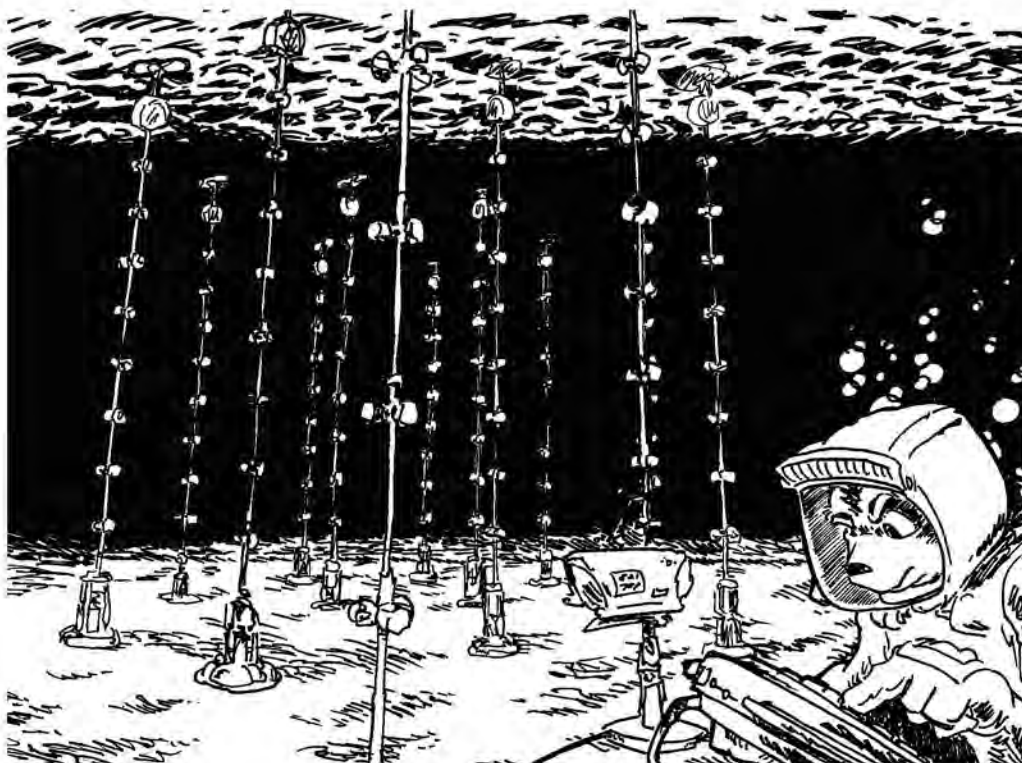
Characters have a normal unencumbered load of double their Body rating, and the ability to lift five times their Body rating over their heads. To elaborate on this:

Status	kg load
Unencumbered	up to 2x
25% run penalty	up to 3x
50% run penalty	up to 5x
75% run penalty	up to 7x
Maximum lift/drag	up to 9x
Lift over head	up to 5x
Pull yourself up	up to 4x

Penalties round towards the nearest speed. The maximum lift/drag is what you can move up to 3 meters in a turn if you are using both hands and not trying to be stealthy or combat-wise. Otherwise, it is an amount that you can grab and drag a meter or so in the heat of combat, like yanking a wounded comrade into a sheltered area.

The normal rules for getting tired when running apply, but characters who are weighed down can cover less distance during the ten rounds of running they can manage without rest.

Characters with Hike have better endurance and physical conditioning than normal and can subtract their Hike Rote Score from 12 to get the rounds of rest normally needed after a long run. Since everyone has at least 1 mark in Hike, the default means a person



has to rest 10 rounds after sprinting, as normal. In practical terms, every mark in Hike after the first gives a character a about an extra hour of sustained march time per day.

Example: Auitzotl has six marks in Hike. After 10 rounds of sprinting at full speed, he only needs to rest for 5 rounds instead of 10. In terms of how far he can march in a given day, he can march default troops into the ground, still fresh when lesser sapients are ready to pass out from exhaustion.

Characters in spacesuits use Spacesuit skill instead of Run skill for extra movement but the Fast and Very Fast Gifts apply to the Spacesuit skill modified speed. Light spacesuits automatically reduce run distance as if the person was 1 level more encumbered and heavy ones as if the person were 2 levels more encumbered.

Example: Auitzotl has four marks in Run (Rote Run of 15 meters) and a Body of 9 for an 18kg unencumbered Carry. If he is carrying normal armor (9kg), a 24 hour kit (about 14kg), a LAKW-1-30 rifle with grenade launcher (3.5kg) and PAKW 4-12 pistol (.75kg), then he has a total load of a hair more than 27 kilograms, which is in the -50% run penalty range (more than 3x Body but less than 5x Body). This gives him a Rote running distance of 7 meters. In addition, we can see that he is in the range where he can pull his entire body and kit up and over an obstacle (less than 4x Body). If Auitzotl dropped his 24 hour kit (except for the ammunition, of course!), he would be down around 16-18 kilograms, which means he would not be encumbered at all. If he dropped the machine pistol, he would be under 27 kilos and only have a 25% penalty, which for him would be a Rote running distance of 11 meters.

Sustained March

The normal movement rules take into account the sit & dash nature of moving around when people are shooting at you, but if you actually need to march from point A to point B, which infantry do a lot of, then you need to adjust it.

On average, a person can do a sustained march at a speed in kilometers per hour

equal to a quarter of their Rote running speed, plus 1 kph.

When hiking, a character will have to spend 1 Body after a number of hours equal to their Hike score, and 1 Body each hour after that if they keep hiking. Characters get back 1 Body lost to hiking after 1 hour of rest, 2 Body after 3 hours and 3 Body after 8 hours, but this assumes enough food and water. You can keep up a good hiking pace for as long as you have ration bars and water and a decent amount of sleep each night.

Example: Auitzotl has six marks in Hike (Rote score of 7) and is weighed down to a -50% run penalty, for a running speed (from the previous example) of 7 meters. If he has to march in this level of gear, he uses a quarter of his running speed, plus 1 kph.

So, at this level of encumbrance, Auitzotl can march at a speed of 3 kilometers per hour, and he can do this for up to 7 hours before he loses 1 Body from exertion. His excellent Hike score doesn't let him walk any faster, but it does let him keep up a sustained pace far longer than less fit troopers.

An average soldier with a Rote Run of 2, a Rote Hike of 3 and an encumbrance penalty of -25% can make about 4 kph and will be able to march about 9 hours for a Body cost of 7, covering 36 kilometers (50 kilometers if unencumbered). This is the pace required to be in the infantry (heavy or light). That is, if you're in the infantry, your character and supporting characters should be able to walk 36km at 25% encumbrance before passing out. *At a minimum.*

Characters without leadership will seldom march past the point where they suffer Body from exertion.

Sprinting

Normal combat running movement assumes you are using cover and not making yourself obvious. Anyone can double their normal movement rate. All concealment or Cover is reduced by 25%, and sprinting costs 1 Body (not Morale) per turn. If there is no Cover where you are, then you should either hunker down and Hide (for a free extra 25%) or you should run as fast as you can to where there *is* Cover!

BUILD & REPAIR

BUILD + REPAIR

Albedo is not a bookkeeping system. Equipment breaks, and is shot at and blown up, but players should never have to keep track of incremental effects on individual items. Even vehicles, which can be huge and extremely complex, will have fewer stats than a character. The rules provided here for making and breaking equipment, including vehicles, are meant to be easy to use and, where possible, to use rules and ideas already known.

Building Vehicles

The array of vehicle characters are likely to interact with is fairly small, so we can make a system for creating them equally concise.

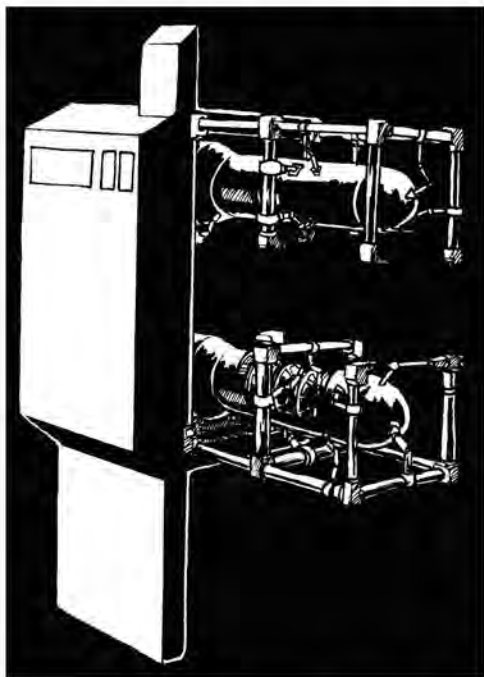
Standard equipment: All military ground vehicles are assumed to come with the following:

- . Obscurement grenades to provide 100% concealment for six turns (stationary) or one turn (moving) are standard equipment and have no cost or space penalty. One reload for this is standard equipment. Note that this concealment goes both ways. A vehicle in a smoke cloud treats all targets it fires at as having 100%

concealment as well. There is barely enough visibility to see where to drive at low speed. Punching into or out of a zero visibility condition at high speed takes a point of Morale or Drive.

- . Communications equal to a squad leader's personal gear, though with a larger display.
- . A sealed environment capable of keeping irritant agents out, and good air in. While *technically* this is proof against a 1 atmosphere differential (vacuum to 10 meter water depth), don't count on it being leak-free.
- . Basic maintenance tools and critical spares, including those that might be needed to dig a vehicle out of a rough spot or repair a damaged wheel or track. This would be enough to repair 1 Body and 1 die shift done by a hit to the vehicle's mobility system.
- . A winch capable of lifting the vehicle vertically, and 50 meters of cable.





1. External equipment tie-down points, power and data access. On a vacuum-capable ground vehicle, this includes life-support hookups.

Aerodynes have a fully sealed environment, radar, ladar and a mid-power comm suite. Internal cargo holds come with sufficient anchor points and tie-downs to hold the maximum rated load under the maximum allowed acceleration.

Power

There are two standard power plants available for most vehicles, *gas turbines* and *fusion reactors*. Fusion reactors are preferred if the vehicle is large enough to mount one, but they are also orders of magnitude more costly, which is part of the reason aerodynes are not seen when there is still heavy anti-aircraft capability on the ground. In the air, turbine thrust nozzles are the method of propulsion and most of maneuverability, and on the ground, wheels or tracks are used. The smallest possible fusion-powered turbo-thruster is rated at about 10,000 kilograms of thrust.

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Real-World Comparison

A late 20th-century turbine would have an output of about 1kW per kg. The ones presented here for *Albedo* are about 2kW per kg.

Given the size constraints mandated by the cargo area of assault aerodynes, the normal ground vehicle power plant is a three-shaft gas turbine with a mass of about 500 kilograms and an effective power output of around 1,000 kilowatts. Military units scavenge every possible bit of exhaust heat through devices like thermoelectric modules to generate more electrical power and spread out the vehicle's thermal signature. Down-rated civilian versions have about half the output of military units, but much longer maintenance intervals, while older Home-guard units simply have slightly reduced performance. Larger vehicles on independent worlds often just use multiples of this power plant for higher output, and increased combat reliability through redundancy.

This turbine is backed up and augmented by a bank of batteries, which serve as an emergency power source, and also provide a quick acceleration boost while waiting for the turbine to wind up to higher speeds. A vehicle's fuel supply is normally enough for about five hours of high-intensity operations, or about forty hours of standby use, running the turbine to keep the batteries charged. Most EDF land vehicles have the potential to add extra fuel tankage. In land vehicles, this is usually in the form of an armor belt that also gives a minor amount of spaced armor protection, as well as quadrupling the fuel load. In aerodynes, their default endurance of 160 hours at full power is normally sufficient.

EDF troops are of two minds about extra fuel tankage. On the one hand, it gives an extra operational margin and provides extra protection. On the other hand, it slows the vehicle down measurably, and this protection is in the form of *turbine fuel*. Even if the extra mass stops a penetration, you do not want to be anywhere near the *outside* of the vehicle when this happens. While the extra fuel cells *are* explosion-proof, there is no way to keep a violently ruptured tank from spraying fuel all over the place.

ILR vehicles are generally not equipped with extra tankage. They rely on using the fuel supplies of whatever area they are occupying.

For both wheeled and tracked land vehicles, power is sent to independent and usually interchangeable wheel hubs or bogies, each with a separate electric motor. Power is distributed to the motors via computer control for optimum traction and maneuverability, though a hardwired default system can provide basic function in the event of computer malfunction.

Aerodynes are powered by small CAG fusion reactors (approximately 2 tons with ancillary equipment) with an output of several megawatts, though this term is largely useless to measure thrust in air vehicles. Aerodynes normally have sufficient fuel and consumables for 160 hours of high-intensity use, with several times this in standby capacity. Exoatmospheric aerodynes vent plasma from the reactor along with a small amount of reaction mass (to cool it down) for thrust and directional control in vacuum environments, and act like normal aerodynes in atmosphere.

You can use the following table to get a rough idea of a vehicle's performance. You normally count the maximum combat weight of a vehicle for determining its top speed. If you want, you can figure loaded and empty performance separately. You take the weight of the vehicle, apply any appropriate modifiers, and then use the result on that row for the top speed and Maneuver of the vehicle. Masses between table entries go to the next highest amount.

Weight	Top speed	Maneuver
.25 ton	≥ 1,225 kph	2d12 or 9
.375 ton	1050 kph	2d12 or 9
.5 ton	900 kph	2d12 or 9
.75 ton	750 kph	1d12 or 6
1 ton	600 kph	1d12 or 6
1.5 ton	500 kph	1d12 or 6
2 ton	400 kph	d12 or 6
3 ton	320 kph	d10 or 5
4 ton	250 kph	d10 or 5
6 ton	210 kph	d10 or 5
8 ton	180 kph	d10 or 5
12 ton	150 kph	d8 or 4
16 ton	120 kph	d8 or 4
25 ton	100 kph	d8 or 4
32 ton	80 kph	d8 or 4
50 ton	65 kph	d6 or 3

Weight	Top speed	Maneuver
65 ton	50 kph	d6 or 3
90 ton	40 kph	d6 or 3
125 ton	35 kph	d6 or 3
180 ton	30 kph	d4 or 2
250 ton	25 kph	d4 or 2
375 ton	20 kph	d4 or 2
500 ton	15 kph	d4 or 2

Modifiers

Down rated turbine	go down 2 rows
Homeguard units	go down 1 row
Using 2 engines	go up 2 rows
Using 3 engines	go up 4 rows
Using 4 engines	go up 6 rows
Using 6 engines	go up 8 rows
Using 8 engines	go up 10 rows
CAG fusion reactor	go up 9 rows
Off-road vehicle*	go down 1 row
Tracked vehicle	go down 3 rows
ILR vehicle	go down 1 row
Exoatmospheric	go down 1 row

So, even if you have no idea about some unknown vehicle you've thrown at players on the spur of the moment, if it's a 30 ton tank with two turbines, you can say it has a speed for the 32 ton row, up 2 rows for the extra turbine, and down 3 rows for the tracks, giving it a top speed of about 65kph.

Aerodynes must have a *minimum* top speed of 500kph, and exoatmospheric models must be capable of at least 900kph in order to safely descend from and ascend to low orbit. An aerodyne that cannot reach 500kph in level flight because of combat damage does not have enough vectored thrust to make a safe *vertical* landing. If it cannot reach a speed of 320kph, it cannot maintain enough lift with its body to sustain level flight. An exoatmospheric *ground vehicle* is one that has the turbine replaced by fuel cells, and further environment sealing and air recyclers. The addition of an airlock to either type of vehicle takes up 3 passenger slots (as per "Loading a Vehicle", p. 237).

An off-road vehicle is faster on-road than a tracked vehicle, but loses 4 *extra* rows in cross-country conditions. A civilian vehicle not rated for off-road use will get bogged down, high centered or otherwise

stuck in short order and unusable on all but the most forgiving plains.

The "Maneuver" column is a measure of how hard the vehicle is to hit at its designed top speed and acceleration, and the stress placed on passengers in these conditions. Think of this number as the maximum the pilot can get out of the vehicle. If the pilot's skill roll is less than this amount, they use the lower of the two. For example, if you have a vehicle that is capable of d12 Maneuver and the pilot only has a d10 skill roll, they just aren't good enough or brave enough to push the vehicle to its limits, and would only get d10 for Maneuver.

The Size is the number of die shifts all rolls affected by the size of the vehicle will take. This includes the Maneuver rating. However, the Maneuver level is a *minimum* of d4 for any vehicle moving at least a quarter of its top speed. For now, all you need to do is remember the amount.

Example: We're going to do a running design of the most common vehicle characters will see, the APCL-8 (this is the EDF's 8-person armored personnel carrier with an 8mm remote machine-gun turret). It is a tracked vehicle with a loaded mass of 12 tons, and is powered by one turbine. Armed with that information, we see that it has a top speed of 80kph, and a Maneuver rating of d8(4), but its size as a vehicle will drop this to d6(3) in practical use because of the die shift from the size modifier.

So, we have:

APCL-8

Top speed: 80kph

Size: 1

Crew: 1+8 [1 crew, 8 passengers]

Maneuver: d8(4)

Armor

The standard armor material for both the EDF and ILR is a monomolecular composite that is grown by a standard electro-chemical process that has been around since the beginning, though the discovery of the Creator ship shows that there *are* more advanced materials available. However, no one has managed to reverse engineer this poly-diamond material to come up with a method to manufacture it.

Armor can be grown in virtually any size or shape, though flat pieces are easier to work with than curved ones, and simple curves are easier than complex ones. A VLCC (Very Large Command Carrier) can manufacture pieces of virtually any size needed, but also carries pre-fab slabs that can simply be cut into the proper shape for replacement of planar parts, like the glacis of the aforementioned AV-4. The basic characteristics of armor include a relatively low heat capacity, moderate thermal conductivity, a fairly low density and transparency to radar. The way in which it is grown allows quite selective placement of inclusions, such that virtually all armor includes a non-metallic conductive grid to provide electrical shielding, both to minimize outside interference and to contain signal leakage generated by its own electronics.

Armor is normally glued together with adhesives similar in makeup to the armor itself, and once joined, pieces are effectively one contiguous piece. However, special RF melters can be run along a seam to re-liquify the adhesive, allowing vehicles to be broken down into their component parts as needed. This process requires field intensities that cannot be generated beyond a few centimeters, so there is no practical military application for the ungluing process. The same process is used for assembly and disassembly of civilian structural materials in most places.

The maximum size for an EDF land vehicle is that which will fit in a standard cargo slot (6 meters long by 3 meters wide by 3 meters high). For a vehicle of that size, you can get the following figures for how much heavy it is. *This figure is the fueled but otherwise empty weight (performance is based on the loaded weight).* Odds are that there will be at most a 1 ton difference for ground vehicles (the weight of the passengers), but cargo

COMMAND REVIEW • APPLAND REPAIR

Drive Safely

Most civilian vehicles on ConFed worlds have a traffic management computer that is run by the Net. This provides hands-free driving in most urban areas. It also keep track of vehicle maintenance needs and can be used by law enforcement to immobilize the vehicle if needed..



aerodynes may have a significant fraction of their combat weight be cargo. To make it simple, weights round up to the next highest table entry. So, a vehicle with a loaded weight of 12 tons and an empty weight of 11 tons counts as a 12 ton vehicle for armor purposes. The table already takes into account the overhead caused by the engine and nor-

mal running gear that all vehicles have. Exoatmospheric aerodynes must have a Deflection of at least 7 to survive a controlled re-entry, which imposes serious mass penalties on large aerodynes. The front armor takes the brunt of the heat stress on re-entry, and if the standard armor distribution is used, a front Deflection of 7 is sufficient to handle the stress.

COMMAND REVIEW • APKNANB NERFUP

Armor Theory and Practice

The nature of the *Albedo* universe puts more stress on personal armor than vehicle armor. It is an infantry-heavy universe, and vehicles simply cannot mount armor sufficient to stop heavy weaponry, or even stop man-portable heavy weapons. There are few real tanks in the EDF – mostly APCs and indirect-fire emplacements. While many Homeguards have tanks, they are few and far between. *Albedo* armored vehicles are a platform that is proof against small arms, that can carry a big gun or a squad of infantry. Everything else is a matter of who gets off the first accurate shot.

As a result, armored vehicles cannot use brute force attacks and expect to survive. Unless your job is to hold a position, EDF and ILR armored vehicle doctrine is generally to use mobility to get the firepower where it can be employed to greatest advantage. Mobility, surprise and knowing when to cut & run are important parts of both EDF and ILR vehicle training.

Specialized Armor

One option that you may apply is a specialized armor bonus. This covers things like reactive armor, heat-dissipating construction for re-entry vehicles, or any other protection that only applies against a limited subset of damage types. You can drop the vehicle's Deflection by 1 overall, to get a +2 against a specific attack. For instance, if a vehicle had a normal Deflection of 7, it would become 6(8), where it had a 6 against normal attacks, and an 8 against a specific type of attack. This has no effect on vehicles that already have a Deflection of 16. Vehicles with a Deflection of 3 (effectively zero armor) may not gain this bonus. Conventional kinetic energy rounds are the default type of attack, and you *cannot* enhance the armor against that type of damage. You can use this rule to give aerodynes heat-resistant coatings to better allow them to handle re-entry stresses. Instead of having an overall Deflection of 6, you would in-

stead have a 5(7), where the higher number only applies against re-entry damage.

The maximum Deflection for a vehicle's inherent armor is 16 (starships are normally 18). Any armor that is heavier than this contributes to a higher Threshold for the vehicle noticing the effects of damage. If a vehicle *already* has a Deflection of 16, an Armored Vehicle Expert increases the vehicle's damage Threshold by 5 instead. However, if the Deflection is less than 16, the expert only increases it to 16.

As long as a vehicle has to interact with the outside world in terms of weapon ports, sensors, thrust nozzles, wheels or tracks, there will be spots where the armor can be penetrated, or at the very least, important subsystems can be damaged or destroyed. However, on a large enough vehicle, even penetrations can do absolutely nothing simply because of redundant systems and other inherent methods of damage compensation.

Sectional Armor

If you want or need to further specialize a vehicle, for each 2 points of total Deflection removed from a side or sides, you can upgrade one other side's Deflection by 1. For instance, if a vehicle had a Deflection of 7 (5 on sides, 3 on back), you could drop the right and left sides to a Deflection of 3, and upgrade the front to a Deflection of 9.

However, this means you actually have to write down the Deflection of *each* side rather than going with the default, so we don't recommend it.

Cockpit Armor

Most aerodynes are light in the armor department. To make up for this, they sometimes have armored cockpits and weapon stations, typically just armored seats and thick armor-glass for any windows. For +1 ton of weight, you can get +3 Deflection, which can be split among as many stations as desired, like +3 for the pilot, or +1 each for a pilot, observer and gunner. The extra armor only applies to hits that would affect these people. It does not protect equipment or the vehicle in general. Land vehicles generally do not have this option.

Empty Weight	Deflection	Threshold
1 ton	3	+0
1.5 tons	3	+0
2 tons	3	+0
3 tons	3	+0
4 tons	3	+0
5 tons	5	+0
6 tons	7	+0
7 tons	8	+0
8 tons	9	+0
10 tons	10	+0
12 tons	11	+0
16 tons	12	+0
20 tons	13	+0
25 tons	14	+0
32 tons	15	+0
50 tons	16	+0
65 tons	16	+5
90 tons	16	+5
125 tons	16	+10
180 tons	16	+10
250 tons	16	+15
375 tons	16	+15
500 tons	16	+20

Modifier	Change
1 cargo slot size	zero modifier
5/6 cargo slot size	go down 1 row
2/3 cargo slot size	go down 2 rows
1/2 cargo slot size	go down 3 rows
1/3 cargo slot size	go down 4 rows
Upgraded civ. veh.	go up 2 rows
ILR vehicle	go up 1 row
Heavy ₁ turret	no row change
Heavy ₂ turret	go up 1 row
Heavy ₃ turret	go up 2 rows
Class 0 aerodyne	go up 1 row
Class 1 aerodyne	go up 2 rows
Class 2 aerodyne	go up 4 rows
Class 4 aerodyne	go up 6 rows
Class 8 aerodyne	go up 8 rows

Turrets

The Heavy designations refer to the size of the weapon that is mounted. If a vehicle has the space to fit multiple turrets, there is only a 1 row additional armor penalty past that for the *largest* turret on the vehicle. So, an aerodyne gunship with four Heavy₁ turrets only suffers a 2 row armor penalty.

Of course, it still has to have the interior space for these weapons (see "Loading a Vehicle", p. 237).

Aerodynes

The class of an aerodyne refers to the size of its cargo area, and is the number of standard 6 x 3 x 3 meter cargo units that the aerodyne can manage in addition to the weight of its armor and airframe. The loaded weight cannot exceed an amount that would reduce performance below 500kph. Most aerodynes past class 0 will lose some of this cargo space because they will need to mount multiple engines. For instance, the D-12 lander is a class 4 aerodyne, but only has a cargo capacity of 2 units.

Class 0 through Class 4 aerodynes are a Size of 2, Class 8 through Class 32 are Size 3, and anything larger is likely Size 4. Remember that the Size is a die shift for any action affected by the physical size or ungainliness of the vehicle. So, even though a large orbital cargo lander has a base Maneuver of 2d12, by the time you take the die shift for its size into account, it is only going to have a maneuver die of d6.

Assault Boats

Watercraft are not a big part of the *A/bedo* universe, but both the EDF and ILR have amphibious vehicles, and water engagements occasionally take place. Ground vehicles will float well enough to be amphibious if they weigh 18 tons or less per cargo unit of space. Vehicles up to 24 tons per cargo space can be made amphibious with preparation. Both would have top speed reduced by 8 rows from its ground speed on the maneuver chart, with a maximum water speed of no more than 25kph. A boat is designed solely as a water vehicle. It will have a loaded mass of no more than 6 tons per cargo space (12 tons plus (class number x 6) for larger ships), and has a top speed based on size and power with a 4 row speed reduction. The EDF does not have any watercraft larger than one standard cargo volume, though planets will of course have large vessels for shipping, fishing or passenger use. These can carry larger loads than "combat" vessels, but are correspondingly slower.

Loading a Vehicle

None of this really tells you what you can put *in* a vehicle. Size and mass are a general indication of armor, but this is only accurate for a vehicle that has no other features.

A one-cargo-slot vehicle can carry a driver and eighteen passengers with some degree of maneuvering room. Two infantry with gear count as three passengers. One dedicated gunner (with minimal gear and pistol) counts as one passenger. ILR infantry and crew only take one slot each. You *can* cram more people in a ground vehicle if you don't mind stowing gear on the outside (and risk having it all blown off or blown up), or having no room to maneuver or use firing ports. In particular, EDF infantry and kit can be crammed into transport aerodynes at the density of two squads per cargo slot, with enough room left over for a crate of support weapons.

Vehicle weapons are either Heavy₁, Heavy₂, or Heavy₃. A remote 6mm or 8mm machinegun with 960 rounds of ammunition (weapon load plus one reload) is a typical Heavy₁ weapon. A twin machinegun remote turret and 480 rounds of ammunition is also a Heavy₁ weapon. If you don't even have a Heavy₁ weapon, you get a passenger slot back. A second Heavy₁ is 1 slot. A light cannon turret, heavy machinegun or autofire grenade launcher and a total of two belts of ammunition is a typical Heavy₂ weapon, as is a single heavy missile or a small rocket pod. Heavy₂ weapons take up 3 passenger slots. *Any* turret that is manned rather than remote is at least Heavy₂. A large autocannon with a total of two belts of ammunition, a regular cannon or heavy mortar with 40 rounds, or a rotary heavy missile launcher (no reloads) is a typical Heavy₃ weapon. Heavy₃ weapons take up 5 passenger slots. Heavy₁ weapons can be operated by the driver or any crew or passenger if necessary. Heavy₂ and Heavy₃ weapons require one dedicated crew, and operate at best efficiency with one observer and one gunner. On aerodynes, groups of similar weapons can be slaved through a fire control computer and only one gunner (and observer) is required per group of weapons.

Extra ammunition equal to what came with the slot, should you need it, takes up 1 slot for Heavy₁, 2 slots for Heavy₂, and 3 slots for a Heavy₃ weapon. This can be prorated if you do not have space for a full set of reloads.

Item	Space
1 Cargo volume	18 slots
2 infantry & gear	3 slots
2 passengers (gear outside)	2 slots
Heavy ₁ weapon	0/1 slots
Extra ammo	1 slot
Heavy ₂ weapon	3 slots
Extra ammo	2 slots
Heavy ₃ weapon	5 slots
Extra ammo	3 slots

EXAMPLE

Example: Using our APCL-8 as an example, it has an empty mass on the "12 ton" row. It takes up 2/3 of a cargo slot and no other row modifiers, which gives it a final Deflection of 13. Using the default, we know that this is the front Deflection. The side Deflection is 11, and all other Deflections are 9.

Its size of 2/3 a cargo slot drops its capacity to 12 plus driver. If we put in 8 infantry and the free 8mm remote turret, that fills the vehicle up exactly. If we did a variant with a light cannon turret, we would lose 3 of our 12 slots to the weapon, and 3 more for the two crew [commander and gunner], leaving 6 slots, enough for a four person fire team.

So, we have:

APCL-8

Top speed: 80kph

Amphibious: yes

Size: 1

Crew: 1+8

Maneuver: d8(4)

Armament: 8mm remote MG turret

Deflection: 13

Aside from determining the Body of the vehicle, we're done!

Additional Equipment

This works out fine for weaponed vehicles that have only one engine. But there are other potential space fillers, especially for non-combat or high-performance vehicles.

As a reminder, ILR forces are on the whole, physically smaller than EDF forces. Fully equipped ILR infantry or vehicle crew only take 1 passenger slot. The ILR is also more partial to wheeled vehicles, for lower maintenance costs and higher road speed, at the cost of reduced cross-country performance compared to tracked EDF vehicles.

Other running gear or ancillary equipment in a vehicle will not affect its armor but will occupy potential passenger slots.

Item	Space
Each extra gas turbine	4 slots
Each extra fusion reactor	9 slots
Mid-power comm suite	3 slots
High-power comm suite	12 slots
Med couch	3 slots
Med table	6 slots
Sanitary system	2 slots
Air recycler	1 slot
Airlock	2 slots
Machine shop	15 slots
Console	1 slot
Fold-out bunk	1 slot
Tactical display	2 slots
Storage locker	1 slot
Kitchen	12 slots
Freight container	12 slots

A mid-power communication suite takes up 3 slots, and can maintain communication with squad leaders over several kilometers, even in a heavy EW environment. This comes with one console to use it, though several consoles can access the equipment simultaneously.

A high-power communication suite takes up 12 slots, and can punch signals through to orbiting ships, even in a heavy EW environment. This comes with one console to use it, though several consoles can access the equipment simultaneously.

A med couch takes up 3 slots, and with a med tech can handle basic wound management and stabilization.

A med table takes up 6 slots, and with two med techs can handle most battlefield surgery and emergency procedures.

A portable sanitary system takes up 2 slots and consists of a small sink and panspecies toilet. Don't expect a lot of privacy.

An air recycler takes 1 slot per 12 people supported. Aerodynes are assumed to have this, but ground vehicles do not. This provides breathable air for as long as the vehicle's power holds out, and may be augmented by a small solar array somewhere on the vehicle.

A one-being airlock takes up 2 slots, and takes a minimum of 2 turns to use, more if you want to conserve air in the vehicle. Aerodynes are *not* assumed to have this (all aerodynes are sealed environment, but not all are exoatmospheric).

A machine shop takes 15 slots. It adds 1 Quality-hour per person using it for a repair or fabrication task, with a maximum of 3 people gaining the benefit.

Fold-out bunks take 1 slot each. They give a person a protected place to get some sleep and store their gear. A crew or passenger plus a bunk will take up 2 slots.

A console takes up 1 slot, and requires 1 person to use it. Any skill that requires coordination and compiling of information is going to require a console.

A tactical display takes up 2 slots, and is simply a touch-sensitive holographic display panel, set in either a horizontal or vertical orientation. These are most often seen in command vehicles, and can usually be dismounted and set up outside the vehicle for pre-mission briefings.

A storage locker takes up 1 slot and holds the equivalent of three 72-hour kits, or eight rifles with three magazines each, or six light rockets or support weapons.

A kitchen takes 12 slots. With one or two cooks it can provide hot pan-species meals for up to a company, using a storage locker's worth of food per company-meal.

A freight container takes 12 slots, and holds 12 slots of other equipment. It is a Deflection 3 box that is 2/3 of a standard cargo volume. The ALP variant of the AV-4 is designed to carry one of these. These are the EDF equivalent of cargo trucks, and the ALP is always found with elastomer tracks to avoid damaging paved surfaces.

Vehicle Body

A vehicle's Body will be based on its *empty* weight, which gives a passable approximation of how much there material is

there to suck up damage. Vehicles have a Body of 4 for a 1 ton vehicle, and +4 Body every time you double this (about +1 for a 25% increase).

Vehicle weight	Body
1 ton	4
1.5 ton	6
2 tons	8
3 tons	10
4 tons	12
6 tons	14
8 tons	16
12 tons	18
16 tons	20
25 tons	22
35 tons	24
50 tons	26
65 tons	28
90 tons	30
130 tons	32
175 tons	34
250 tons	36
375 tons	38
500 tons	40

EXAMPLE: So, a basic APCL-8 with a mass of 12 tons will have 18 Body [4 for 1 ton, then +4 more at 2, 4 and 8 tons, +2 more for a 50% increase past 8 tons]. This gives it a minimum damage threshold of 36. This is completely outside the range of what small arms can do short of a Critical Hit (even if they could penetrate the armor), but well within the range of weapons such as heavy machine guns and light cannon.

Aerodyne Design

Aerodynes are designed exactly the same way, except you use a fusion reactor instead of a turbine. Note that even though you could conceivably fit a fusion powered vehicle into a standard cargo slot (though not by much), the cost of the reactor alone would be more than everything else in the vehicle put together, so they simply are not used on ground vehicles. An aerodyne *can* be powered by multiple fusion plants, and this may be required for exoatmospheric models. For purposes of armor and Body, you use the empty aerodyne weight. For

purposes of performance, you use the loaded weight, which will of course vary with what you have in the cargo slots.

The "class" of an aerodyne is simply for design purposes and represents the number of standard cargo slots it can hold. The Class 0 aerodyne is the smallest, and can carry a fire team and all their supplies, or up to 2 tons of cargo. It has for all practical purposes half a cargo slot, split lengthwise. There are cargo aerodynes up to 5,000 tons in total weight, but characters are never going to see one outside an extremely safe rear area. However, with some modification, the rules *can* stretch that far...

Civilian helicopters and other light craft are built like aerodynes, but use gas turbines for power instead of fusion reactors. Helicopters have more "bite" in the air than aerodynes and get a Maneuver that is one die type higher than their actual top speed would indicate.

As an optional rule for long-distance travel, craft that can operate at high altitudes can go up 2 extra rows for determining their top speed in thinner atmospheres.

EXAMPLE

Example: The Aero C-3 is the smallest cargo aerodyne in service (a class 0), used for training and Homeguard purposes. It has an empty mass of about 8 tons and a loaded mass of about 10 tons. We look at the mass and the power plant table and see that it has a top speed (empty) of about 750kph (CAG fusion reactor, Homeguard unit, and we have to round the mass up to 12 tons). This gives it a Maneuver of 1d12[6], though we can note that it would be 2d12[9] if the cargo hold were empty. We look at the armor table for an *empty* mass of 8 tons and a class 0 aerodyne and see that it has a Deflection of 8, and the Body table to see that it has 16 Body. In a cargo configuration, the C-3 is unarmed, so we can get back a little space, but otherwise that's all we need to know.

Aero C-3

Top speed: 750kph(900kph empty)

Size: 1

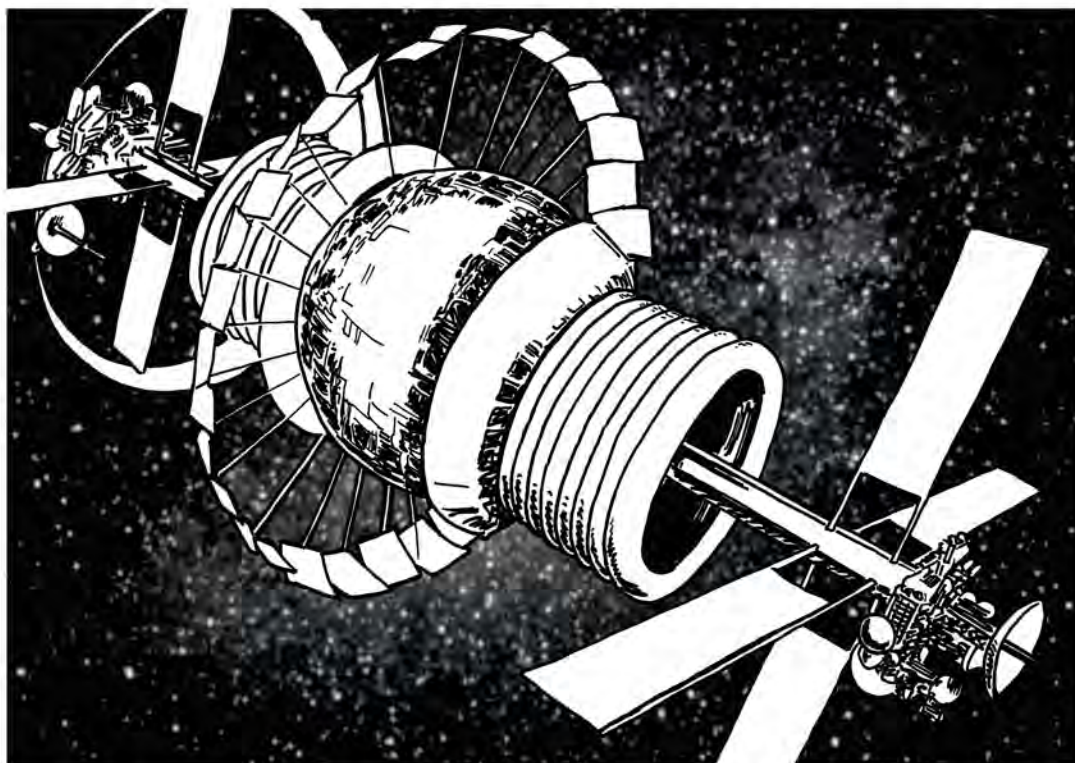
Maneuver: d12[6]

Armament: none

Deflection: 8

Body: 16

Damage Thresholds: 32/42/52/72



Aerodyne Designations

Aerodynes in Albedo are designed according to their cargo volume (class 1, class 2, etc), but are *named* according to their cargo volume dimensions.

Field Modifications

Crews are always doing things to their vehicles, at least within the limits that higher-ups allow. This could be anything from nose art on a bomber to field-expedient armor upgrades. Sandbagging is an example. Remember that any field expedient changes you make can affect performance. If you drop a few tons of sand, spaced armor or extra fuel tankage on an ACV-4, you might be able to increase its Deflection by +1 and its Body by +1, but its top speed is going to be significantly slower, and you've certainly compromised its amphibious and soft terrain capability.

Field modifications to armor simply use half the weight added to adjust the overall armor value and Body, or the full weight added to adjust any three facings, or "weapons" or "passengers". Ground vehicles can add this improvised armor externally, while air vehicles would have to do it internally and in most cases how you can do it is very limited.

EXAMPLE *Example:* Our ACPL-8 design had an empty weight of 12 tons. If we sandbagged this vehicle for 4 more tons of armor, we could get and +1 Body and +1 Deflection on three facings, probably the front and sides, or, we could just say that hits that would be to passengers or driver get the extra +1 Deflection. This extra 4 tons of weight is going to drop our top speed from 80kph to 65kph, which also drops our Maneuver die from d8 to d6.

If a vehicle gains extra Body from improvised improvements, then the first Body lost from damage is generally to these improvements and not to the actual vehicle. A Wound to our sandbagged ACPL-8 would do 1 Body, but we would say this first point of damage is to the sandbags. This means that the actual vehicle needs less repairs.

Other modifications can be useful without affecting performance. Most APCL-8s are being upgraded with vision and firing ports in the roof hatches. While no one

expects the occupants to shoot at targets above them, the hatches are already used for partial cover when open, and this increases their effectiveness to 75%. The only downside is that reduced visibility through the firing port increases the effective concealment of anything fired at by 25%.

Characters who have an idea, a vehicle to work on, and a superior who is willing to endorse it (or at least look the other way) can make minor modifications to a vehicle. This uses Design skill. If you do not have Design skill, you cannot improvise or improve your vehicle. Convincing a superior to allow it is a role-playing issue, but can usually be handled with Persuade. The actual difficulty of the modification is up to the Game Host. Supporting characters will not modify equipment without the guidance and implicit permission of their immediate superior (usually 1 Morale). In addition to any limits imposed on performance, it will take an amount of time like repairing 1 Body of vehicle damage. This will be some combination of Scrounge, Repair and possibly Bureaucracy tasks to pull off, the difficulty depending on the exact situation.

Repairs

While most planetary operations are relatively short in duration, military gear, especially vehicles, often runs at the edge of the performance envelope and requires a high amount of maintenance to stay in good operating condition. Infantry hardware is generally an exception. That gear is meant to be abused, and can usually withstand seriously hostile conditions for quite some time with only moderate care.

For all practical purposes, any military vehicle is due for a routine maintenance cycle after *every* combat. All military vehicles should have at least a cursory inspection done each day or after each sortie, just to see if any problems are about to crop up.

Cursory Maintenance

Routine checks of fluid levels, pressure readings, and electronics diagnosis are the sorts of things that ground vehicle crews do once a day, and flight mechanics do between routine flights. It takes 1 Quality-hour for a one ton vehicle, and +1 hour each time you double it, rounding to the nearest multiple.

Aerodynes take 50% longer, wheeled vehicles take 50% less, and civilian vehicles take 50% less. *Yes, wheeled civilian vehicles require no maintenance per day.* If you want to do this level of detail, a soldier's personal weapons and gear require 1 Quality-hour of maintenance per week of normal duty, or per day that has a firefight in it.

Example: On an independent planet that has a 32 ton tracked vehicle, the crew needs to spend 6 Quality-hours per day of use just keeping the tracks tensioned, doing turbine diagnostics, cleaning the air filters, and doing other routine tasks. If the crew has two people with Repair Rotes of 2 and two with Rotes of 1, that means the entire crew working together spends an hour working on it. If this were an aerodyne, it would take 9 Quality-hours per day (1.5 hours for that crew), and if it were a military wheeled vehicle it would only take 3 Quality-hours per day (half an hour for that crew).

Routine Maintenance

A vehicle should receive routine maintenance after any combat situation, or any situation extraordinary enough to warrant use of the vehicle's full Maneuver rating. Stressed airframes and turbines, EW-attacked electronics, and damaged armor all need attention. Routine maintenance works much like cursory maintenance, but is 2 Quality-hours for a 1 ton vehicle, and +2 hours each time you double it, rounding to the nearest multiple. Aerodynes take 50% longer, and wheeled vehicles take 50% less. Civilian vehicles in normal use need routine maintenance twice a year.

Damage Control

If a vehicle has actually suffered Wound effects of lost Body, it is time to break out the spare parts or call the nearest depot drop-ship. To make it simple, it is 3 Quality-hours for a 1 ton vehicle, and +3 hours each time you double it, rounding to the nearest multiple. This time has to be spent *per* Body the vehicle has taken. Aerodynes take 50% longer, and wheeled vehicles take 50% less. Die shift marks are removed proportional to the Body repaired, and you can choose which systems are repaired first.

EXAMPLE

Example: Look at the AV-4 from the damage example on page 205. It is a 12-ton vehicle that has lost 5 Body and suffered 3 die shift penalties. We need 15 Quality-hours per Body to repair the damage (the 12 ton mass rounds to 16 tons), so this vehicle will take 75 Quality-hours to get back into shape, provided the parts and tools are available. Since there are 3 die shift penalties, we can erase 1 of them each time 2 Body are repaired.

It is possible a vehicle can have die shift penalties without having lost any Body. In this case, count the necessary repairs as taking the time to repair 1 Body of damage. A vehicle can also have all its die shift marks repaired and still have unrepaired Body damage. Despite visible damage, the vehicle is completely serviceable.

It is up to the Game Host to set practical limits on how many people can contribute to a particular repair, both for the size of the item being repaired and the tools available to make the repairs.

Spare Parts

Repairs go faster if you've got everything you need. If you have to, you can yank out a turbine spindle and individually replace shredded impellers, or you can just pull the whole turbine and plug in a new one. If you've got the spare parts to waste, like a donor vehicle, you can pull entire compatible assemblies and replace them as a unit, rather than just fixing the actual broken bits. If a vehicle has lost more than 3 Body, this is an option, and speeds the repair. Each 3 Body repaired only takes the time of 2 Body, but at the cost of double the material. Since the EDF is fairly stingy in this regard, and EDF personnel are assumed to have unlimited time for their duties, this procedure is normally limited to emergency situations, where time is more important than expense.

Commanders also have the option of declaring a damaged vehicle as "scrap", which makes it instantly eligible as a donor vehicle for parts. A good repair tech will use absolutely everything on a scrap vehicle, and when it comes time to pack up and go home there won't be anything left but a greasy spot on the ground.

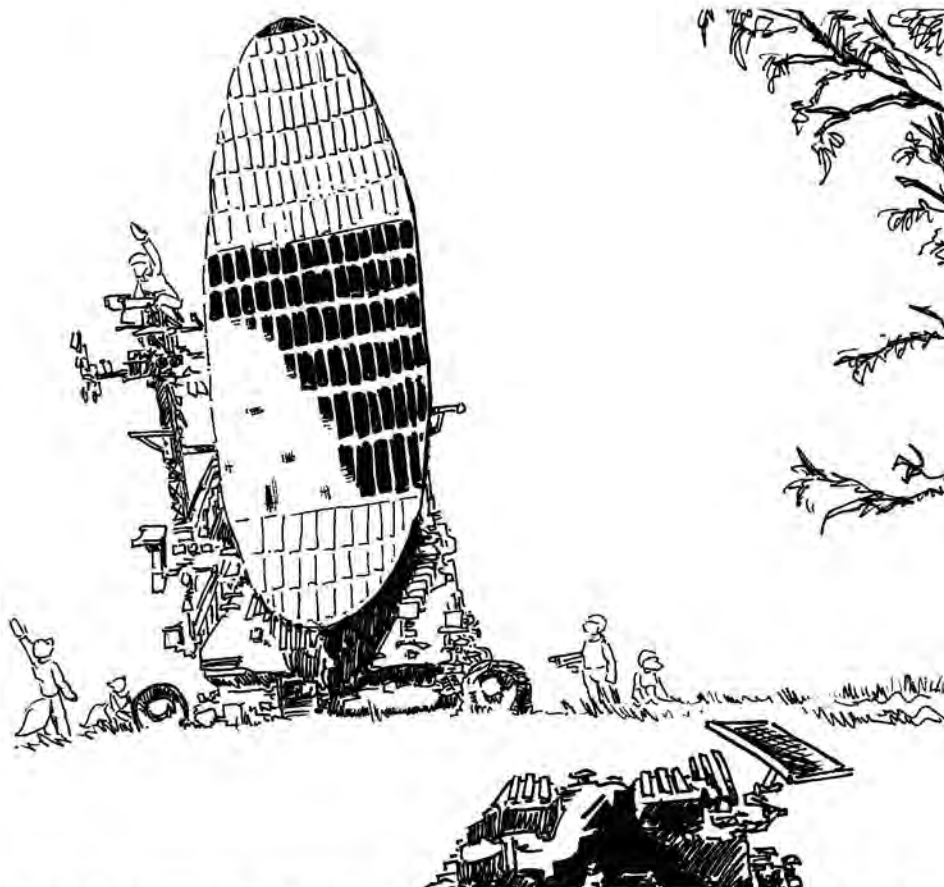
Environmental modifiers: These numbers assume an environment that applies *normal* wear & tear to a vehicle. Harsh conditions (sand, volcanic dust, monsoon rains) will turn cursory maintenance into routine maintenance, and routine maintenance into damage control as though the vehicle took 1 Body. Hostile environments are especially tough on a deployment. Units go through spare parts and maintenance stores at double the normal rate, vehicles that re-supply these stocks need double the maintenance, and orbital facilities like VLCCs that manufacture spares and supplies are working twice as hard. Even with good advance planning, there may be localized parts shortages that make proper maintenance impossible, forcing some mechanized or aerodyne units to operate at less than full capacity. Local commanders complain, and scroungers scrounge, but if the parts aren't there, they aren't there.

Inadequate Maintenance

If a vehicle (or any other piece of significant hardware) has not had the required

maintenance for its level of use, there is a chance it will suffer a malfunction of some kind the next time it is used. The next time a system is used on a die roll and *any* die rolls "1", that system suffers a die shift penalty of 1 and the vehicle takes 1 Body. Characters who are using Rote are babying the vehicle and it will not have any problems for a number of missed maintenance cycles equal to the Rote Score in question. This penalty on the vehicle can happen only once per missed maintenance cycle, but it can happen several times in the same maintenance cycle if it managed to avoid problems in previous ones. Covering for inadequate maintenance involves the same time as Damage Control to repair the lost Body.

It is *always* cheaper in time and parts to do preventive maintenance than catch-up maintenance, and a good commander will make sure techs stay on top of things before minor problems have a chance to become major ones.



NEW GEAR

NU JEN

In addition to some fairly plebian items missing from the gear available in the basic game, the universe of *Albedo* is a universe at war. In war, things change. If your armor isn't strong enough, you make it stronger. If your weapons are not powerful enough, you upgrade them. If your tactics don't work, you modify them. Even the intellectually conservative inhabitants of the Confed and ILR are not immune to the pressures that force technological evolution.

Some of the gear that follows is brand new, and will be encountered for the first time sometime later in your campaign, while other gear simply provides needed stats for things you've already encountered and probably taken for granted.

The EDF has some unique items that may give it an edge, and the ILR has a few to make life difficult for EDF characters. Items will be listed as EDF, ILR or Independent, which gives you a fair idea of where they will be found. Many Independent items like pistols are also likely to be found among civil populations on Confed worlds.

Hunting and Gathering

EDF troops are issued very specific gear. And it's not their gear, it's the EDF's, and so they can't necessarily hang onto it between assignments. This is where good leaders and scroungers come into play. A character can normally make only one official request for an item outside the normal allotments for a mission or the standard equipment for their unit type. If the request fails, you normally can't make another for that particular item until you are reassigned or your immediate superior is reassigned, or your unit is redeployed.

- i. Persuade** ("Ah, c'mon, we're buddies, right? I really need that grenade launcher..."),
- ii. Bribery** ("I'll give you these heated gloves for that grenade launcher"),
- iii. Bureaucratics** ("Subsection 3.2 of the Unit Allocations text states that an officer is entitled to the weapon of his (or her) choice. Well, I want a grenade launcher."), or
- iv. Scrounge** ("Did you know a J32-A6 plasma duct has 6 manifolds, and each one has an inside diameter of exactly 32mm?...")



To acquire extra equipment, and the difficulty depends on how far outside your normal operational specs the gear is. A Botch with Bribery or Scrounging results in 1 Oversight (you got caught doing something you shouldn't have been doing). Having something useful to negotiate with will usually drop the difficulty by 1, and a grade of rank beyond O6 or S3 might also be of use with certain skills.

To have another unit or division modify existing equipment for more efficiency is a difficulty of 1. Anyone can do this, you just have to ask nicely. "Hey, it's freezing out here! We need some winter boots!". The EDF has a lot of combat experience to draw on and units will generally be equipped with the right gear and weapons for their mission, though perhaps not in the quantity desired by the individual squads.

To actually modify existing equipment in a visibly non-standard way is a difficulty of 2 or 3. This is something like having extended magazines made for your weapons, or altering a multi-species weapon grip that really doesn't take your *particular* anatomy into account all that well.

To get a hold of extra gear that is technically allowed for your unit but was not actually issued is a difficulty of 4. This is something like scrounging up an under-barrel grenade launchers for an assault rifle, or somehow acquiring a shotgun or two.

Something that is issued at a company level (for *your* company), but not to your particular squad, would be a difficulty of 6. This might be something like a pack robot or a couple PLRX rocket launchers.

Something that exists at battalion level but which your company or unit has no business using is a difficulty of 8. Acquiring possession is usually part of an adventure in itself, and *then* you have to use some skill to hang into it for any length of time. "Look, it's an armored personnel carrier! It followed us home, can we keep it?"

Simply getting or hanging onto extra consumables like clips or grenades or ration bars is a difficulty of 2 for 1 item, and +1 each time you double the number of items hoarded or otherwise acquired. A day's worth of ration bars or other non-combat consumables is one item.

Once you have your mitts on an item, you can usually hang onto it until your unit is redeployed. Any time you have to pack up your gear or inventory your weapons, you usually have to make a skill check to keep any non-standard kit, and anything that is really out of bounds is going to disappear or have to be somehow integrated back into the normal scheme of things. "Forgetting" to list an item in your squad's inventory is just asking for Oversight, and even if you are willing to risk it, the superior you got permission from is unlikely to, and will not-so-gently remind you about any "incomplete" paperwork you need to finish up before Admin bean-counters start looking for discrepancies.

There are all kinds of forms and official excuses to cover for the temporary redistribution of combat assets outside the normal channels, but it is important that the numbers add up at the end of the day and that it is all accounted for. Anything that is "missing" tends to look a lot like smuggling or theft, and that brings in Special Services, which no one really wants.

So, even if your light infantry manages to somehow get and keep an APC, you're never going to get it off-planet and keep it for your next assignment. You'll have trouble enough simply keeping it if you are transferred to a different city. The best thing to do might be to trade it for a case of grenades and let it be someone else's toy for a while...

EXAMPLE

Example 1: Lt. Bayloo has two marks in Persuade, and is also an O7. If, after a particular action, she wants to hang on to some munitions and ratpacks [4 extra clips, 2 grenades, and 2 days worth of ratpacks], this is 8 items. Eight items has a difficulty of 5 [base of 2, +3 for three doublings]. She can drop this to a 4 because she is an O7, and she has a skill roll of 1d6 unless she Pushes or Risks it. If she rolls a 5 or 6, she informally mentions it to her platoon leader and he gives her a nod, because he did the same thing himself as a squad leader. On a roll of 1 to 4, she makes the request at a bad time or otherwise blows it, getting a stern look from the platoon leader that she knows means "no hoarding today".

Example 2: Lt. Bayloo wants to have her squad weapons modified to be more avian-friendly. In this case, she is on solid ground. It might normally be a difficulty of 3, but she has a Rote of 3, and her rank might drop the difficulty to 2, plus the fact that her entire squad is avian means there will be no compatibility problems if the weapons are slightly altered.

Note that supporting characters (especially Supporting Officer Characters) can hoard and modify too if they have the skills (and *everybody* has a Mark in Bribe and Persuade!). Most soldiers get really good at asking Supply for things they could conceivably need that might under the right circumstances be issued but they have not gotten yet. These items are usually Trivial to acquire (such as more hygiene supplies, a new knife, or a new blanket) but they can be hoarded and traded for ration bars, ammunition, and the like. After all, if you are going to Bribe someone, you need something to Bribe with! On the other hand, everything easily acquired from supply is already in circulation, making it a low-value currency for trading.

War Trophies

While things like captured vehicles are usually demolished or turned over to local governments for internal use, captured enemy weapons and gear may be kept and shipped home as war trophies. Weapons are demilled (made permanently inoperative), usually by drilling holes in inconspicuous but critical components, and removal of any explosive compounds. Electronics of a non-sensitive nature are usually left intact. It is usually a difficulty of 3 or 4 to get the time and permission to have a war trophy logged and demilled and put in the normal transport queue to be shipped home, which is done as low-priority military cargo.

Utility Items

There are many items that are neither weapons nor vehicles that characters will find important.

Fiber Spool (EDF)

A 1 kilometer spool of abrasion-resistant fiber-optic thread weighs about 10 kilo-

grams. It can be used to set up secure and unjammable communications or data links between two points. It can be spliced into longer lengths with signal repeaters, and multiple stations can tap into the same fiber. It is not very durable — someone tripping over it will snap it — but it is better than nothing and will work through most weather and temperature extremes. It is the same fiber used for passing commands between computerized subsystems on a vehicle, so repair crews typically have several partially used spools of the stuff lying around.

Infuser Pump (EDF)

This is a tiny, computer controlled micro-pump with a reservoir for pain-killing drugs. A med tech can place a tiny injection needle on the nerve pathways that lead to a specific injury site to deaden the pain in just that spot without having to drug the entire patient. This is a tiny device that only weighs about a tenth of a kilogram and takes up negligible space in a medical kit.

This device does not prevent or reverse any loss of Body, but it does reduce the continuing assault of pain on the nervous system. A Crippled character can act as if merely Wounded. An Incapacitated character who has had their injuries stabilized (a separate medical task) can act as though they were only Crippled. An infuser pump will last for a week on one battery, but needs to be refilled with drugs anywhere from twice a day to once every few days, depending on the level of pain relief required.

Example: A person who has a wound (+1d20 on subsequent attacks), is counted as uninjured.

It requires a skilled med tech to properly apply the device, and it is not something that can be done without at least 2 marks in the skill. It takes a few minutes to do this

COMMAND REVIEW • APPENDIX REFERENCE

Chemical Addiction

The neural pathways that lead to chemical addiction seem to have been engineered out of the species of *Albedo*, so no abuse of pain-killing drugs for "entertainment" purposes has been recorded.

properly, if only because armor must be partially removed to get at the appropriate area for the nerve block.

v2 Multi-Species Combat Rations (MCR) (EDF)

The standard EDF ration bars are universally loathed. The only soldiers who appear to like them are ILR POWs, which implies that their combat rations are even worse, a point which most EDF infantry argue is quite impossible.

The official designation of Multi-species Combat Ration (MCR) is occasionally referred to as Marginally Consumable Refuse. The v2 ration is designed to reduce (but probably not eliminate) complaints about the v1 ration.

The v2 rations are about double the size of the v1 bars, but add negligible weight. They come in a variety of flavors and dietary preferences, and also in different sizes for different species. They also have a self-heating pack for cold weather, a flavoring and purification tablet for water, and a variety of small dessert items. Aside from being size-specific, contents are randomized, encouraging troops to mix and trade with each other to get their personal preferences.

The v2 rations are still not very filling, though they do provide all the nutritional requirements of a soldier in the field.

Rescue Flare (EDF)

The normal flare is a standard pyrotechnic device that has one of several colors, each one denoting a particular situation. The standard red flare that is part of an EDF kit is "EDF person needs help!". The rescue flare is currently a prototype item issued as part of a 24 or 72 hour kit, substituting for the regular flares. Instead of a pyrotechnic light source, it uses an omni-directional laser emitter. Before firing, it interfaces with the user's hand computer or helmet to generate authentication codes unique to that individual. When it reaches its maximum height, it broadcasts a visual signal that can be recognized by any EDF electro-optic device, which can then pass the information on to the best people to act on it. This is the only way for a soldier out of radio range to get a uniquely identifiable distress signal out to friendly forces. The flare goes into standby mode to receive signals when its sealed

pouch is opened, and this requires negligible power. A soldier can simply issue a voice command to deactivate the flare, or put in a "duress" overlay on the signal, thus preventing the flare from being used to draw in EDF forces if the soldier is captured. Bandwidth of the signal is enough to send a short sentence's worth of repeating data, but otherwise it cannot be used as a long-range means of contact for units outside radio range.

Autonomous Combat Resupply Unit (EDF)

Also known as a "CRU" (everyone drops the "A"), this is a variant of the standard legged utility robot, which takes up about as much space as a normal infantry unit. The legs are slightly shorter and thicker, and it is much boxier. It can carry up to 60 kilograms of any type of supplies through any environment a person can walk in (it cannot climb or swim). With a range of about 10 kilometers under good conditions, it can be sent into harm's way to resupply units behind enemy lines. Typically, it is keyed to listen for a particular squad's authentication codes, and is paradropped into their immediate vicinity. It then uses its own on-board intelligence to find the best route to its destination, and if no one is there, it will use terrain mapping and known threats to make a guess about which direction to go next.

CRUs are expensive supply mules and have a very high casualty rate in any hot zone, so they are not frequently used. They would be battalion-level assets, used to support platoons that cannot be resupplied by any other means. A CRU is counted like a vehicle with a Deflection of 9 and 4 Body, and it has a top speed (seldom reached) of about 30 meters per turn.

Glue Gun (EDF)

This is a 40 kilogram wheeled unit the size of a large backpack, equipped with a 3 meter armored hose and shielded emitter nozzle. When hooked up to a high energy power source like a vehicle turbine, it can be used to weld or unweld monomolecular armor or structural materials by weakening the bonds between the adhesive material used to join panels. New material comes from a reservoir in the unit, while material vacuumed out in the unwelding process is

ejected in a heap beside the unit. Welds are for most purposes, as strong as the base material. Glue guns are ubiquitous with engineering units (and starship damage control units), and can be used to patch bullet holes, add tie-down points and even assemble or disassemble entire vehicles. One or more glue guns would be *required* tools for some build & repair tasks, along with any required amount of glue blocks to be dumped into the gun's hopper.

Folding Barracks (EDF)

This is a 1/2 cargo slot container (6 x 3 x 1.5) that unfolds into a complete barracks for a squad. This includes a solar recharging station and a small shower, sink and toilet facility. It takes 2 Quality-hours to set up the barracks, and 3 to fold it back up. Properly anchored, it can withstand up to hurricane-force winds. It is only marginally airtight, and previously used units (most of them) may have minor glitches. They are highly prized for any long-term deployment outside an urban area.

Camouflage Netting (EDF)

This is used mainly by stationary units such as headquarters or field hospitals. It has a standard 10 x 10 meter size and masses a lightweight 8 kilograms. It cannot negate the ability of high tech observation equipment to spot it, but it can disrupt the silhouettes of what is underneath it, making it difficult to identify specific targets. It provides a 25% concealment bonus to anything underneath it.



Camouflage, ghillie suits and color-adaptive fabrics have not come into use with either the ILR or EDF. Even the use of camo nets is debated as to its actual effectiveness. Their use is left to the discretion of field commanders.

Fuel Cracker (EDF)

This is a 2/3 cargo slot container that turns water into vehicle fuel. It can be standard equipment in an aerodyne, but is normally a separate piece of equipment. Using just the electric output of an aerodyne's reactor (which uses negligible supplies), it takes water and any locally available carbonaceous material (wood, leaves) and generates either hydrogen for fuel cells, or any other long or short-chain hydrocarbon for vehicles (anything from methane to diesel fuel). Fuel crackers are specialized deployments. Most EDF operations are expected to have access to local fuel sources shortly after landing, and securing such a supply is a basic part of any planetary landing. One fuel cracker and one aerodyne can provide sufficient fuel for an armor company, or the normal vehicle complement for a battalion.

Arms & Armor

A variety of offensive and defensive technologies are used by combatants in *Albedo*. This section lists some of the less common items characters may encounter and use.

Hot Pods (EDF)

These are used for low orbital or extremely high altitude insertion of troops. Each one takes twice the space of the gear in it (3 slots per fully equipped infantry). In a heavy EW environment they are virtually undetectable as they freefall. Inertial locators and computer controlled drogue chutes keep each group of pods in close formation (but far enough apart to avoid being caught by a single airburst weapon). Main chutes deploy at the bare edge of survivability and crumple zones in the bottom of the pod absorb the hard-landing stress.

This is not for ordinary troops. It causes 1 Awe just to deploy in such a fashion (being crammed into an oversized coffin and dropped tens or more kilometers up into a hostile environment is *not* for the meek).

The pod itself has a Deflection of 8 and 5 Body and would be treated as a vehicle for damage purposes. If the "mobility" of the pod is incapacitated, it means it no longer has a working chute.

Assault Armor (EDF)

This is a selection of form-fitting plates designed to attach to the front torso of standard battle armor. It uses a monomolecular variant with a variable ultimate yield strength and elastic modulus across its depth. The front face is extremely hard and somewhat brittle, and grades to a less hard but more ductile characteristic at the back of the plate. Troops call it "shatter plate", because that's what it does when it is hit by any significant weaponry, leaving large spider-webbed cracks in the brittle face, held in place by the ductile backing. However, in the process of shattering, it absorbs far more energy than a simple ductile deformation could. Shatter plate provides +2 Deflection and +5 Threshold to standard battle armor for one hit. It might save your life by preventing a penetration, but after that, yank it off and throw it away.

Assault armor is also available for the front and sides (including turrets) of most AV-4 variants, and has the same effects, but it weighs enough (2 tons) to drop the vehicle's speed by one level (which is about 20%). The personal plate weighs anywhere from 1 to 2 kilograms (20% of battle armor weight). This extra weight is never welcome, and for some characters it can push them over their easily carried load of twice their Body rating, even if they have dropped their kit for combat.

Assault armor is only issued in cases where exceptionally heavy resistance is expected, or troops are expected to be isolated for extended periods and need the extra survival margin. In either case, a briefing that indicates assault armor will be issued is never received with anything but subdued groans.

Assault Shield (EDF)

This is a 5 kilogram shield held in the off-hand to provide 50% cover for the person carrying it and 25% cover for up to two people behind or to the sides. It drops the damage of any weapon penetrating it by 7 (possibly to less than zero), and drops penetration from explosions by 1d20. Optionally, weapons with a damage of 7 or less are completely stopped or deflected by the shield. Assault shields are only issued when urban "house-clearing" operations are in order, where one unlucky squad member (usually an Ursine) leads the way holding the shield and a pistol or grenade, with companions providing the fire support. Assault shields or something like them can be improvised from road signs, doors or structural materials, but at reduced levels of effectiveness.

A lightweight version of an assault shield may be used by police units for riot control purposes, possibly in combination with one-handed combat staves or non-lethal stun weapons.

Battle Armor

Standard battle armor is as described in the basic rules. The weight of armor varies with species, and generally equals the wearer's Body rating (but do not count Body bonuses for being Healthy or Young). Battle armor is not really possible for species or individuals with less than 3 Body. This weight includes a standard battle helmet (advanced model is an additional .3 kilograms because of extra electronics and batteries).

Example: Auitzotl has a Body of 9. However, he is Healthy, so we count him as a Body of 8. For him, a standard battle armor has a weight of 8 kilograms. Lafgalti on the other hand has a Body of 12 (and is also Healthy), so his armor weighs 11 kilograms.

Battle armor is meant to keep a person alive, and to that end, it is more heavily armored in the most vital areas. While the Deflection averages out to 11, if you use the optional hit location rules, battle armor is rated like this:

EXAMPLE

Location	Deflection
Head	13
Neck	11
Chest	13
Stomach	13
Limbs	9
Hands or feet or tail	7

Wearing partial armor, like only a jacket, reduces the average Deflection of a full-body armor by 4, and only has half the weight of a full body armor.

Armored Space Suits multiply the mass by 1.5 and add 2 to all deflections. Concealed armor has half the mass of standard armor and can be tailored into clothing so as to be visually undetectable (though it is only a Search difficulty of 2 to detect).

ILR battle armor has a Deflection of 10, and while made to lower standards is generally a more effective piece of protection for its weight and cost, since it only has to be made for one body type (lapine) and only a few sizes.

Portable Comm Array

The PCA is a manpack version of the medium communication array that is typically mounted in a command vehicle. By virtue of a separate directional antenna and a limited frequency range, it can punch through interference about as well as the much larger vehicle unit, but at 8 kilograms plus about a kilogram more for batteries for each day of operations, it requires a dedicated operator who usually doesn't carry a weapon larger than a pistol.

What it does in play is give a platoon commander a subset of the communication functions a company HQ would have, including the ability to directly communicate with distant vehicles or aerodynes, and take full advantage of company-level tactical analysis or plan skills. It also has sufficient power and bandwidth to pass highly detailed sensor observations to other units.

The PCA is a high profile electronic signature on the battlefield. Its 8 kilogram mass normally includes three semi-disposable antennas (.5kg each), each with their own battery pack, and a small spool of optical fiber. If the comm tech feels the situation warrants it, an antenna is set up

some distance away, and signals are passed to it via the optical fiber. This allows use of the PCA without giving away the exact location of the unit.

Sensor Pod

This is a vehicle-deployed unit about the size of a small person (25kg). It has a powerful burst transmitter, and a variety of 360° sensors (thermal, video, radio, radar, etc.). When placed, it acts as a static spotter with a Role of 6. Whenever it detects something within its reporting parameters, it passes all the data it has accumulated in a short radio burst back to friendly forces. This could be to nearby ground troops, aerodynes, or conceivably even to friendly satellites. Under normal use, its batteries will last for a few months. Sensor pods can be concealed, with just the sensor head visible, though this may affect their functioning. After all, they need to be placed where they can see things, and this implies that they can also be *seen*.

A sensor pod is more of an invisible fence than a precision spotting device. It can pass data sufficient for indirect fire purposes on slow-moving targets, but cannot provide useful targeting information against anything faster than a sprinting person. Think of it as taking a data snapshot one or two times a turn.

Consider a sensor pod to have a Deflection of 7 and 5 Body, and it will operate to some degree until it has taken all its Body in damage.

Weapons

EDF weaponry is in general more sophisticated and integrated than its ILR counterparts. Even an EDF pistol can communicate wirelessly with a combat helmet to provide status on remaining clip capacity, time until next scheduled maintenance, barrel temperature and so on, while an ILR weapon may have nothing more than a laser sight and a round-chambered indicator. The larger the weapon the more sophisticated, to the same relative standards. An ILR rifle might have a telescopic sight with light intensification, while the EDF equivalent might have a day/night thermal sight, ballistic compensation and its

own heads-up display that highlights threats identified by other squad members.

The civilian weapon market is not well developed. There is no hunting tradition, so the only weapons are those useful in a self-defense role, and to a very small extent, competition shooting.

The EDF is extremely conservative when it comes to new weapons or armor. There is very little change in personal gear since the first war, and the more expensive the outlay, the less likely any major changes are going to be made. Functional improvements that have little capital outlay have a much better chance of working their way through the various oversight and approval committees, as do ones that re-use existing electronic or programming modules.

The ILR always looks at the bottom line. They are more likely to look at quantity as a solution instead of quality, putting a cheaper weapon solution in the hands of more soldiers, provided the cost/benefit analysis of a deployment comes up right. And this includes the appropriate profit margin for the ILR contractors bidding on the project. A proposed program could be cheap and effective, but never see production because the profit margin wasn't worth it.

Weapon Nomenclature

EDF and ILR weapons have a particular pattern in the way their weapons are named. EDF infantry weapons generally follow this format:

ABCD E-FF

Through long use and several changes in EDF structure, older weapons may have different designation structures that have been kept just for continuity's sake, but the EDF is trying to keep new developments within the standard nomenclature. Improvements of existing hardware are likely to keep their older nomenclature scheme.

- **A:** Weapon weight/type, in a subjective sense, either Light, Medium, Heavy, Crew-served, Grenade, Powered, pistol, Shotgun or Vehicle. This designation is within its category. A medium pistol is smaller than a light rifle. This letter is not always used on existing weapons, or is in the second position instead of the first. A crew-

served weapon can be fired by one person, but often has multiple people involved in its use, either because it is large or because it often uses someone like a designated spotter for optimum effect. A powered weapon is one like a multi-barrel machinegun that requires an external source of electrical power in addition to its ammunition requirements.

- **B:** The type of action the weapon has, Automatic, Bolt (single shot with magazine), Launcher (single shot), or Semi-auto.
- **CD:** The last two letters indicate the type of weapon. The last letter is almost always "W" as in Weapon, but the first letter varies. The most common terms are Kinetic Weapon and Rocket Weapon. Grenade launchers are lumped in with other kinetic weapons.
- **E:** This is the model number, and indicates how many prior versions of the weapon there have been. Many EDF weapons are still in the "1" series.
- **FF:** This either indicates the barrel length of the weapon in terms of a multiple of its caliber (for most hand-held KW's), or the weapon bore in millimeters (for vehicle weapons, RW, GW and SW's).

EXAMPLE: The EDF carbine is the Light Automatic Kinetic Weapon, series 1, 30 calibers, or LAKW 1-30. While an officer's sidearm might be the PAKW 4-12, its proper designation should actually be the pSKW 4-12, the semi-auto grenade launcher GAKW is technically the GSKW 1-32, the under-barrel launcher GLKW is technically the GLKW 1-32, the VAKW heavy machinegun is technically the PAKW 2-20 and the HAKW is the PAKW 1-12.



Improved Combat Staff (EDF)

The improved combat staff comes with a blade that can be fitted onto one end to provide a two-handed weapon with a fair reach and improved damage relative to either a standard combat staff or knife alone.



Demolition Charge (ILR/EDF)

These are basic bricks of high explosive that can be set by a demolition tech to destroy or in some cases create obstacles. Placing a single demo charge takes about 1 Quality-hour, based on the Demolitions skill of the person placing them. This skill use involves examining the structure or area to be targeted, carefully placing the charge and moving to a safe distance. Elimination of any of these steps speeds the process considerably, but has its hazards.

The damage stats listed are for a single .5 kilogram block. Each time you double the number of blocks, you get +2 to the damage and +1 penetration, and each time you quadruple the number of blocks, you get +1d20 Penetration (which increases the effective blast distance).

EXAMPLE

Using four bricks (2.0 kilograms) gets you +8 damage, +4 penetration and +1d20 Penetration dice.

Demolition charges can be tamped to reduce side effects. This takes 1 Quality-hour, reduces the blast distance by 1 meter and increases the damage as though twice the amount of explosives were used.

EXAMPLE

Using four bricks (2.0 kilograms) in a tamped charge gets you +10 damage, +5 penetration, +1d20 Penetration dice and a 1m blast radius instead of 2m.

A demolitions kit includes a number of standard gizmos for attaching a demolition charge to slick or vertical surfaces, allowing for the creation of limpet mines and other high-risk combat explosives.

Booby Traps (ILR)

Neither the EDF or ILR uses mines. However, the ILR does plant demolition

charges and has triggered machine pistols that are used as booby traps.

Spotting a booby trap or at least being suspicious enough to take a closer look is a Spot or Sixth Sense task based on the skill of the person placing the booby trap.

The problem with any booby traps used by the EDF is the possibility of civilian casualties.



Thermobaric Grenades (EDF)

This is a slightly functional improvement on the incendiary grenade. A thermobaric grenade blasts a flammable gaseous cloud out to its effective radius, and then ignites it, instantly raising the temperature of the entire volume of space to well past the ignition point of most flammable materials. Anyone without respiratory protection has their lungs flash fried before they have time to scream, all exposed flesh is instantly seared, plastics melt, wood chars. The effect consumes all oxygen in its area, so even superheated items might not be on fire. In the end, the effects are no less horrific on personnel than a normal incendiary grenade, but it is less likely to set structures ablaze or cause other uncontrollable fires. They are still rarely issued to EDF troops. Units may be more likely to have them on certain assignments, as thermobaric grenades are more effective at wrecking materiel than the scattered flaming fragments of normal incendiaries, and do not have as high a sonic signature as fragmentation or concussion grenades.

Overwatch Software Module (EDF)

A new addition to the standard software suite available to fire teams, this is meant to be used with the stand-alone or under-barrel grenade launcher and variable grenades. If someone has a ready weapon Watching for indirect fire (and successfully spots it), the software provides plotting, aim points and timing information to properly intercept a single incoming round in flight. This is typically rolling against a 2d6 task when distance,

size and other factors are taken into account. Incoming rounds are typically intercepted at ranges of 20 meters or less, meaning the attempt is a risky proposition. Failing to intercept leaves no time to dodge or seek better cover, so anyone on an overwatch assignment should already have their foxhole dug *and* be in it. Infantry are currently being given simulator training with the software upgrade and full compliance with training requirements is expected within a few months.



Irritant Grenades (EDF/ILR)

The EDF has but rarely uses irritant grenades, as ILR infantry has breathing protection as standard equipment, though like the EDF, they aren't wearing it as often as regulations suggest they should. The ILR simply uses regular grenades (or the threat of them), thus saving money.

EDF deployments may include irritant variable grenades or rifle grenades in cases where there are likely to be civilian hostages, or the EDF has to deal with a domestic insurgency and does not want local insurgents to be martyrs for their cause.

Irritant grenade effects are stunning damage, which only takes 5 times the current Body loss to recover (instead of 100 times). The normal effect causes intense pain in the eyes, nose and lungs. The useful measures a person without breathing gear can take count as a Deflection of 7. Any species with +1 Smell or more must have breathing gear or only count as a Deflection of 3.

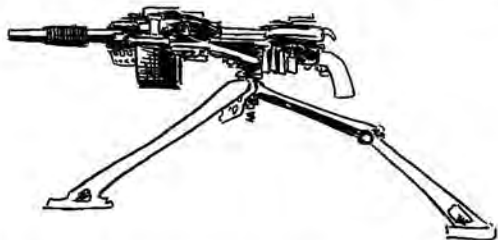
Irritant grenades generally fill an entire area with a single, low power bursting charge, and only get 1d20 for penetration. However, if the grenade goes off in an enclosed space like a room, it gets +1d20, and in a small space like a vehicle cockpit or crew compartment, it gets +2d20. Irritant grenades cause 2 Awe for each d20 of Penetration they roll. They won't kill you, but they will really make you want to get out of the area of effect.

Recon Grenade (EDF)

Designed for use with the GLKW 32 and GAKW 32 grenade launcher, it is a lightweight grenade with a high-efficiency parachute. When launched, it trails a hair-thin fiber-optic cable behind it. At apogee, the parachute deploys, and an on-board day/night camera relays a picture of the battlefield back to the firer, an image which can be interpreted by battle software, passed to other squad members and used for the targeting of indirect fire weapons. The transmission of the image through a fiber-optic cable bypasses the limitations of the EW-heavy battlefield environment. Limitations of the hardware are the same as for any other remote viewing (a 25% increase in concealment on anything you are trying to spot). The maximum range and viewing angle of the grenade can give a picture of an area 400 meters across, centered on a spot 200 meters away from the firer. This area shrinks as the grenade descends, and it has a useful lifetime of 10 turns. Spotting things in the display is a normal perception task based on the range, using either Spot or Sensor Operations (user's choice), with a default d8 for the range or a fixed target number of 4, not counting other potential modifiers. Classifying targets and passing data on for indirect fire is a Routine task for a forward observer (Navigate skill).

A Botch when using this weapon usually just means that the fiber-optic strand snapped and the grenade has been wasted. Any other use of the grenade launcher or a rifle the grenade launcher is attached to will sever the fiber-optic link.

Creative troops have also used this grenade for static remote viewing by carefully unreeling the fiber-optic line and equipping the grenade with a few extra batteries. This is a Routine Scrounge task that only takes about half of a Quality-hour to complete. Supporting characters will not do this modification on their own. Note that this use of the device is video only, since the grenade has no microphone.



MT 200 Grenade Launcher (ILR)

This is the standard weapon for a typical ILR squad grenadier. It is a 32mm grenade launcher that only fires ILR-type grenades. It is a semi-automatic weapon that fires from a 6 round detachable clip. While it is normally shoulder fired, the butt plate of the stock folds out like a flower to form a stable base plate. In this mode, the MT 200 can be used to fire all 6 shots in a clip in a single round, to provide the advantages of an indirect fire barrage. The weapon must cool down for several turns after a barrage, a feature monitored by an on-board temperature sensor that the user cannot override. This weapon comes with a compensating sight that can be detached and unreeled several meters to fire the weapon remotely. The MT200 has an unloaded mass of 5 kilograms and a loaded mass of 8 kilograms, making it a significant load for the average lapine. It is not uncommon for one or two average ILR infantry to be issued a 3kg clip just to give the grenadier extra capacity. The extra load is a "new guy" or "punishment detail" assignment that no one wants, but no one complains about it (not officially, anyway).

K3 HARM Grenade (ILR)

This is a passive homing grenade designed expressly for indirect fire use by ILR grenadiers. The heavy EW in the normal battlefield environment makes long range communication difficult, but it does not in any way make it harder to find out where jamming signals are coming from. Because of the ubiquitousness of frequency-hopping, spread-spectrum radio systems, homing in on a particular portion of the radio spectrum is next to useless. Rather, the HARM grenade is simply set to first, second and third strongest signals in its sensing arc, which is a 60° cone that is either set as directly ahead of the projec-

tile, or oriented towards the ground in front of the grenade. The first setting is passable for airborne targets, and the second is for ground units. The theory is that the strongest signal in any given environment is likely to be an enemy squad leader or vehicular radio, and the second strongest is an average infantryman. In an area where there is an ILR jamming source, it is likely to be strongest, and so the grenade is set to ignore that and look for a weaker signal.

If there is more than one signal that qualifies, it simply homes in on the one closest to its flight path, which is modified by small servo-fins at the back of the projectile. The grenade has no thrust and operates entirely on the energy of its firing charge. It can with some difficulty hit airborne targets, but it is mostly designed to hit infantry. The warhead is a small HEDP round, a not-too-effective shaped charge surrounded by a fragmentation sleeve.

The K3 grenade counts as a homing weapon, but it has no proximity fusing, so it requires a direct hit in order to affect airborne targets.

There has not been enough combat experience and recovered examples of this device for the EDF to deploy a fairly simple counter-measure (a "bait" transmitter placed well away from the squad), but if the K3 goes into regular deployment, such a countermeasure would only lag behind it by a few months.

KA1 Canister Grenade (ILR)

The ILR grenadier is an extremely useful squad member for ranged engagements, but is little use in a close-range firefight. If operations are likely to be at short range, the MT 200 launcher is loaded with a clip of canister rounds. This turns the weapon into a 32mm semi-automatic flechette launcher. The penetration is not as good as the AW 191 carbine, but the sheer volume of projectiles thrown can cause significant blunt trauma through battle armor. A point-blank blast may not kill an EDF soldier, but it may make them wish it had.

K2 Variable Grenade (ILR)

This is the standard ILR grenade. It is a three-piece unit with a firing charge, main

explosive body and a fragmentation sleeve. The firing charge can be detached to make it a thrown grenade, and the fragmentation sleeve can be removed to make it a concussion grenade. It is armed with a simple pyrotechnic delay fuse that can be manually set in one second increments up to 12 seconds, with a default of 4 seconds. It also has an impact sensing fuse, which arms after 2 seconds. It is *not* electronically programmable. It is however, quite cheap to manufacture and just as effective when it goes off as an EDF variable grenade.

E32-3 EMP Grenade (ILR)

This is a specialized grenade that is seeing limited deployment (real-world field testing). The only operational difference between this and a regular grenade is that it requires a battery be discharged into the MT-100 launcher's standard power interface to charge the grenade for at least a turn before firing. This energizes a superconductor coil within the grenade. This coil is surrounded by a small conventional explosive charge (no real blast damage, but it will still scare the fur off you if it goes off in your lap). When this charge detonates, it pinches the magnetic field within the coil to absurd flux densities, which generates a corresponding electrical field that is powerful enough to destroy or damage unprotected systems, and damage or force a reboot of many protected ones. While EDF equipment is hardened against electromagnetic interference, and includes many optical isolators and circuits, virtually all devices have a radio frequency interface. This pathway into the device *is* a method of compromising the system. It can also pass interference or corrupted data streams to the closest devices in its immediately network, causing an entire integrated system such as a soldier's kit to be temporarily affected. Other devices, especially electro-optics like vision enhancement, have to be exposed to the signals from the environment, and while they can compensate for most ambient interference, a blast from an EMP grenade is sufficient to fry them.

ML 202 Booby Trap (ILR)

This is an autonomous version of the ML 199 SMG. It is in a small rectangular box with a universal mounting plate/clamp and weighs about the same as the ML 199. After a delay to let the person placing it get out of range, it activates, and will fire at anything that passes directly across its passive infrared sensor (it is always Watching, and if necessary would be considered to have a Spot Rate of 3). It has three settings to correspond with the approximate IR signature of an unarmored person, a fully armored person, and a space-suited person. On the correct setting for a target, it gets a 1d6 roll, and on an incorrect setting it gets a 1d4 roll. It can be set to activate only at certain ranges, and can also be set to ignore the first, second or third targets detected. It expends its entire clip when triggered, but can be manually operated via a fiber-optic or short-range radio link to fire one shot at a time.

The mounting clamp can be set for a fixed aim point, or set to "wobble", meaning that the weapon's recoil sprays the contents of the clip over a wide area, which would be counted as a 1d4 Suppression Fire attack out to the weapon's Contact range of 5 meters, and it cannot do Following Fire or other options that require intelligent control.

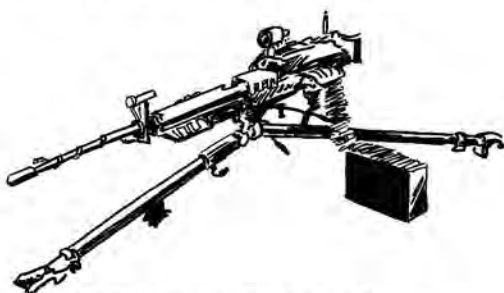
ILR special forces routinely use these weapons as a means of distracting and channeling enemy troops, often triggering the devices one shot at a time via a remote fiber-optic link. A handful of them set to cover a street can make it look like an ILR fire team is covering an area, when in fact the *actual* fire team is taking aim at your back while you are distracted...



AW-193 Light Machine Gun (ILR)

This is a belt-fed version of the AW-191, which gives it better suppression fire capability. It also has a heavier, longer barrel, which gives it a marginal increase in range and damage. ILR infantry or elite units may have one squad member with this

weapon. It masses 4 kilograms empty and 5.5 kilograms fully loaded. Up to 200 rounds can be carried in a box that mounts under the weapon. Vehicle installations typically have belts of nearly a thousand rounds. The AW-193 requires regular cleaning to avoid feed problems with the caseless rounds used.

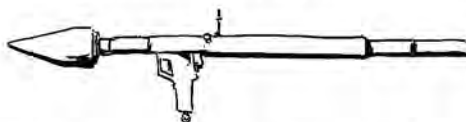


AW-188 Heavy Machine Gun (ILR)

This is a belt-fed 11mm single-barrel machinegun that serves the ILR in the same way (but not as well) as the HAKW serves the EDF. This is usually a vehicle mounted weapon. It is more than heavy enough to punch holes in most AV-4 variants, and lucky hits can damage aerodynes. It can of course, badly chew up any infantry that it hits. It has a standard belt of 480 rounds. EDF infantry with any experience know the silhouettes of all ILR vehicles that mount this weapon, and direct their fire accordingly. This weapon is available in a man-portable version, which is 30 kilograms for the weapon and tripod and 30 kilograms for a 480 round feed box. This may be seen in prepared defensive positions, and also serves as poor-man's anti-aerodyne weapon. The ILR may supply these to insurgents, in a version that has no ILR manufacturing marks. This way the ILR can lay blame on "rogue elements" for supplying the weapon,

should there be any political fallout from their use.

The ILR also uses a modified version of the man-portable version as their equivalent of the EDF's LRCKW. It fires in semi-auto mode from a 10 round box magazine, and the weapon, electronics and tripod mass 15 kilograms. An ILR sniper team will normally be three elite troops, the sniper, a spotter and an overwatch, with the weapon carried by the sniper, the tripod and extra ammo by the spotter, with the overwatch having their normal infantry load.



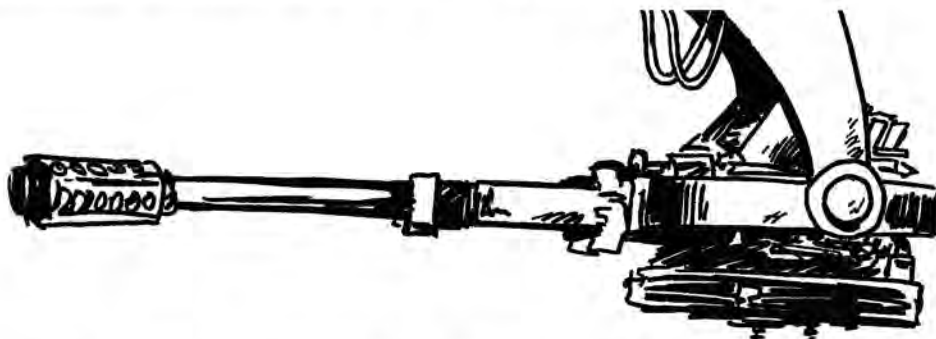
200mm Demolition Rocket (ILR)

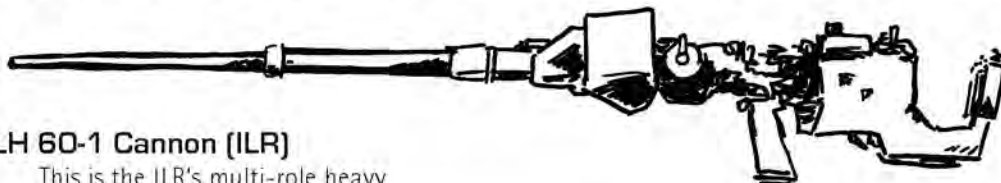
This is an unguided bunker-buster or street-clearer. Armed with a large HE warhead, it can blow a significant hole in anything smaller than a starship. Like the EDF's larger demolition rocket, it is fairly inaccurate, but it can miss by a large amount and still cause a lot of damage.

The important thing about these rockets is that the shipping container for each rocket can be used as an improvised launcher. Without any fire control system and only marginal aiming ability, the firer loses 2 marks off their skill (minimum of d4), but the appallingly high number of Botches means that this tactic is best left to "insurgents" that this weapon sometimes "regrettably" falls into the hands of.

LH 20-2 Autocannon (ILR)

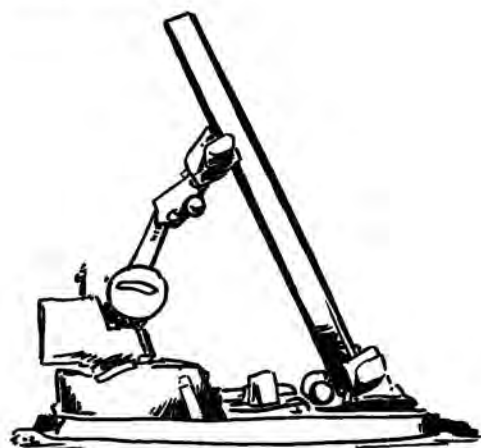
This is a chain-driven autocannon firing solid kinetic penetrators. It is still in service on WA-6T variants, but is being phased out in favor of the LH 60-1 cannon.





LH 60-1 Cannon (ILR)

This is the ILR's multi-role heavy weapon. A 60mm smoothbore auto-loading cannon, it fires either high explosive or kinetic penetrator rounds. There is no shaped charge munition for the weapon at this time.



LH 100-2 Mortar (ILR)

This is a large, hopper-fed mortar and is the heaviest weapon deployed to date by the ILR. It is used exclusively in the WA-81 fire support vehicle. Its most important attribute is the ability to lay down a barrage of six shots in tight pattern in a single turn. Provided this pattern is in the right spot, the results can be devastating. Like all indirect fire weapons, mortar shells land the turn after they are fired. Because this mortar cannot be angled for horizontal fire, it has a minimum practical range of about 750 meters.

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ILR's Specialty Weapon

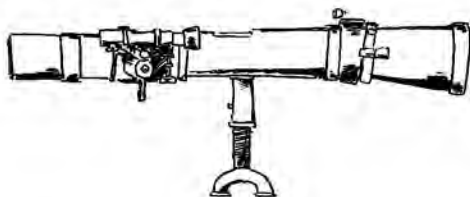
The LH 60-1 cannon has more damage, range and flexibility than any comparable EDF weapon. You can't sit at range and take it out, because it has more range than you do, and you can't hide behind something and go toe-to-toe, since it can perforate any mobile platform the EDF has. If a vehicle with this weapon is deployed intelligently, it will be a problem that requires intelligence and creativity to deal with.

There are three main munition types for this mortar. The first is a standard HE/fragmentation round, which can be set for impact fusing or airburst. The airburst setting drops penetration by 1d20 because of the distance, but will negate up to 50% of any *ground level* cover. That is, if you are hiding behind a low wall, you might have 50% cover from an impact detonation, but none from a detonation several meters up.

The second round is an obscurement shell. It bursts into a 100% opaque cloud that will linger in an area up to 15 meters across for up to a minute (10 turns) in calm conditions. The last round is a homing HEAP round that seeks out the shape of EDF ground vehicles, though it can be programmed to most other ground vehicle shapes. This will do damage against the top armor of the vehicle on any hit, which might be a glancing shot against a sloped side, or a solid hit on the flat top.

Camouflage and breaking up a vehicle's visual signature can confuse the round and cause it to veer off. Relatively simple countermeasures such as laying out blankets in the right configuration can also cause these rounds to miss. However, if a target area can be remotely viewed, the gunner can isolate particular targets so that only *that* target is sought out, or exclude particular targets so that target is never sought out.

When used in normal mode, the mortar has a sustained fire rate of one shot per 2 turns. In rapid fire mode, six shots are fired, but then the mortar must cool down for a minute before firing again, or premature detonation of rounds is possible. This limit is part of the drill for ILR crews for this weapon, and can be ignored in an emergency, if the vehicle commander orders it (this costs the crew 1 Morale).



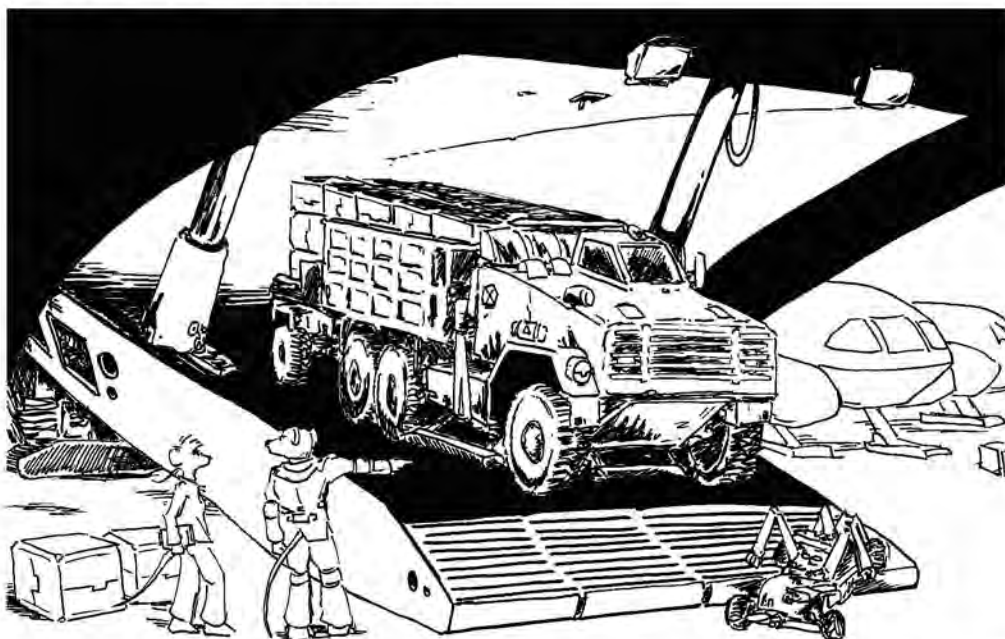
HVDD 15 (ILR):

The newest weapon to spring from the creative minds at ILR corporate labs is the hypervelocity dart launcher. This bears a similarity to a recoilless rifle or rocket launcher, but it fires a 15x250 dart at several thousand meters per second. The otherwise crippling recoil is balanced by the expulsion of an equal mass of powdered, high-density material (inert) out the back of the weapon. The high velocity is achieved by use of a propellant that borders on a high explosive. Radial blast pressures are contained within the weapon by use of an energy absorbing structure that is akin to a controlled, incomplete rupture of the barrel (similar to the process used for EDF assault armor). As a result, it is a one-shot weapon. The 5 kilogram HVDD comes with fixed sights, but normally a standard grenadier's targeting scope with altered programming is used with the weapon, and is simply moved to another dart tube after firing.

The main advantage of the weapon is that it is for all practical purposes a line of

sight weapon. The projectile moves fast enough that at any range which the weapon can be aimed at, a target will have moved a negligible amount between the act of firing and the projectile reaching it. For instance, an aerodyne moving 400kph at a range of a kilometer will have only moved its length in the time it takes a dart to reach it. It is unguided, cannot be jammed, has no signature before firing and cannot be shot down. As a result, despite its moderately expensive production cost, it works equally well as an anti-armor *and* anti-aerodyne weapon. Its range is sufficient to be annoying to aerodyne pilots, and the damage is enough to make all but the largest or best armored vehicles take notice on a solid hit.

The mass of propellant gases and expelled material makes it *extremely* unsafe to use inside a vehicle or building, with effects much like setting off a concussion grenade. Panicked troops may do this because they aren't thinking clearly enough to consider the consequences. ILR infantry in open-topped personnel carriers have also been savaged on occasion when a panicked or inexperienced gunner fires an HVDD without realizing exactly *where* the back-blast is going. Outdoors, the back-blast makes the firer instantly visible, even from great distances, and creates a



100% obscurement in a 3 meter radius behind the firer. The high speed of the dart is offset by a relative inaccuracy. It has a very long useful range for a weapon of this type (sufficient to give aerodyne pilots the jitters) but performance drops markedly past that distance.

The weapon is typically deployed by the crate. The defensive nature of the weapon means that it is usually delivered to troop positions by APC or armored truck, making the extra encumbrance academic.

EDF sources report that new ILR vehicle deployments have a single tube mounted alongside the standard 6mm ILR machine gun, and battle software has been updated to assist in using the weapon. Once fired, a member of the vehicle crew must expose themselves (50% cover) for at least a turn to dispose of the old tube and mount a new one. Typically, only two spare tubes are carried per vehicle, the reasoning being that no ILR vehicle is likely to survive more than three encounters with an EDF vehicle (though no one will actually say it in that fashion).



LAKW 1-62 Light Machine Gun (EDF)

This is a belt-fed version of the LAKW 1-56 rifle, with a heavier, longer barrel, and the ability to fire from a 200 round belt that is stored in a box below the weapon. It is for all practical purposes a dismounted version of the 8mm light MG found in the remote turret of many EDF vehicles. The sustained autofire capability given by the extended belt is matched by a

recoil-driven forced air system to keep the barrel cool. In the event this is not sufficient, worn out barrels can be easily dismounted and replaced. The LAKW 1-62 is significantly heavier than its rifle counterpart (4.5 kilograms unloaded, 7 kilograms loaded), but is not too heavy for regular use. Typically, no more than one person in a squad would have this weapon.

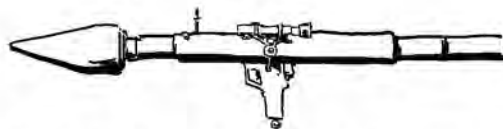


LRCKW-C Rifle (EDF)

Originally an unauthorized field modification made to an LRCKW by Ursine heavy infantry, the modification has since been graced with an official designation.

The barrel is shortened, the tripod removed, the advanced sight replaced with a standard EDF rifle sight, and the handgrip altered for the species of the end user. These modifications cut the maximum range significantly and the damage slightly, but they decrease the loaded weight to a little more than 10 kilograms.

While the requirements for approval of the modification are Byzantine, and the ammunition is several dozen times heavier than normal 8mm rifle ammunition, the heavy firepower and long range of the rifle are often quite welcome.



280mm Demolition Rocket (EDF)

This is similar in concept and use to the ILR demolition rocket, except it has about twice the payload and a slightly better range. Each rocket packs the wallop of over 40 kilograms of high explosive, enough to crater roads, drop bridges, pulverize small to medium buildings and turn any WA-series vehicle or parked aerodyne into twisted metal. The EDF has specific guidelines on how and when these rockets can be used because of the carnage they

COMMAND REVIEW • APNNAND NEEUP

Scorched Earth Policy

Both sides in the EDF-ILR conflict have qualms about using weapons as heavy and indiscriminate as fuel-air explosives and massive rocket bombardments. As the conflict heats up, weapons of this class (or even nastier!) will see use on both sides.

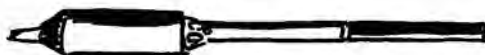
could wreak on civilian infrastructure and lives if one lands in the wrong spot.



PLRX Rocket (EDF)

Due to innumerable complaints and official after-action reports about the inadequacy of the PLRW as an anti-armor weapon, the EDF bureaucracy has come up with the unique solution of reclassifying it for anti-infantry use only. This is a task that the 3kg rocket is only slightly less suited for than a .25kg hand grenade, but it is deemed to make up for it with its extended range. Or so say the people who don't have to use it.

The replacement rocket is the PLRX series, which uses the same guidance module and electronics as the PLRW, but has greatly improved damage (8+14) and an angled warhead that is designed to hit the top armor of vehicles rather than the sides. However, the optimized shaped charge round rolls only 1d20 Penetration for secondary blast effects (but still gets the full 5d20 Penetration dice against what it actually strikes).



CLRW 1-96 & 1-144 Rocket (EDF)

The EDF is currently considering deployment of two new rocket launchers, which will result in the phasing out of both the PLRW (and the upgraded PLRX version). The CLRW 1-96 is a single shot 96mm rocket launcher, while the 1-144 uses a 144mm rocket. It uses a disposable launch tube to which a reusable electronics suite is clipped to. The .3 kilogram suite is the same for both the CLRW 1-96 and the larger CLRW 1-144, and the disposable launch tube and rocket weigh in at 3.7 and 6.7 kilograms, for a total weight of 4 kilograms and 7 kilograms. The total weight actually varies slightly with the rocket type used, of which there are three types planned. The first is a shaped charge warhead, the second is high explosive with a fragmentation sleeve, and the last is a controversial fuel-air munition of yet

unknown specification. Actual performance figures are unknown, but are expected to be slightly better than the PLRX. All the rockets have a rudimentary multi-mode guidance module (silhouette recognition, laser designation or emissions homing). These capabilities pose few technical challenges, but are proving very expensive to cram into the relatively small and light missiles, which may prevent their deployment in any significant numbers.



SA-8c (Independent)

The SA-8c is representative of most civilian firearms or what would be carried by police armed with lethal weapons. It is a .5kg pistol firing standard 8x24 rounds from a removable 12 round clip. These are *not* discarding sabot or armor-piercing projectiles, giving them a lower damage and penetration than EDF-issue pistols. EDF pistols can, if required, use this ammunition at the SA-8c level of damage, and likewise, the SA-8c can fire EDF ammunition if it is available. The weapon does not come with any targeting accessories. However, within Confed space, such weapons have micro-tagged propellant that can be tracked back to the original purchaser, and the pistol will have a small digital camera that takes a picture every time the trigger is pulled. This information is both stored in non-volatile memory and uploaded as a matter of course to law enforcement authorities, who only have access to the information with a court order.



SS-18i Shotgun (Independent)

This is a powerful personal defense weapon, and might be carried by undercover police officers, riot police or police engaged in a raid where the over-penetration of rifle ammunition might be a problem. The 2kg SS-18i uses standard shotgun ammunition, fed from a 4 round internal magazine under the barrel. This

can be reloaded in one turn if the user has both hands free and a ready supply of loose ammunition. In addition to normal shotgun ammunition, the SS-18i may use elastomer shot or slugs, which is much less lethal, but can be equally incapacitating at short range. This would have a damage of 2+6 for shot and 5+10 for slugs. Unless a critical success is rolled, neither cannot do more than an Wound effect per hit. The damage is still considered lethal in nature, as it can crack skulls and ribs at close range, and leave bruises that take weeks to heal. Neither elastomer load has any effect against a full coverage armor with a Deflection of 7 or better, nor will it penetrate cover with a Deflection of 7 or better.



NS-6 (Independent)

This is a 6 shot stun-gun-like weapon, but instead of trailing wires back to a central power unit, it fires oversized projectiles (about the size of a shotgun shell), which have a number of short barbed prongs in front, and a battery-powered high voltage supply in the rear. While these have a normal 0+10 damage, they cannot penetrate any Deflection greater than 5. This makes them useless against *any* fully armored target, regardless of the armor's toughness. Against targets with partial coverage, penetration is rolled for normally, as it might hit an unprotected location. In effect, it does 1d20+10 damage, or does nothing at all.

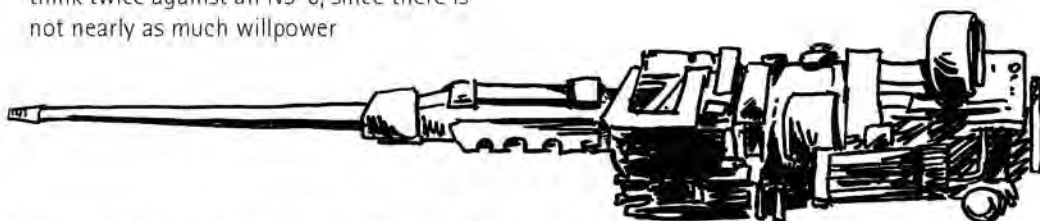
The NS-6 looks similar to a cut-down pump shotgun and masses about 2 kilograms when fully loaded. This is the normal weapon used by policing forces on most worlds, as it is incapacitating but non-lethal. Individuals who might defy an officer to use lethal force on them might think twice against an NS-6, since there is not nearly as much willpower

or excuse required to use a weapon that you know the target will quickly recover from. Wounds inflicted by this or other non-lethal weapons only take 5 times the current loss to recover one point of injury, not 100 times the current loss as for lethal injuries. For most people, recovering 1 Injury can be done overnight, and 2 or 3 Injuries might take a few days.

The 0+10 damage is a limit of the ammunition's software to protect smaller species, and is *not* a hardware limit. A tech can disassemble a unit of ammunition and remove the limiters to increase the damage to 0+15. Police forces may have access to such ammunition as well, in the event they need to subdue an unruly ungulate or other large sapient, but by and large they use standard ammunition as a duty load.

KW-112 (Independent)

This is the largest weapon mounted in anything smaller than a starship. A few independent worlds have bought into a "bigger must mean better" philosophy for their Homeguard and have built vehicles capable of mounting this enormous 112mm smoothbore cannon that fires dual purpose shaped charge/high explosive rounds. Vehicles that mount this weapon can only with great difficulty be made air-transportable in a standard cargo volume, and so neither the EDF or ILR has such a weapon or plans to deploy one.



Consolidated Weapons Table (Older Ordnance in Gray)

Extra-planetary Defense Force (EDF)

Weapon	Type	Action	Mag.	Ammo	Range	Damage	Notes
GAKW	Heavy	Semi-	12	32mm EX	S5, M20, L80, X400	0+10	Exp 2m
				32mm EX	S5, M20, L80, X400	0+10	Exp 2m
				Thermobaric	S5, M20, L80, X400	5+12	Exp 1m
GLKW	Longarm	Single	1	Anti-Tank	S5, M20, L80, X400	5+12	Exp 1m
				Irritant	S5, M20, L80, X400	0+5	Exp 3m
				Recon-	Special – see page 253		
Variable grenade	Thrown	Thrown	1	-	Thrown object	0+10	Exp 2m
Demo. charge	Demolitions	Placed	-	-	Placed weapon	2+11	Exp 2m
LAKW 1-30	Longarm	Full	24	8x56	C5, S15, M50, L330, X2300	10+9	
LAKW 1-56	Longarm	Full	24	8x56	S15, M60, L470, X3700	10+10	
LAKW 1-62	Heavy	Full	belt	8x56	S15, M65, L510, X4100	10+10	
MAKW 3-60	Heavy	Full	belt	8x64	S15, M50, L360, X2600	11+10	
LRCKW	Longarm	Semi-	8	10x56	S15, M50, L330, X2300	24+12	
LRCKW-C	Longarm	Semi-	8	10x56	S15, M45, L310, X2100	24+9	
CKW Precision	Longarm	Semi-	24	8x56	S15, M70, L560, X4600	10+10	
MPKW 2-18	Pistol	Full	24	8x24	C5, S10, M30, L190, X1100	8+7	
PAKW 4-12	Pistol	Semi-	16	8x24	C5, S10, M40, L230, X1400	8+7	
PLRW	Heavy	Single	1	-	S15, M60, L470, X3700	0+10	Exp 1m
PLRX	Heavy	Single	1	-	S15, M60, L470, X3700	8+14	Exp 1m
CLRW 1-96	Heavy	Single	1	-	S15, M60, L470, X3700		
CLRW 1-144	Heavy	Single	1	-	S15, M65, L550, X4300		
SBKW 10	Longarm	Single	9	10mm	C5, S10, M20, L40, X60	5+5	Shotgun
HAKW MG	Heavy	Full	belt	20x70	S15, M55, L410, X3000	26+13	
VAKW MG	Vehicle	Full-	belt	20x80	S15, M55, L420, X3100	33+15	
Demo. Rocket	Vehicle	Single	1	280mm	C10, S25, M135, L700	14+17	Exp 4
VAKW 24	Vehicle	Full	belt	24x120	S15, M65, L550, X4300	37+16	
VSKW 32	Vehicle	Single	20	32x200	S15, M60, L475, X3700	42+16	
				66x350	S15, M55, L425, X3200	68+26	
VSKW 66	Vehicle	Single	20	Hi-Ex	S15, M45, L320, X2200	4+12	Exp 2m
Improved Staff	Melee	Melee	-	-	C2	7+Body	

Independent Forces (Homeguard)

Weapon	Type	Action	Mag.	Ammo	Range	Damage	Notes
NS 6	Pistol	Semi	6	15mm	C2, S5, M10, L20, X40	0+10	Stunning
SA 8c	Pistol	Semi	8	8x24	C5, S10, M40, L230, X1400	6+5	
SS 18i	Longarm	Semi	4	10mm	C5, S10, M20, L40, X60	4+4	Shotgun
KW 112 Cannon	Vehicle	Single	1	112mm	S15, M50, L400, X2800	15+15	Exp 3m

Inter-Lapine Republic (ILR)

Weapon	Type	Action	Mag.	Ammo	Range	Damage	Notes
AW 191	Longarm	Full	48	6x40	S15, M50, L410, X3000	8+9	
AW 193	Heavy	Full	belt	6x40	S15, M55, L430, X3200	8+10	
ML 199	Longarm	Full	32	6x30	C5, S10, M40, L230, X1400	7+7	
MP 197	Pistol	Full	32	6x30	C5, S10, M30, L150, X800	7+6	
ML 202	Demolitions	Full	32	6x30	C5, S10, M30, L150, X800	7+6	
MS 195	Longarm	Single	12	8mm	C5, S10, M20, L40, X60	4+4	Shotgun
HVDD 15	Heavy	Single	1	15x250	S5, M20, L1000, X2200	28+18	
		Semi-	6	32mm EX	S5, M20, L85, X375	0+10	Exp 2m
				K3 HARM	S5, M20, L85, X375	5+8	Exp 1m
				K2 Variable	S5, M20, L85, X375	0+10	Exp 2m
				E32-3 EMP	S5, M20, L85, X375	0+10	EMP
MT 200	Heavy			KA1 Cann.	S5, M10, L30, X160	7+7	Shotgun
AW 188	Vehicle	Full	belt	11x65	S15, M55, L380, X2800	20+10	
Demo. Rocket	Vehicle	Single	1	200mm	S10, M25, L120, X600	12+16	Exp3m
LH 20-2	Vehicle	Full	belt	20mm	S15, M60, L475, X3700	31+15	
LH 60-1	Vehicle	Single	1	60mm	S15, M70, L550, X4600	69+25	
		Single	1	HE round	S15, M50, L310, X2100	2+11	Exp 2m
		Single	6	100mm	L750, X6800	6+13	Exp 3m
LH 100-2	Vehicle	Single	6	Homing	L750, X6800	13+14	Exp 1m
		Single	6	Smoke	L750, X6800	-	Exp 3m



VEHICLES

REVIEW

While there are certain archetypical vehicles in the *Albedo* universe, the basic rules do not describe any of them in great detail. The following list of EDF and ILR hardware should be of great use to anyone planning a large-scale or long-term assignment to a particular world.

The Crew number is the required crew for combat operation of the vehicle. This will always be at least 1 (the driver), and any additional number is how many passengers it can carry. For a military vehicle, this is assumed to be fully equipped infantry.

EXAMPLE

Example: The MMA carries 11 people [1 driver + 10 passengers]. The description of the vehicle further states this is 3 medics and 7 stretcher cases.

AV-4 series (EDF)

This is the EDF ground vehicle. It comes in a bewildering number of configurations, and a handful of repair techs with the right tools can build one from a pallet full of parts in a few days. ConFed and independent worlds use the basic chassis for industrial uses or their own armored vehicles. It can use elastomer tracks for light weight and less damage to paved surfaces, or alloy tracks for durability and toughness. The ground pressure can be altered by varying track width, so even heavy variants have good cross-country

capability. Power is provided by a single gas turbine, though the chassis configuration allows for up to two. The basic AV-4 chassis takes 2/3 of a cargo slot, because the hull is only 2 meters tall. Variants with large turrets or better standing room inside will take 5/6 or a full cargo slot, but all variants must be drivable into a 6 x 3 x 3 box. This may have to be done remotely, since a tight fit may preclude opening hatches, but for quick drop and retrieval, roll-on/roll-off capability is a must.

Combat variants begin with the letter A, and non-combat or support variants begin with M. The largest armament is usually a dashed designation at the end, with the bore size in millimeters, and the letters before that indicating the weapon type. There are a number of exceptions and sub-cases, which any vehicle crew or repair tech is expected to know by heart. For instance, a second numerical designation denotes the number of infantry a dual-purpose vehicle carries.

EXAMPLE

Example: An ACPL-8 is an Armored Carrier, Personnel, Light, 8mm MG. An AKW-24-4 is an Armored Kinetic Weapon, 24mm, plus 4 infantry, while an AKW-32M is an Armored Kinetic Weapon, 32mm, plus Missile armament.

Vehicles that mass 12 tons or less are amphibious with no preparation, with a top water speed of about an eighth of their road speed. Heavier variants are amphibious with preparation, non-amphibious ones can cross solid underwater surfaces using battery power alone at depths of up to 10 meters. This does require a special cover be fitted over the turbine intake and exhaust if you plan to restart the vehicle on the other side. Some water leakage and minor electrical malfunctions are to be expected with any amphibious use, and crews are trained in the hazards of dealing with extremely large electrical currents and a sopping wet power-train.

COMMAND REVIEW • ADVANCED REPAIR

EDF vs. ILR Vehicles

As a general comparison, EDF vehicles have better protection, the largest weapons and better off-road capability than ILR vehicles, while ILR vehicles are as fast or faster on-road and require less maintenance. The ILR fields more vehicles with heavy weapons than the EDF does. Most EDF vehicles are impervious to ILR small arms fire from all angles, while most ILR vehicles are vulnerable on at least one facing to standard EDF assault rifles. ILR infantry is trained appropriately, and does not waste fire or expose itself to vehicles it cannot harm. Instead, this task is left to grenadiers or indirect fire, or ILR vehicles are called in to deal with the threat.

AKW-66

Light Tank

Top Speed: 65 kph	
Maneuver: d6 (3)	Deflection: 13
Size: 1	Thresholds: 40/50/60/80
Crew: 3+0	Body: 20
Armament:	□□□□ □□□□ □□□□
24mm autocannon,	□□□□ □□□□
8mm coaxial MG	Damage:
	General ① ② ③ ④ ⑤
	Mobility ① ② ③ ④ ⑤
	Armament ① ② ③ ④ ⑤

This is a light tank, armed with a 66mm smoothbore auto-loading cannon and 8mm coaxial machinegun. The main gun has a selection of kinetic penetrators, high explosive rounds and shaped charges.

AKW-32M

Urban Assault Vehicle

Top Speed: 50 kph (amphibious non-standard)	
Maneuver: d8 (4)	Deflection: 13
Size: 1	Thresholds: 44/54/64/84
Crew: 3+0	Body: 22
Armament:	□□□□ □□□□ □□□□
32mm autocannon,	□□ □□□□
8mm coaxial MG,	Damage:
280 mm assault rockets	General ① ② ③ ④ ⑤
	Mobility ① ② ③ ④ ⑤
	Armament ① ② ③ ④ ⑤

This has a 32mm autocannon turret with coaxial 8mm MG, a remote 8mm MG turret, plus a 2-shot launcher for 280mm unguided assault rockets, plus 12 missiles carried under armor. It requires two turns to reload one missile, but this can be done without any crew having to expose themselves (the launcher tilts vertically and is loaded from the rear).

Use of this vehicle and the variants with even larger main guns are uncommon. They have an undesirable psychological impact on civilian populations. While a personnel carrier looks about the same, it is filled with people, who come out, talk to civilians and have a certain reassuring, if intimidating, presence. Vehicles like the AKW-32M are closed-up monsters that spit fire and belch death. Deployment is based as much on psychological and social profiles of the local civilian population as on operational needs.

Strengths of the design are extreme firepower and protection against ILR small arms. Weaknesses include a limited ammunition supply and a low top speed compared to other ILR vehicles.

AKW-72

Tank Destroyer

Top Speed: 80 kph	
Maneuver: d8 (4)	Deflection: 12
Size: 1	Thresholds: 36/46/56/76
Crew: 3+0	Body: 18
Armament:	□□□□ □□□□ □□□□
72mm cannon,	□□ □□□□
8mm remote MG	Damage:
	General ① ② ③ ④ ⑤
	Mobility ① ② ③ ④ ⑤
	Armament ① ② ③ ④ ⑤

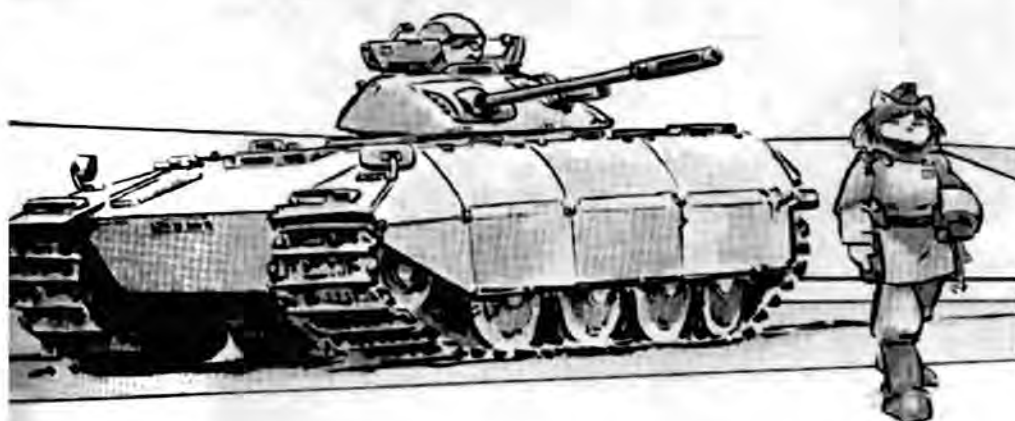
This is a tank destroyer, armed with a 72mm smoothbore auto-loading cannon and 8mm remote machinegun turret. It is less armored than the AKW-66 and relies on speed, concealment and the ability to operate at long range to survive enemy fire. It can fire high explosives, kinetic penetrators and shaped charges, with a majority of the carried rounds being kinetic penetrators. In the event that artillery support is needed, AKW-72s are used in combination with ALP combat resupply vehicles.

ACC

Army Command Center

Top Speed: 100 kph (amphibious)	
Maneuver: d8 (4)	Deflection: 9
Size: 1	Thresholds: 32/42/52/72
Crew: 1+8	Body: 16
Armament:	□□□□ □□□□ □□□□
none	□□□□
	Damage:
	General ① ② ③ ④ ⑤
	Mobility ① ② ③ ④ ⑤
	Armament ① ② ③ ④ ⑤

The AV-4 command vehicle, with 6 work consoles, a tactical display and mid-power comm suite. Often, the modular electronics in an ACC are unhooked and set up in a folding barracks after a planetary situation has stabilized.



AKW-24-4

Heavy Infantry Vehicle

Top Speed: 50 kph (amphibious non-standard)

Maneuver: d8 (4) **Deflection:** 12

Size: 1 **Thresholds:** 36/46/56/76

Crew: 3+4 **Body:** 18

Armament: ☐☐☐☐ ☐☐☐☐☐☐☐☐☐

24mm autocannon, ☐☐ ☐☐☐☐

8mm coaxial MG **Damage:**

General ① ② ③ ④ ⑤

Mobility ① ② ③ ④ ⑤

Armament ① ② ③ ④ ⑤

This is a heavy infantry vehicle. It has a 24mm autocannon and coaxial 8mm MG, and room for one fire team of infantry (4 individuals). This is often an anti-armor or anti-air fire team that works in synergy with the AKW-24-4's crew on a particular facet of an operation.

This is the heaviest armed vehicle in common EDF use, and most planetary deployments will have them.

ACPV-8

Hostile Environment Operations Vehicle

Top Speed: 65 kph (amphibious)

Maneuver: d6 (3) **Deflection:** 11

Size: 1 **Thresholds:** 36/46/56/76

Crew: 1+4 **Body:** 18

Armament: ☐☐☐☐ ☐☐☐☐☐☐☐☐

8mm remote MG ☐☐ ☐☐☐☐

Damage:

General ① ② ③ ④ ⑤

Mobility ① ② ③ ④ ⑤

Armament ① ② ③ ④ ⑤

The least common AV-4 combat variant, this is really just a life-support box on tracks.

In terms of manufacture, it is an ALW with the turbine replaced by fuel cells, a single person airlock taking up part of the left rear, a solar-augmented air recycling system, fold-down bunks, extra supplies for personal spacesuits and the absolute minimum of sanitary amenities. It can provide life support for four infantry and a driver for up to a week, longer if oxygen is diverted from the mobility fuel cells, which have a nominal life of twenty hours at full power. The ACPV-8 is equipped with a variant of the MAKW 3-60 altered for vacuum and extreme temperature use.

APCL-8

Armored Personnel Carrier

Top Speed: 80 kph (amphibious)

Maneuver: d8 (4) **Deflection:** 13

Size: 1 **Thresholds:** 36/46/56/76

Crew: 1+8 **Body:** 18

Armament: ☐☐☐☐ ☐☐☐☐☐☐☐☐

8mm remote ☐☐ ☐☐☐☐

MG turret

Damage:

General ① ② ③ ④ ⑤

Mobility ① ② ③ ④ ⑤

Armament ① ② ③ ④ ⑤

Armored personnel carrier with a capacity of 8 infantry, armed with a remote 8mm single or twin machinegun turret. Access is by a rear swinging or drop-down door, and by eight roof hatches.

This vehicle is commonly modified by troops. If not modification to the actual vehicle, it may be covered with extra water jugs, spare track segments, storage bins, rolled up camo nets and anything else the infantry or driver thinks will be useful.

ALP

Army Cargo: Flatbed

Top Speed: 80 kph w/ full load (see text)	
Maneuver: d8 (4)	Deflection: 9
Size: 1	Thresholds: 28/38/48/68
Crew: 1+2	Body: 14
Armament:	□□□□ □□□□ □□□□
8mm remote MG turret	□□
Damage:	
General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

The AV-4 flatbed truck is a driver's compartment on tracks that can carry a variety of containerized loads. It can be used to resupply other vehicles. The ALP can carry containerized 2/3 cargo slot loads, including small military units like high-power comm suites, foldable barracks, and so on.

Note: The ALP has a top speed of 120kph when unloaded. Standard equipment for the ALP is a folding trailer that can carry up to 2/3 of a cargo slot in lightweight cargo. This slows an ALP down and reduces its maneuverability, but is often used for extra on-road transport capability (the trailer is wheeled).

ALE

Army Engineering Vehicle

Top Speed: 100 kph (amphibious)	
Maneuver: d8 (4)	Deflection: 9
Size: 1	Thresholds: 32/42/52/72
Crew: 1+2	Body: 16
Armament:	□□□□ □□□□ □□□□
8mm remote MG turret	□□□□
Damage:	
General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

A mobile machine shop, it has the tooling to make most repair parts required on a deployment. It is typically accompanied by one or more ALPs loaded with appropriate raw material stocks and common parts, particular for turbine and reactor repairs and electronic module replacement.

ALW

Army Munitions Carrier

Top Speed: 80 kph (amphibious)	
Maneuver: d8 (4)	Deflection: 12
Size: 1	Thresholds: 36/46/56/76
Crew: 1+2	Body: 18
Armament:	□□□□ □□□□ □□□□
8mm remote MG turret	□□ □□□□
Damage:	
General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

This is a dedicated munitions carrier, designed to supply units and vehicles during combat. The ammunition compartment is separated from the crew by an armored bulkhead for crew safety, but ALW drivers are still a jittery bunch.

ARE

Army Towing Vehicle

Top Speed: 120 kph (amphibious)	
Maneuver: d8 (4)	Deflection: 11
Size: 1	Thresholds: 36/46/56/76
Crew: 1+3	Body: 18
Armament:	□□□□ □□□□ □□□□
8mm remote MG turret	□□ □□□□
Damage:	
General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

This AV-4 tow truck has an heavy-duty winch, a bulldozer blade, a small crane, and while unofficial, most crews find room to put on an 8mm remote MG turret. The heavy engines of the ARE are sufficient to make it the fastest AV-4 variant, and it can tow most other AV-4's at a decent speed, especially if it can run a power cable to get some of the damaged vehicle's road wheels going.

AREs are typically festooned with a collection of spare bogie wheels, track segments and sometimes even an entire spare turbine engine.

An ARE can tow any EDF vehicle that still has its tracks at up to 50kph, with a maximum of d4 Maneuver.

MMA / MMSA**Military Ambulance****Top Speed:** 100 kph (amphibious)**Maneuver:** d8 (4)**Deflection:** 11**Size:** 1**Thresholds:** 32/42/52/72**Crew:** 1+10**Body:** 16**Armament:**

none

□□□□ □□□□ □□□□
□□□□**Damage:****General** 1 2 3 4 5**Mobility** 1 2 3 4 5**Armament** 1 2 3 4 5

The main AV-4 ambulance, capable of holding 7 stretcher cases and 3 medics. It and the other medical variants have no armament aside from smoke grenade launchers. Access is through a roof hatch for the driver and a large dropdown door in the rear.

The MMSA is an MMA variant with room for 4 stretchers and 4 medics. It is configured in this fashion if the force it is deployed with has a large fraction of the larger species. The extra room also gives medics more space to work, allowing them to treat some wounds, rather than just stabilizing them.

Both the MMA and MMSA are often in the path of enemy fire, whether directly aimed at them or not. Both vehicles have double the number of obscurement grenade launchers, allowing two uses before reloading is necessary.

MMSTA**Mobile Army Surgical Hospital****Top Speed:** 100 kph (amphibious)**Maneuver:** d8 (4)**Deflection:** 9**Size:** 1**Thresholds:** 32/42/52/72**Crew:** 1+6**Body:** 16**Armament:**

none

□□□□ □□□□ □□□□
□□□□**Damage:****General** 1 2 3 4 5**Mobility** 1 2 3 4 5**Armament** 1 2 3 4 5

This is a small but reasonably appointed mobile field hospital. It has 2 medical treatment tables and room for 4 medics to work (surgeon + assistant), plus ample room for storage of medical consumables. Surgeries

and other emergency procedures can be performed in an MMSTA at no penalty. The surgical suite can also be dismounted and put into a folding barracks if the situation allows. The MMSTA and MMSA have external extended fuel tankage as a standard feature, allowing them an extended run time of a week while parked and providing medical services.

MMSSA**Mobile Army Ward****Top Speed:** 100 kph (amphibious)**Maneuver:** d8 (4)**Deflection:** 9**Size:** 1**Thresholds:** 32/42/52/72**Crew:** 1+4**Body:** 16**Armament:**

none

□□□□ □□□□ □□□□
□□□□**Damage:****General** 1 2 3 4 5**Mobility** 1 2 3 4 5**Armament** 1 2 3 4 5

This is either a small recovery ward or a space for overworked medics to get some quiet shuteye. It has 4 bunks, minimal sanitary amenities and lockers for medical supplies.

The MMSSA can be reconfigured as an urgent care ambulance by the addition of up to 2 med couches, allowing for severely injured patients to be moved while their critical care is maintained.

ILR Vehicles

The ILR relies almost entirely on wheeled vehicles. Like the EDF, they have a standardized set of running gear for all their units.

The standard ILR chassis is the WA-series, which comes in three lengths and a variety of configurations. These configurations are 1/3, 1/2 and 2/3 cargo slots in size, though any given chassis can be bumped up a notch in terms of cargo volume by the addition of a turret or extended height cargo box. The three configurations have 4, 6 and 8 wheels, respectively. All ILR vehicles are wheeled, and their dual top speed and Maneuver ratings are for on-road/off-road conditions. ILR vehicle designations are usually WA (Wheeled Armor), followed by the number of wheels and a single letter designation that denotes the main role of the vehicle, like Scout, Personnel carrier, Tank or Indirect fire.

WA-4S

Light Reconnaissance Vehicle

Top Speed: 180/80 kph (amphibious)

Maneuver: d8 (4) **Deflection:** 8

Size: 1 **Thresholds:** 24/34/44/64

Crew: 2+2 **Body:** 12

Armament: □□□□ □□□□ □□□□

6mm remote MG turret
Damage:
 General ① ② ③ ④ ⑤
 Mobility ① ② ③ ④ ⑤
 Armament ① ② ③ ④ ⑤

A four-wheeled scout car, often the lead vehicle in a convoy or a patrol vehicle in relatively secure urban areas, the WA-4S has a crew of 2 (driver, commander) and can carry two extra infantry if needed. It can also be used as a small ammunition resupply vehicle. It is armed with a one-person turret mounting a belt-fed version of the AW-191 6mm machine gun. This turret may also mount a single hypervelocity dart launcher, with two reloads inside the vehicle. Entry and egress is through a door on the left side that has a vision and firing port, or a rear door that is similarly equipped. The right side has no vision or firing ports, which makes it a minor blind spot, though of course the turret gunner's vision blocks see into that arc, and the driver can see to the right front.

The lightweight WA-4S is extremely fast and nimble, and drivers with any combat experience are usually skilled and cool under pressure.

WA-8P

Infantry Support Vehicle

Top Speed: 80 kph; 35 off-road (amphibious)

Maneuver: d8/d6 (4/3) **Deflection:** 12

Size: 1 **Thresholds:** 40/50/60/80

Crew: 2+8 **Body:** 20

Armament: □□□□ □□□□ □□□□

11mm MG turret □□□□ □□□□

Damage:
 General ① ② ③ ④ ⑤
 Mobility ① ② ③ ④ ⑤
 Armament ① ② ③ ④ ⑤

A common armored personnel carrier and infantry support vehicle. It is an 8-wheeled configuration, and mounts a one-person

turret, with either a twin 6mm machine gun, or more commonly a single 11mm heavy machine gun, with or without a hypervelocity dart launcher alongside. The WA-8P carries 8 infantry in addition to the driver and commander, and has two secure lockers for personal shelters, food and ammunition for extended operations. There are two vision and firing ports on each side and the rear. Strengths of the WA-8P include a high road speed and good infantry protection and firepower. Weaknesses include marginal off-road capability and the requirement that the commander also operate the main weapon rather than assessing the situation and directing troops. Operational doctrine places the vehicle commander in charge of the vehicle, and the squad leader in charge of troop deployment, but the two commanders do not always work together as well as they should. Entry and egress is through a left side door or dropdown rear door, with an additional hatch in the turret.

Note: A variant model, the WA-6P, has two demolition rockets and a 6mm machine-gun, but it only has room for 6 infantry.

WA-6T

Heavy Armored Vehicle

Top Speed: 65 kph/30 kph

Maneuver: d8/d4 (4/2) **Deflection:** 13

Size: 1 **Thresholds:** 40/50/60/80

Crew: 3+0* **Body:** 20

Armament: □□□□ □□□□ □□□□

60mm auto-loading □□□□ □□□□

cannon, 11mm heavy MG
Damage:
 General ① ② ③ ④ ⑤
 Mobility ① ② ③ ④ ⑤
 Armament ① ② ③ ④ ⑤

This is the heaviest armed and armored WA-series vehicle, in a six-wheel configuration. It has a two person turret armed with a 60mm smoothbore autoloader and 11mm heavy machinegun. It has a crew of three (driver, commander, gunner), and carries no infantry. Access is through two roof hatches (driver and one large turret hatch), and a left-side door that has a vision block and firing port.

Strengths include the best armor and weapon of any ILR vehicle and the ability to

fire HE or KE projectiles from the main gun. Weaknesses are a heavy ground pressure, which limits off-road performance, and a limited supply of ammunition for both weapon systems.

The WA-6T is the most likely ILR vehicle to cause headaches (and casualties) among EDF troops because of its relative invulnerability to small arms from all angles, combined with its ability to easily perforate all AV-4 variants and cripple any aerodyne with a single hit. WA-6Ts without a place to hide draw unfriendly attention. To improve their chances of survival, WA-6Ts have an integrated fire control system that can link identical weapons on different ILR vehicles via a short range radio or fiber-optic link. This can provide a die type bonus as mentioned elsewhere, allowing one designated gunner on any linked vehicle to simultaneously fire several weapons on different vehicles.

Example: The WA-6T and WA-8T have the same weapons, while the WA-8P does not have a heavy weapon, but does have the same 11mm MG as the other two. When linked through the WA-6T fire control system, the WA-6T can track both 60mm cannons on one target, and the WA-8T gunner can track all three 11mm machineguns on another. If the WA-6T is taken out, all the weapons automatically revert back to local control, and of course, the gunner in each vehicle can override the slaved weapon for emergency self-defense.

Some ILR units may have WA-6T variants equipped with a 20mm autocannon and coaxial 6mm light machinegun. The turrets are interchangeable, but readily distinguishable from each other.

WA-8X

Staging Vehicle

Top Speed: 100 kph/ 40 kph (amphibious)

Maneuver: d8/d6 **Deflection:** 12

(4/3)

Size: 1 **Thresholds:** 36/46/56/76

Crew: 1+4 **Body:** 18

Armament: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

6mm twin MG ☐ ☐ ☐ ☐ ☐ ☐

turret

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

This eight-wheeled variant is used exclusively by political detachments. It is equipped with a remote 6mm double machinegun turret, a powerful radio system, secure computer consoles and fold out bunks. The storage lockers may have a variety of esoteric equipment appropriate to this particular mission. While armored, it is not meant as either an infantry carrier or combat vehicle. Rather, it is a secure place to work, sleep and keep confidential data.

WA-8T

Support Vehicle

Top Speed: 80 kph/ 35 kph (amphibious)

Maneuver: d8/d6 **Deflection:** 9

(4/3)

Size: 1 **Thresholds:** 40/50/60/80

Crew: 3+8 **Body:** 20

Armament: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

60mm auto-loading ☐ ☐ ☐ ☐ ☐ ☐

cannon, 11mm

heavy MG

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

A combination tank destroyer and personnel carrier. It has the same heavy cannon and 11mm machinegun turret as the WA-6T, but is much less armored and can carry eight ILR infantry. Access is through a driver's hatch, turret hatch, left side door and rear dropdown door. There are a total of six vision blocks and firing ports, two on the left side, two on the right side and two in the rear.

The WA-8T does not do anything particularly well, but it *does* do multiple things, which means it is a "cost effective" solution as far as

COMMAND REVIEW • ΑΡΧΗΤΑΝΣ ΝΕΚΡΕΥ

Maneuver Downgrades

Remember that a vehicle's Maneuver is downgraded by its Size. The only reason it is not listed with this already taken into account is so all size modifiers in combat are uniformly applied.

ILR planners are concerned. *Whatever the mission requires, throw WA-8T's at it.*

ILR infantry in general do not mind having a ride, but they are more than eager to get out of a WA-8T when heavy weapons fire starts, because they know that the vehicle is the target, and it isn't likely to survive that kind of attention.

WA-6P

Light Support Vehicle

Top Speed: 80 kph/ 35 kph (semi-amphibious)

Maneuver: d8/d6 **Deflection:** 11
(4/3)

Size: 1 **Thresholds:** 40/50/60/80

Crew: 2+6 **Body:** 20

Armament: □□□□ □□□□ □□□□
11mm heavy MG □□□□ □□□□

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

A shortened version of the WA-8P used exclusively by ILR special forces. It has a one-person 11mm machinegun turret and dual HVDD launcher, an improved communications suite, and it carries tethered surveillance drones much like the WA-8I. In addition to the side and rear door, it also has six roof hatches, which swing up to provide 50% cover to anyone behind them.

WA-8I

Urban Support Vehicle

Top Speed: 100 kph/ 40 kph (amphibious)

Maneuver: d8/d6 **Deflection:** 9
(4/3)

Size: 1 **Thresholds:** 36/46/56/76

Crew: 4+0 **Body:** 18

Armament: □□□□ □□□□ □□□□
100mm auto- □□ □□□□
loading mortar,

Damage:
6mm remote MG **General** 1 2 3 4 5
turret **Mobility** 1 2 3 4 5
Armament 1 2 3 4 5

An eight-wheeled heavy fire support variant, the WA-8I is a 100mm mortar carrier with an extended ammunition capability. Using a magazine fed mortar, it can fire an entire barrage in a single turn, or fire several shots per minute (one every other turn) at a sus-

tained rate without overheating. The WA-8I has a crew of four (driver, commander, observer/comm, gunner), and carries enough ammunition for extended use. This vehicle carries integral recon capability in the form of a tethered electric RPV that can hover quietly up to 100 meters above the vehicle, providing 360° visual and thermal coverage of the immediate area via fiber-optic strands in the tether. Two spare RPVs are carried. These RPVs are *supposed* to be reeled in and recovered because of their cost, and this takes about half a minute for one at maximum altitude. This doesn't always happen, especially if someone is using counter-battery fire on the vehicle and it needs to get under cover in a hurry.

Strengths of the WA-8I include "shoot & scoot" capability to avoid counter-battery fire, especially if it has sufficient target information to fire in burst mode and get back under cover. If the turbine is running, it can close all hatches, lift the hydraulic base-plate and jacks, and get underway two turns after firing.

Weaknesses include a relatively small amount of armor protection, which can be catastrophic when combined with a load of high explosive mortar rounds. Similarly, the entire mortar compartment must be open when the weapon is in use, giving the gunner and main weapon no protection from overhead attacks. For this reason, WA-8I's are seldom if ever deployed near the front lines and almost always have a mobile infantry escort.

WA-8C

Urban Support Vehicle

Top Speed: 100 kph/ 40 kph (amphibious)

Maneuver: d8/d6 **Deflection:** 11
(4/3)

Size: 1 **Thresholds:** 36/46/56/76

Crew: 1+6 **Body:** 18

Armament: □□□□ □□□□ □□□□
6mm remote MG □□ □□□□
turret

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

This is a standard ILR command vehicle, that performs much the same function as its EDF equivalent. ILR light and heavy infantry will not have this vehicle in their headquar-

ters squad, but will have portable computers and backpack mounted equipment that does the same thing, though with a little less sophistication.

Additional ILR Vehicles

The ILR also has a number of specialized non-combat WA-series vehicles, such as command, recovery, medical, kitchen and so on, similar to what the EDF has in the AV-4 series of vehicles. However, the ILR tends to co-opt civilian facilities for many of its needs, so other than command vehicles, the other types are far less common than their EDF equivalents.

Civilian Vehicles

There are both armored and unarmored civilian vehicles. Since EDF units are often operating in a mixed civilian/battlefield environment, some of these vehicles are worth noting. With the exception of the IKW-112, none of these vehicles have off-road capability.

Armored Truck

Improvised Civilian Vehicle

Top Speed: 100 kph

Maneuver: d8 (4) **Deflection:** 8

Size: 1 **Thresholds:** 32/42/52/72

Crew: 1+16 **Body:** 16

Armament: □□□□ □□□□ □□□□
none □□□□

Damage:

General ① ② ③ ④ ⑤

Mobility ① ② ③ ④ ⑤

Armament ① ② ③ ④ ⑤

When possible, ILR forces co-opt local resources. While they may have sufficient light AFVs for their mission, they never have enough armored transport to get infantry from place to place. Their solution is a fairly simple up-armoring of civilian transport. These vehicles are not meant to engage enemy vehicles, or operate in an environment with enemy aerodynes, but to protect troops from ambush by surviving Homeguard units or even disgruntled citizens. Typically, a flatbed delivery truck is used. The engine compartment and driver's station are protected, and a rectangular box of monomolecular plate is

glued onto the cargo bed. This box has vision and firing ports, a drop door/ramp, and a climate control unit removed from a food delivery vehicle. The addition of seating benches fills out the interior. The normal model can carry up to 2 squads of fully equipped ILR infantry. You can increase the overall Deflection for the passengers and crew to 9 if you choose to have an open-topped vehicle.

These trucks are also used for the transport of prisoners (up to 12, plus a few guards). As a field-expedient design, variants are common. Similar vehicles may also be constructed by anti-ILR resistance movements to provide some protection during urban operations, though this is often for a single use as the vehicle is difficult to conceal during the inevitable follow-up searches and reprisals.

A better-looking and more ergonomically appointed vehicle with the same stats is often used as a light armored personnel carrier by many Homeguard units.

IKW-112

Reinforced-Chassis Civilian Vehicle

Top Speed: 65 kph

Maneuver: d6 (3) **Deflection:** 13

Size: 2 **Thresholds:** 48/58/68/78

Crew: 4+0 **Body:** 24

Armament: □□□□ □□□□ □□□□
112mm auto- □□□□ □□□□ □□□□

loading cannon, **Damage:**

8mm remote MG **General** ① ② ③ ④ ⑤

turret **Mobility** ① ② ③ ④ ⑤

Armament ① ② ③ ④ ⑤

The IKW-112 is an impractical vehicle that nonetheless exists in small numbers on several independent worlds. It is built on standard AV-4 running gear, upgraded for the heavier load it carries, and structurally reinforced to handle the recoil of a massive 112mm smoothbore, auto-loading, liquid propellant cannon.

The IKW-112 is actually two separate AV-4 chassis. The front chassis contains the main weapon, ammunition, auxiliary batteries and a remote 8mm machinegun turret, while the rear chassis contains the main power plants, crew compartment and a

second remote MG turret. The crew is composed of a commander, driver, gunner and observer, with the observer also handling one of the remote MG turrets. The two units are connected by power, data and electro-mechanical couplings. IKW-112 munitions are exclusively dual purpose HE/HEAP rounds.

The design has some advantages. The articulated design allows the vehicle to move in more cramped quarters than a single large vehicle. It also enhances crew survivability, since the IKW-112 can, to some extent, fire around corners. It only has to expose the front chassis, and even if that chassis is completely destroyed, the crew in the rear chassis is likely to be untouched.

The main operational disadvantage of the IKW-112 is the remotely operated cannon. As with all remotely operated systems, any concealment a target has is increased by 25%, giving the vehicle a built-in targeting disadvantage. Another disadvantage of the IKW-112 is its size. While it is technically only two cargo equivalents in size, it would take major disassembly to ship by aerodyne. The main gun would have to be dismounted due to its barrel length. The wide tracks necessary for acceptably low ground pressure would have to be completely removed, as would the bogies. The complete separation of the crew from the main weapon compartment means that in the event of malfunction, the vehicle must withdraw from combat, as the crew will have to exit the vehicle to clear the problem. The last disadvantage of the IKW-112 is the inexperience of its crews. Existing IKW-112s are either leftovers built during the last days of the first war, or new ones built recently because of war jitters. In neither case are there experienced crews for this particular vehicle. Combined with their small numbers, they are not a major concern for ILR planners. The examples encountered by the ILR on independent worlds have been neutralized, sometimes from orbit, and EDF forces have yet to encounter one in enemy hands.



Ground Car

Civilian Residential Transport

Top Speed: 250 kph

Maneuver: d10 (5) **Deflection:** 3

Size: 1 **Thresholds:** 16/26/36/56

Crew: 1+3 **Body:** 8

Armament: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

none

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

A typical passenger vehicle, capable of carrying up to four medium-sized people in comfort. Many civilian vehicles are powered by fuel cells instead of turbines because they are quieter, cheaper and require less maintenance. Most ground cars are capable of autopilot use on high-speed urban and intercity roadways.

Commercial Truck

Civilian Cargo Transport

Top Speed: 150 kph

Maneuver: d8 (4) **Deflection:** 3

Size: 1 **Thresholds:** 20/30/40/60

Crew: 1+1 **Body:** 10

Armament: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

none

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

A light cargo vehicle, either with an open bed or a thin shell for weather protection. Especially in urban areas, these are also likely to be powered by fuel cells instead of turbines. The cab has room for two large or three regular-sized people, and the bed has 1/2 of a standard volume in cargo space, the exact dimensions depending on the role of the truck. The maximum cargo capacity is about 4 tons.



Air Car

Civilian Long-Range Transport

Top Speed: 320 kph

Maneuver: d10 (5) **Deflection:** 3

Size: 1 **Thresholds:** 20/30/40/60

Crew: 1+4 **Body:** 10

Armament: ☐☐☐☐☐☐☐☐☐☐

none

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

This is a turbine-powered personal air vehicle, capable of transporting 5 civilians and some luggage. Rotorcraft are cheaper, so these are as much a status symbol as anything else.

Armored Limousine

Civilian Dignitary Transport

Top Speed: 150 kph

Maneuver: d8 (4) **Deflection:** 9

Size: 1 **Thresholds:** 28/38/48/68

Crew: 1+6 **Body:** 14

Armament: ☐☐☐☐☐☐☐☐☐☐☐☐

none

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

With insurgent and terrorist activity increasing, some high civilian officials have taken to traveling in unarmored civilian vehicles as a precaution. This is a typical armored limo, which has a loaded weight of about 6 tons.

Helicopter

Civilian Air Transport

Top Speed: 400 kph

Maneuver: **Deflection:** 3

2d12 (7)

Size: 1 **Thresholds:** 12/22/32/52

Crew: 1+5 **Body:** 6

Armament: ☐☐☐☐☐☐

none

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

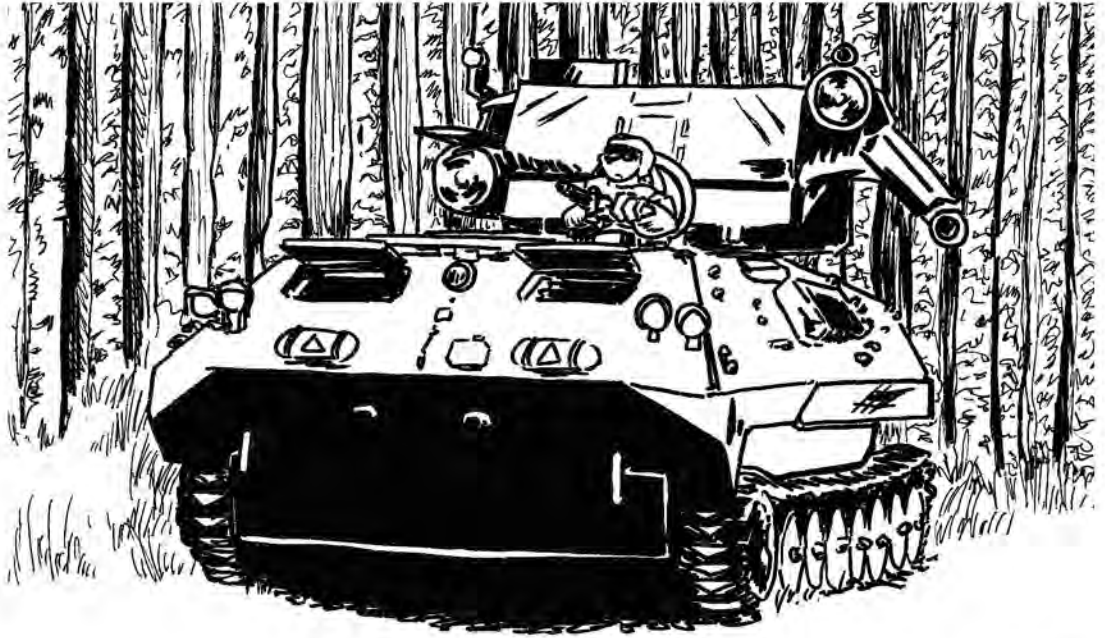
Armament 1 2 3 4 5

This would be a typical police or small business helicopter. It is unarmed and unarmored, but it is structurally sound enough to mount light machineguns (up to the AW-193 or LAKW 1-62). It is very fast and maneuverable for a non-fusion powered vehicle, but is also very fragile and easily brought down if it can be hit.

Decoys

Neither the EDF or ILR tends to use decoy vehicles, though their use is not unheard of. Normally, software interpretation of satellite recon data is sufficient to distinguish even a good decoy from the real thing. However, in conditions of lingering marginal visibility, visual, thermal and radar signatures may be confused enough that a decoy vehicle or formation can fool sensors, and thus draw enemy attention or fire, either diverting fire from real and better concealed vehicles, or revealing enemy weapon concentrations.

A decoy generally takes up 1 passenger slot for impersonating most ground vehicles. It is an inflatable construct with a battery pack and small computer that mimics the shape, coloration and heat signature of a



parked vehicle, irregularly running its 'engine', emitting barely detectable EM signals and so on. The battery is good for about a week of use, after which the decoy is disposed of. While inflatable decoys can technically be re-used, they are far cheaper and easier to simply replace.

Anyone doing recon of an area will spot a decoy vehicle with the same roll they would use to spot a real vehicle. At all but close visual range it will appear to be the real thing, especially if it has partial concealment.

It is only a Routine task for Information Analysis, Spot or Vehicle Operation to notice the flaws or inconsistencies that mark a decoy, adjusted by any concealment or obscurity the decoy has. This leads to a balancing act. They decoy must be visible enough to be spotted, yet concealed well enough to avoid the deception being uncovered. Few are able to judge the observation skills of their foe well enough to pull this off on a reliable basis. Consequently, decoys are only issued upon specific request, and only granted if the skills of the team are deemed sufficient to be worth the investment of time.

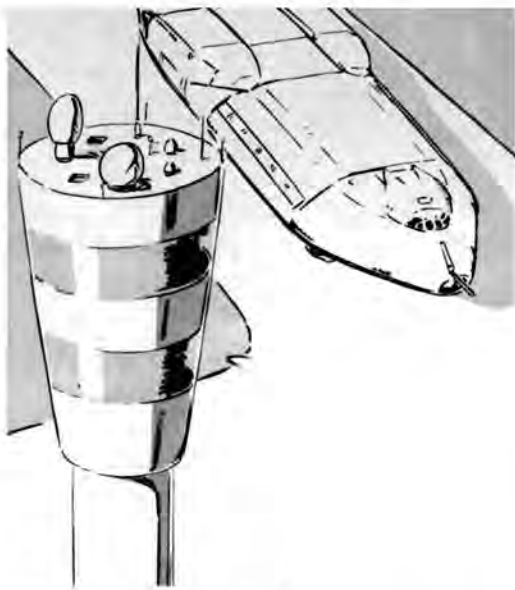
ILR strategic planners make reasonable and fairly accurate assumptions about the quality of EDF orbital assets, and will use decoys during the opening stages of an EDF insertion. Typically, they are just a statistical dodge. A group of two mortar carriers with

ready concealment may deploy two decoys. If they dodge under cover when they detect enemy aerodynes or counter-battery fire, EDF forces may blow up the decoys and not realize the ILR forces are still there. Or, the decoys could be placed in a just barely obvious fashion. EDF planners notice the deception and ignore the decoys, not realizing the real vehicles are lurking nearby for a potential ambush. If nothing else, the ILR decoys are a cost-effective means of making the EDF waste time, intelligence assets and munitions.

One very cheap and easy decoy used by artillery and special forces units is the drone decoy. This is a simple helium balloon that has the same visual and reflective signature of a well-camouflaged tether drone. The balloon is released on a hair-thin strand of plastic fiber and left to float in place. Any EDF that spots it will have difficulty distinguishing it from the real thing until they spend a few minutes observing it, and so have no way to know if they are in imminent danger of being hammered by artillery. And even knowing that the drone is a simple balloon does you no good if there is an actual forward observer marking your location while you were busy staring at the sky.

Another annoying ILR tactic is to put radio-frequency and synthetic emission transponders on civilian vehicles in occupied areas, typically on public transport and fire or

rescue vehicles. These mimic the electronic emissions of WA-series vehicles. From a remote sensing viewpoint, it masks the true number and location of vehicles that might otherwise be detectable, and it prevents the EDF from using homing munitions or mines designed to look for these electronic signatures. Drivers who remove these transponders are subject to beatings or execution.



Aerodynes

Both EDF and ILR make use of aerodynes. The ILR uses them mainly as landing craft, once orbital weapons (or the threat of them) have pacified an area, while the EDF also uses them as fighters, hot-landing troop deployers and air superiority gunships. For the most part, you can use EDF cargo aerodyne stats for ILR use. It is seldom that the ILR will risk these expensive assets in operations where they know they will be lost. Rather, if they do anything at all, they will co-opt civilian rotorcraft (like police helicopters), door-mount a belt-fed light machinegun, and then put an ILR pilot behind the stick, a couple civilian "observers" in the passenger slots, and dare the EDF to shoot it down.

Designations

The naming conventions for EDF aerodynes are under revision. They originally used the same names as the civilian craft they were based off of, names that had

only the vaguest bearing on the size and capability of the aerodyne. There is some movement towards an information-content designation for EDF aerodynes. The current specification (tentative) gives a letter designation for the width of the cargo bay, and a number for the length of the cargo bay, with a third number (if any) for the height. Single digit notations are assumed to be one cargo depth high (3 meters). A letter after the designation denotes any special role for that particular aerodyne, like "C" for cargo or "G" for gunship, with a second letter "A" for atmosphere-limited and "E" for exo-atmospheric capability. If there is no letter suffix, the aerodyne is assumed to be cargo and atmosphere-limited.

Cargo width	Designation
.5 unit	A
1 units	B
2 units	C
3 units	D
4 units	E

EXAMPLE

Example: Under the proposed notation scheme, the Aero C6 (the smallest cargo aerodyne in service) would become an A-1. A D-32, with a cargo bay 4 cargo units long and 3 wide, would become an E-3, and a D-12 with a bay 2 units wide and 1 long would become a C-1. The D-12 as an exoatmospheric gunship would be a C-1GE.

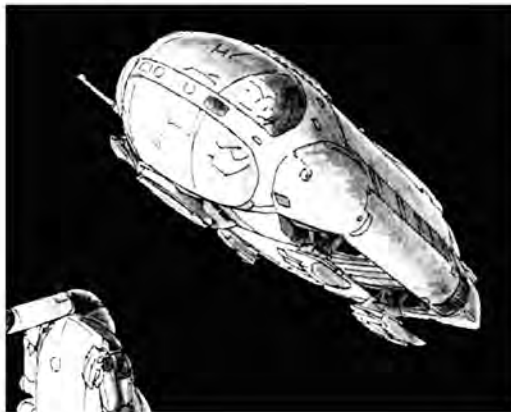
B-2 Pinnacle

Chemical-Thrust Exo-atmosphere Craft

Top Speed: n/a	
Maneuver: d12 (6)	Deflection: 3
Size: 1	Thresholds: 20/30/40/60
Crew: 1+4	Body: 10
Armament:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
none	Damage:
	General 1 2 3 4 5
	Mobility 1 2 3 4 5
	Armament 1 2 3 4 5

This is a very small chemical-thruster vehicle designed solely for exoatmospheric use. It's a space taxi that is small enough to be deployed from larger aerodynes and has an airlock and tiny (1 person cargo slot) hold. It is typically used for inter-ship personnel transfers of a few people, or to approach

suspicious situations where you do not want to risk an aerodyne. It has no armament and only minimal radio and sensor capability, relying on the much better capabilities of nearby ships or aerodynes.



Aero C-6

Small Aerodyne

Top Speed: 900 kph

Maneuver: 2d12 (7) **Deflection:** 8

Size: 2 **Thresholds:** 32/42/52/72

Crew: 1+6 **Body:** 16

Armament: 8mm remote MG or grenade launcher

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

This is the smallest cargo aerodyne in use with the EDF, and is identical to the civilian model except for the addition of a remote 8mm machinegun or stabilized targeting/target painting video system to provide targeting information for indirect fire units.

An Aero C-6 can carry 6 infantry or 1/2 a standard cargo volume, provided it is

taller than it is wide (1.5m wide by 3m tall by 6m long) and weighs no more than 2,000 kilograms. A full squad *can* be crammed in for short periods, but cannot deploy into combat with any speed (2 people per turn). The Aero C-6 is rated for atmospheric use only, though there are aerodynes this size with orbital capability for use by Rapid Response Squads. These C-6s have been stripped down to a Deflection of 7 and can only carry a maximum payload of 1,000 kilograms, but are otherwise the same as a C-6. Some commanders have bolted a tripod-mounted HAKW to the cargo floor and use C-6s as mini-gunships, with varying degrees of success.

D-9 Gunship

Medium Aerodyne

Top Speed: 900 kph

Maneuver: 2d12 (7) **Deflection:** 5 (7)

Size: 2 **Thresholds:** 48/58/68/88

Crew: 4 **Body:** 24

Armament: VAKW x 2, HAKW x 8

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

These have a fearsome and largely well-deserved reputation. Not because they are hard to shoot down. They are only slightly tougher than any other aerodyne that size. A few hits by a medium to large anti-vehicle weapon can put a serious hurt on a D-9. It's just that while you are getting those few hits, the D-9 is putting a few *hundred* hits on you. That, and the fact that an aerodyne this size is



largely immune to small arms fire does nothing to help ILR morale.

The normal situation is that ILR troops use standard doctrine when defending against D-9s. At the moment, in game terms this is as much Aimed fire by heavy weapons as possible, preferably exhorting these troops to Push their rolls. This is combined with Danger Space fire by regular infantry if the aerodyne is unlucky enough to be in carbine range. If the ILR gets lucky, they can damage or even bring one down. If they don't bring it down with the opening volley, they get plastered, and then if possible, surrender or escape (in game terms, they will be in a Panicked state).

For regular infantry dealing with aerodynes outside of rifle range, their orders are generally to get behind something *very* solid that provides 100% cover and wait it out, so their morale is not totally shattered by the time the EDF infantry comes in to mop up.

The normal D-9 crew is one pilot, one observer/fire director, and two gunners, one for the HAKWs and one for the VAKWs.

Due to the fact that D-9s mount ten very rapid fire guns and are almost always in the path of enemy fire, they require inordinate amounts of maintenance to keep in fighting trim. It is not uncommon for one or more guns to be offline, or for only three of a squadron of four to be operational, the most damaged one being used to replace depleted supplies of spares. While this is no consolation to that D-9s crew, EDF infantry are still overjoyed if they have an entire (if under strength) squadron of D-9s around. Most are happy if they get the occasional assistance of a single D-9.

As a side effect of D-9s being down for maintenance, there is one unofficial variant. This removes two HAKWs and replaces them with two extra gunner stations, giving each HAKW gunner two weapons (four gunners, eight weapons). This gives the D-9 the ability to run four separate fire missions, and makes the best use of D-9 gunners grounded by a lack of flyable D-9s.



D-12 Lander

Large Aerodyne

Top Speed: 900 kph

Maneuver: Deflection: 5 (7)
2d12 (7)

Size: 2 **Thresholds:** 48/58/68/88

Crew: 3+20 **Body:** 24

Armament: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
HAKW x 1 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Damage:

General 1 2 3 4 5

Mobility 1 2 3 4 5

Armament 1 2 3 4 5

This is the largest aerodyne deployed into combat zones. It can drop 4 squads, 2 vehicles or any combination of the two (2 standard cargo units). It has two separate loading platforms that drop from the belly, each of which has a 16 ton weight limit. A D-12 can reach orbit carrying a 16 ton load, and drop safely from orbit carrying double that. The listed top speed and maneuverability assumes a 16 ton load, which would be something like a loaded APCL-8 and two heavy infantry squads.

D-12s can be unarmed, but typically have a ventral remote heavy MG turret. D-12s go into hot zones and take a lot of hits, but standard doctrine is not to put them directly in harm's way. Troops are landed near the action, but not in the thick of it. Though large, a D-12 coming in for a landing is vulnerable to ground fire, and everyone on board with it.



D-32 Lifter

Large Aerodyne

Top Speed: 900 kph

Maneuver:	Deflection: 8
2d12 (7)	
Size: 3	Thresholds: 56/66/76/96
Crew: 3+72	Body: 28
Armament:	□□□□ □□□□ □□□□
HAKW x 1	□□□□ □□□□ □□□□
	□□□□

Damage:

General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

This is the largest aerodyne deployed by the EDF, but is by no means the largest aerodyne cargo lander. D-32s are heavy lifters, capable of moving a full company (including armored vehicles) to and from orbit. The only time one of these is actually shot at is shortly before some luckless EDF officer is court-martialed for incompetence in planning or executing the operation involving them.

A D-32 can carry 12 standard cargo equivalents that mass no more than a total of 160 tons. An example might be an infantry company, its command vehicles and either extended operating supplies or a few APCL-8s. It can get this mass to *and* from orbit. A D-32 can be overloaded for landing runs, but they are unwieldy enough at regular capacity and pilots do *not* like to wallow around in overloaded ones. Unladen, a D-32 is easily supersonic.

D-32s are virtually unarmed, but pack enough electronic countermeasures to thwart everything but line of sight attacks, and their heavily redundant systems can absorb quite a bit of punishment.

The D-32 configuration is a common civilian design, and ILR forces use it as well.

E-29 Liner

Large Aerodyne

Top Speed: > Mach 1

Maneuver:	Deflection: 7
2d12 (7)	
Size: 3	Thresholds: 60/70/80/100
Crew: 3+50	Body: 30
Armament:	□□□□ □□□□ □□□□
none	□□□□ □□□□ □□□□
	□□ □□□□

Damage:

General	1 2 3 4 5
Mobility	1 2 3 4 5
Armament	1 2 3 4 5

The E-29 series is a standard civilian passenger vessel for either high-speed suborbital hops or ground to orbit flights. It can be configured for cargo, but is mainly used as a commercial passenger shuttle, carrying 50 passengers, their luggage and a small amount of cargo. It has no armament or military electronics.

EDF Theater Assets

There are plenty of units and equipment that characters will not deal with on a daily basis, but which are still vitally important to their mission and whose organization is going to be important in many ways.

The organizational structure that follows is for regular Battalions. These are not used for garrison work or Homeguard training and are rarely used for counter-insurgency. They are too large to be carried by anything other than a VLCC or a task force. The battalion structure is a fairly large pond for characters to swim in and a bit impersonal. However, these are the levels of structure employed when large planetary battles are fought, the heavy stuff of the War.

The EDF also uses many smaller organizational structures, especially Independent Company Commands (ICCs), Training Commands, and Ship Detachments, and the EDF

often sends very small units or even individual officers out on missions of varying importance. These will not be used in what EDF high command consider "major combat", though it may feel very "major" to the characters involved.

When a Game Host is creating a campaign concept, he or she might very well want to stick to small scale operations. If this is the choice, then the units will be much smaller and the organization structure likely will be somewhat different. However, the squad structure of the EDF is universal, so if there are squads, they will look like those presented. Other force details of small independent units can be altered to suit the campaign. The EDF is very adaptable with its force structure when it has to be.

An EDF or ILR battalion is normally 8 companies and a headquarters, and a company is normally 16 squads (4 platoons). A battalion is the smallest element at which firepower, maneuver, intelligence, and support are combined under a single commander. Battalions are meant to be tactically self-sufficient and a designed around a particular tactical mission, like artillery, anti-armor, heavy infantry and so on. Battalions are normally commanded by a Major (O11+), who has a command squad as his supporting characters.

- . **Battalion (O11):** 8 Companies
- . **Company (O9):** 4 Platoons (16 Squads)
- . **Platoon (O8):** 4 Squads (32 infantry or 8 combat vehicles or 8 non-combat vehicles)
- . **Squad (O7):** 8 people or 1-2 combat vehicles + crew or 2 non-combat vehicles + crew

Battalions normally fight enemy forces they can see and engage. This defines an area of operations extending from less than 100 meters out to about 5 to 6 kilometers from a battalion's direct and indirect fire units. On offense, a battalion task force is expected to defeat a defending enemy company (4:1 odds against a dug-in defender). On defense, a battalion task force is expected to defend against and defeat an enemy regiment (dug-in against at least 2:1 odds). Battalions generally have no deep penetration capability except for perhaps Recon units, but may be charged with the

execution of the fight following up an enemy retreat and securing a position. A battalion normally designates a company-size reserve as a counterattack force.

Battalions are normally 8 companies, but do not always operate at full strength, and may also have companies added for special roles, like recon, extra EW assets, specialized air defense and so on. Keep this in mind when looking at battalion descriptions. A battalion a character is in might be stretched thin, or a company might be pulled from several battalions to create a new battalion for a specific task, leaving everyone else slightly under-strength. What any given unit looks like on paper is often a far cry from what it looks like by the time it hits the ground.

A company is normally 4 platoons and a headquarters, commanded by Lieutenant Commanders (O9+). Companies have very limited self-support capability and normally fight as a single unit. While individual platoons and squads may not be in contact with each other, they are all generally working on the same tactical objective.

While each company is generally designed around a specialty, within a company (16 squads) there will be specialized assets, the exact composition of which may be determined by the nature of the deployment. For instance, there may be plenty of engineer vehicles on planet, just not nearby to you. The composition of any 8-person squad assumes the unit commander (an O7+) is taking one of the roles listed, otherwise subtract 1 regular infantry from the listings.

There are usually enough EDF companies in any given deployment for each one to have a specialty, such as indirect fire, anti-armor or anti-aerodyne capability. These companies may be deployed as squads or platoons, but are usually within mutual support or response distance of each other if possible.

Companies are normally divided into platoons (4 squads), and platoons are normally kept together rather than having individual squads reassigned. From a character standpoint, it means that until such time as they get promoted to a company command, odds are they will be dealing with the same crew of platoon and squad officers and supporting

characters throughout their career (barring casualties, of course).

EDF forces typically have air superiority, and company-level groups may have anti-armor assets, EW specialists, or med/psych specialists. These assets are typically attached to the lieutenant commander in charge of the company, to deploy as the situation warrants.

In terms of Branch assignments when designing main and supporting characters, different specialties look like this:

Aerospace Operations

- *Aerodyne vehicle operations:* Aerodynes flying from ground bases as infantry support are typically considered "surface operations" for the duration of the assignment.
- *Engineering:* For most aerospace operations, this is mostly maintenance and repair personnel.
- *Freefall Infantry:* Technically aerospace operations because of where they are deployed from, they are "loaned" in the operational structure to surface operations.

Surface Operations

- *Light Infantry*
- *Heavy Infantry:* The only real difference between these two branches is that Light Infantry are trained for accuracy, and Heavy Infantry are trained to suppress. LI are better for guerilla warfare; HI are better for holding and securing areas. Otherwise, either type is interchangeable.
- *Mechanized:* This includes all crews and drivers of combat vehicles, but not any infantry attached to that vehicle (like a mobile infantry unit).
- *Mobile Surgical Hospital:* This includes all dedicated medical personnel, including medics attached to aerodyne units, but not normal infantry who happen to also have some medical training.
- *Engineering:* Engineering includes both maintenance and engineer units, and usually includes any integral infantry associated with those units.
- *Command:* This covers most of the specialized personnel needed for

headquarters units, like communication techs, aides, EW experts and analysts.

- *Rapid Response:* Specialists in handling high speed aerodyne maneuvers and still being able to walk straight afterwards, these troops are used as leading edge assault and recon units, deploying from small, lightly armored aerodynes.

Administrative Operations

- *Industry and Procurement:* These guys make sure that the VLCC manufacturing centers make what the local troops need.
- *Liaison:* Liaisons are usually associated with Command, but are technically Admin personnel.
- *Quartermaster:* This includes drivers of non-combat vehicles, cooks, ombudsmen, supply clerks and so on. This includes all the mid-level managers who make sure everyone is supplied and everything get to the people it is supposed to get to.
- *Special Services:* In addition to investigators, this branch also include advocates for the anyone accused under EDF law or EDF personnel accused of crimes under local law.

The TOE (Table of Organization and Equipment) for EDF battalions looks something like this:

Reaction Battalion (EDF)

- 1 Infantry HQ Company
- 2 Light Infantry Companies
- 2 Heavy Infantry Companies
- 1 Mobile Anti-armor Company
- 1 Mechanized Infantry Company
- 1 Air Recon Company (RR)

This was the standard EDF battalion prior to Derzon and a Reaction Force based on a VLCC would consist of 4 Battalions of this type plus administrative elements. This represents a generalized, multipurpose, flexible force that can handle almost any problem. It is normally supported by Aerospace aerodyne assets drawn from the ship(s) that bring it to its deployment. It also has some inherent aerodyne transport.

Experience has shown that is model is very good for countering small ILR opera-

tions and handling security and for making raids and probes of its own. Prior to the start of the 2nd ILR War, this is the only 'ready force' out there and the only type of battalion used in combat.

In practice, the Air Recon clears the way for landings, makes raids, exploits enemy weaknesses, and covers retreats and redeployments if necessary. The Light Infantry and Heavy Infantry do the bulk of the fighting (the former in more open areas against lighter resistance; the latter against denser concentrations of enemy hard-points and vehicles). The Mobile Anti-armor moves around where they are deemed necessary, and the Mechanized Infantry company provides fire support and area security. Finally, the HQ company takes care of all the little details of engineering, repair, and administration.

This battalion, like all battalions, has attached support and administration staff (drawn from the Administration Service) that land when the battle is well in hand or (hopefully) over to take care of long term needs but these are not listed in the regular structure and are attached from Brigade as needed.

Standard Battalion

The Derzon action and others, plus a careful study of likely future engagements has demonstrated the need for new Brigade, Battalion, and Company-level structures. Some of these were incorporated into the old Reaction Battalion to form a new Standard Battalion.

- 1 Infantry HQ Company
- 5 Composite Infantry Companies (CICs)
- 1 Mobile Anti-armor Company
- 1 Air Recon Company (RR)

The old Light/Heavy dichotomy in infantry was found to be unworkable and unwieldy on the Company level and so was moved to within the Company structure itself. The mobile Infantry Company was found to be too weak to be worth the transportation costs and risks involved in landing it.

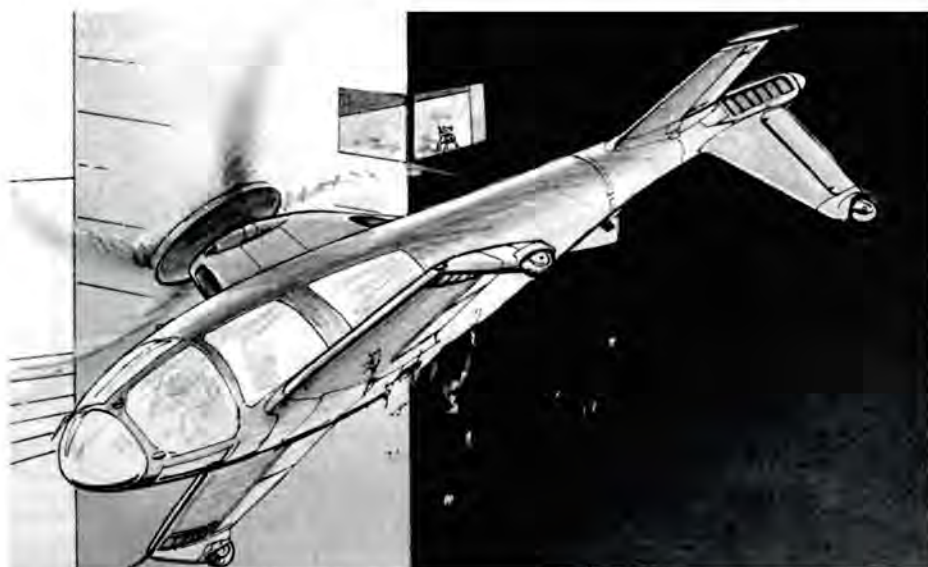
By the time the war breaks out, the Composite Infantry Company has become the standard for the EDF but some battalions still have the old HQ structure and retain the Mechanized Infantry and some do not, usually depending on the ratio of transports to gunships.

Air Assault Battalion

- 1 Airmobile HQ company x 1 (use the regular Infantry HQ company profile but without vehicles)
- 1 Airmobile Rifle Company x 7 (this uses the Composite Infantry Company model)

All rank requirements for command above squad level are one level higher than in other battalion structures (platoons are commanded by O9s, companies by O10s, etc.) to reflect the higher experience levels.

All Officers of O8 or better (squad leader or better) must be Main Characters and at



least half of all officers O7 or better will be Main Character level. Veteran air assault are usually cold-hearted, highly-trained killers ... or are already dead.

Air Assault and General Tactics

Air Assault units go in first if the landing is heavily contested (Derzon was not heavily contested). These units are in limited supply and exist solely to secure a landing zone so that the other battalions can land. They may also be used to disrupt enemy rear areas or as a decoy, especially if the EDF main landing is not in a contested area.

Air assault units take heavy casualties but also get the most important and interesting assignments, an important consideration for role playing.

Air Assault units are pulled from combat as soon as possible to save them for the next assault. As with other EDF units, they are not kept as a unit above platoon level from mission to mission. One reason for this is that they have a high casualty rate!

Air Assault units are new. They will certainly be a surprise for the ILR.

Brigades expecting a heavily opposed landing (once the war starts), will have 1 Air assault battalion and 3 Standard Battalions.

Aerodyne Assault Wing

- . 1 Aerospace HQ company
- . 4 Aerodyne gunship Squadron (16 aerodynes each)
- . Aerodyne transport Squadron x 4 (16 aerodynes each)

The Aerodyne Assault Wings are the strength and soul of EDF operations and the infantryman's best friend. They are the guardian angels and the fast ride out of a bad place. Aerodyne Wings are often over-worked and unable to be in all the places they are needed at the same time. Due to combat damage and pilot fatigue, they are also likely to be under strength at any given moment.

COMMAND REVIEW • APKNAND DEFEUP

The Few, The Proud...

With very rare exceptions, officers at platoon command and higher should be Main Characters controlled by the Game Host (and *not* mere Supporting Characters) in terms of the depth of their talents. You don't make it to 1st Lieutenant or better without some genuine ability to Rally others.

At full strength, an AAW can land 2 Standard Infantry Battalions or Fast Reaction Battalions (barely). Brigades have a single AAW for making combat landings, so half the brigade is landed initially and the rest ferried down through 2 or more subsequent drops using the survivors of the first attack. The gunship contingent is therefore responsible for the entire brigade, one squadron per battalion or 2 gunships per company.

Actual strength after the first few hours is more like 1 aerodyne per company and after a couple days, roughly 1 aerodyne per company half the time. But considering that a single D-9 can shred anything that moves and most things that don't, this is deemed adequate.

Mobile Infantry Battalion

- . 1 Armored HQ company
- . 4 Mobile Rifle company (16 vehicles each)
- . 2 Mobile anti-armor company (16 vehicles each)
- . 1 Armor company (32 vehicles)
- . Support Engineering Company x1

It occurred to EDF planners that they might have to fight a battle where they do not have or cannot maintain aerodyne cover or where they cannot make a landing near the objective or where the ILR decides to fight a mobile battle. If any and especially if all these conditions apply, they need units that can move under hostile conditions and operate *without* the benefit of aerodynes.

Because of the major aerodyne commitment required to move the vehicles, these units are not landed until after an air assault and standard battalion have done the job of clearing a safe zone for the big transports they need.

There is serious debate over whether these battalions are even needed (or rather are worth the difficulty of transport) and the EDF only has them at the start of the war because they were up-rated Homeguard units from very politically powerful worlds.

They are kept around after the start of the war because it is generally suspected that attacks on ILR worlds are inevitable and these units will be needed.

Once the EDF actually uses them (despite the maintenance and support hassles), everyone wants more of them.

Logistics Battalion

- III. 1 Headquarters company
- III. 2 Construction Engineer companies
- II. 1 Aerodyne transport company
(8 aerodynes)
- III. 2 Engineering Support Companies
- VI. 2 Transport companies (120 vehicles)
- V. 1 Medical Company
- III. 1 Light Infantry Company

These guys fix, structurally and medically, what the regular troops break.

A logistics battalion is only needed in support of division-level activities. It provides general support, maintenance and delivery service for a division. Logistics HQ is typically sited with divisional HQ, though its assets may be distributed across the theater as needed.

Because of their proximity to infrastructure and distance from front-line action, many seriously injured EDF personnel who have been rehabilitated with cybernetics end up in logistics or HQ units.

The Light Infantry Company serves as security and rear area patrol and often provides replacements for other units.

COMMAND REVIEW • ΑΓΩΓΙΚΟ ΔΕΛΤΙΟ

Player Characters & Air Assault

Characters cannot begin the game in Air Assault. Troops in the Air Assault Battalion are all drawn from the regular ranks who then receive specialized training. In game terms, all these personnel must have 18 or more missions. Any time after completing 18 *successful* missions they may apply for assault troop training. An entire unit may apply together and if accepted, they will usually be kept together up to company level. Acceptance is generally not a problem.

Air assault training takes 6 months and the character gains "Air Assault Training Package". This is a 2 Gift Package:

- III. +1 Astronautics
- III. Rapid Descent Expert.

Character who already have one or more of these Gifts receives a service Group Gift of their choice instead for each of these gifts they have.

From this point on, they use either their original branch *or* the Rapid Response Branch list for improvements. However, the next two Medium Improvements the character is eligible for are downgraded to Low Improvements.

These units are often used after a major engagement to clean up and to support Administration Service rebuilding efforts. They may also be used to support Home-guard units in a variety of circumstances. In low intensity conflicts, Logistics Battalions may be the major EDF presence on a world.

EDF Company Assets

This is the general distribution of units within each type of EDF company. Remember that specialty platoons can be attached to these companies or substituted in for another company, and that companies sometimes run under-strength due to forces beyond their local commander's control.

A company within a battalion structure is a solid fighting unit, but it is not a self-sufficient one. It can only operate for a very limited time (a few days at most) without external support in terms of fuel, food and ammunition. A company requires the transport and logistics assets of its battalion for any sort of extended operation, and without that reinforcement quickly loses its combat potential.

Independent Company Commands (ICCs) are complicated, highly variable, and not covered under the Battalion TOE. Their structure will vary and is up to the Game Host but they are still made up the squads/platoons listed here. They *are* designed to operate on their own and also tend to have up to twice the complement of a normal company, mostly in attached support squads.

A company *can* be deployed as a self-contained unit into situations where there is going to be a friendly support structure. This would be things like Homeguards, garrisons or raids that happen shortly before a main invasion. A light company can be dropped with a single D-32 flight, making it a convenient unit of force to bolster defenses in an area.

Infantry HQ Company (EDF)

- III. 1 Headquarters squad
- III. 1 Communications squad
- II. 1 Liaison squad
- III. 1 EW squad
- VI. 2 Medical squad

- 1 Maintenance squad
- 1 Transport squad (4 vehicles)
- 4 Aerodyne transport squad (8 aerodynes)
- 4 Support squad

A headquarters company serves as the nerve center for an entire battalion. It is entirely mechanized, able to pick up and move on a few hours' notice (at worst) and is typically set up a few kilometers beyond the range of the worst of enemy weapons, which is often at the edge of reliable communication range with individual squad leaders. In such cases, platoon leaders without vehicles will often have a dedicated Comm officer in their squad, carrying a man-pack transceiver capable of punching through EM interference and acting as a communication hub for the squads under platoon command.

It is worth noting that a headquarters company for a battalion is *not* the same as the administrative group for a battalion. The headquarters company directs the fighting and makes combat decisions, while the admin group is largely considered "bean-counters". The purely administrative aspects of a headquarters company may be responsible to admin group command rather than on-site military command, and this can cause some friction on occasion, but the two groups usually work together.

Example: The liaison squad in a headquarters company is under Admin direction and follows Admin orders first, but would not turn down a request from the battalion commander unless they had very good reason.

Battalion HQ directs the fighting, but battalion Admin gets them the tools and supplies to keep doing it. The main Admin people do not even hit the ground until a secure rear area is established.

A headquarters company has greater endurance than other companies, simply because it is where the supplies are kept, but even an HQ requires regular shipments from elsewhere, which is the job of its transport assets.

Rifle Company (EDF, obsolete)

- Headquarters squad x 1
- Light infantry platoon x 4

The simplest EDF company, a Rifle Company serves much the same function as ILR light infantry, a short range assault force that can move into any terrain and provide as much fire over as large an area as possible. With some under-barrel grenade launchers added in it has a very limited anti-armor or anti-air capability, but this is neither its strong point nor its designed mission.

In detailed organization, it consists of 3 Full Platoons and 1 'short' or reserve platoon of 3 squads. The reserve platoon is often broken up and its squads sent to bolster other platoons or replace combat losses. Reserves are often used to defend flanks, to patrol rear areas, and so on, so command of the reserve platoon can be sort of punishment to ambitious officers. On the other hand, the duty is usually easier and the life expectancy is higher... The least experienced squads usually get assigned to the reserve platoon until the casualties start, then the most shot up platoon gets the duty.

Heavy infantry squads can be substituted for lights to make a Heavy Rifle Company, another obsolete structure. Separating Heavy and Light infantry by company only deprived Light Infantry of firepower.

Under modern EDF fighting doctrine, Rifle Companies are discouraged in favor of the Mobile Rifle Company (below). However, since this is the largest EDF company that can fit into one D-32 lander, it's often seen in the field where commanders work with what they have, not with what they wished they had.

Composite Infantry Company (EDF)

- 1 Infantry HQ squad
- 1 Heavy Infantry platoon
- 3 Light Infantry platoons

This company has enough anti-armor and support weapons to take care of itself against all but the direst threats and it has its own medical, communications, and engineering assets.

The Heavy Infantry Platoon theoretically has the same firepower as a Light platoon with fewer men but a higher ammunition mass requirement. It is also an under-strength platoon, with only 3 squads. In

practice, it is often broken up to support the Light Platoons. Ambitious officers started transferring from Heavy to Light with this reorganization, seeing the career advancement in Heavy Infantry diminished. Less ambitious and more cautious officers started transferring *into* Heavy Infantry because of the trend to use them as fire support and leave the close and dangerous work to the Light Infantry.

Mobile Rifle Company (EDF)

- III. 1 Mobile Headquarters squad
- III. 3 Mobile Rifle platoons
- II. 3 Mobile Anti-armor squads

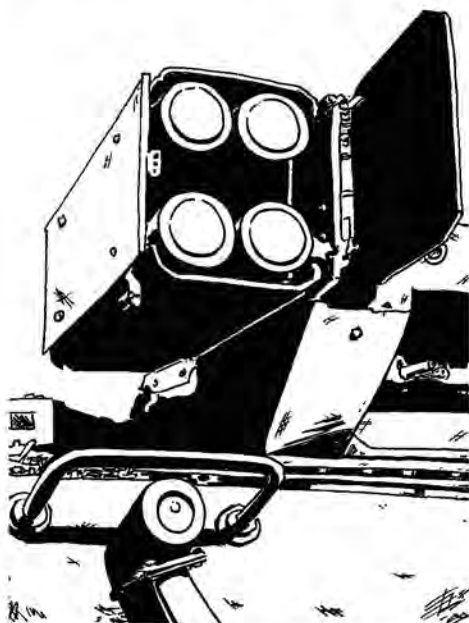
This is similar to a regular rifle company, but with the addition of ACPL-8s to the mix to give troops some high speed transport and light armor. Since mobile infantry has a "ride", they typically are more heavily equipped, with more grenade launchers, an ample supply of grenades, and more light machineguns.

The anti-armor squads give them some 'punch' and are usually kept together as a mobile support or breakthrough unit.

It takes two D-32 flights to drop a mobile rifle company because of the size and weight of the vehicles.

Mobile Anti-Armor Company (EDF)

- III. 1 Mobile Headquarters squad
- III. 5 Mobile anti-armor platoons



This is a combination of heavily armed infantry and vehicles with some anti-armor (and anti-aerodyne) punch. It is the heaviest armed and armored EDF unit that includes integral infantry.

This is also an unusual unit in that the platoons consist of 3 squads each rather than 4 squads. This makes it easier to disperse them as needed for defense or support of operations but does not interfere with concentrating them if necessary.

Armor Company (EDF)

- III. 1 Armored HQ squad
- III. 15 Armor squads

Tanks and more tanks. The actual vehicles may vary with any given deployment, but this is exclusively a vehicle unit and has no embedded infantry. A company of this type is unusual for any action that isn't expecting an extremely stiff resistance and implies a willingness to do a lot of property damage to achieve an objective. An armor company will never operate alone, but will have combined arms support in the form of something like a mobile rifle company and aerodyne support.

While a large transport like a D-32 can drop a rifle company in one trip, the mobile rifle, anti-armor and armor companies each require two or more D-32 landings.

Construction Engineer Company (EDF)

- III. 1 Headquarters squad
- III. 3 Construction Engineer Platoons
- II. 1 Repair squad
- III. 1 Demolitions Squad
- II. 1 Heavy Vehicle squad

Engineer companies pave the way (sometimes literally) for other units. Lightly armed and armored, their main job is to set up field fortifications, lay infrastructure for headquarters (such as hooking up to local power grid), and towing out and (if possible) repairing damaged ground vehicles.

Support Engineer Company (EDF)

- III. 1 HQ squad
- III. 2 Maintenance platoons
- II. 1 Demolitions Platoon
- III. 1 Construction Engineer Platoon (3 squads)

This is the general purpose support group that no motorized or mobile Battalion can really be without.

A demolitions platoon is 4 Combat Engineer squads, and the Construction Engineer platoon is under-strength at only 3 squads.

Transport Company (EDF)

- 1 Headquarters squad
- 15 Transport squad (60 vehicles)

A company-sized transport unit is usually only part of a logistics battalion, and the individual squads are often scattered in deployment, rather than operating as a single unit. However, a transport company would be the basis of a large convoy. A transport company can move up to 2 companies of infantry or about 18 cargo equivalents of material. This is through good terrain. Off-road, these numbers are halved.

Air Recon Company (EDF)

- 1 Air Recon HQ platoon
- 3 Air Recon platoons

Air Recon is not divided into squads. Each consists of a number of fire teams under Fire Team Leaders commanded by a Platoon Commander. The Company and Platoon commanders are all Surface (RR) Branch but they

COMMAND REVIEW • APNANA DETEUP

New Branch of Service: Air Recon

- +1 Astronautics
- +1 Athletics
- +1 Firearms
- +1 Sixth Sense
- Rapid Descent Expert

Specialties:

- Officer/Rifleman
- +1 Spot
- +3 Longarms
- Grenadier
- +1 Spot
- +3 Heavy Weapons
- Medic
- +4 Medical Sciences
- Demolitions
- +4 Demolitions
- Communications
- +4 Sensor Operations

Air Recon Fire Teams can also be dropped from orbit and used as pathfinders or interdiction teams but only *experienced* units are used in this way.

command the Aerodyne pilots and Aerodynes that are integrated into the company.

Each Air Recon Platoon consists of 6 Fire Teams of 6 men each. Each Fire Team is led by an O6 or O7 and has a Supporting Officer Character of O6 rank flying his or her transport and 4 Standard Supporting Characters, 2 of which are Riflemen, 1 of which is a Grenadier, and one of which is a Platoon Support Specialist. All Standard Supporting Characters should use the optional +1 Mark rule. The Platoon Leader is an O8 or possibly an O9 and his or her pilot is an O7.

The Air Recon Headquarters Platoon consists of 4 Light Gunships (1 Flight), 2 repair transports (with a repair tech 'fire team' under an engineer main character- drawn from the Engineering Branch) and 2 regular transports hauling the Commander (O9 or better) and his Fire team (which includes 2 support specialists instead of 1) and the Assistant Commander (O7 or better) and his Fire Team (which includes 2 support specialists instead of 1).

The light gunships can be anything from transports with snipers and gun-ports to missile carriers to various improvised weapon mounts (the most popular of which is a HAKW).

The support specialists vary with the unit but typically each platoon has 2 medics (because Air Recon is often used as Medevac), 2 Demolitions Experts and 2 EW/Comm experts. The company level specialists usually consists of 2 medics and 2 EW/Comm experts.

All Air Recon Fire Team leaders and higher officers should be considered Main Characters.

Note that there is 1 empty seat in each transport. This allows for casualties in the transportation wing or additional specialists.

EDF Platoon Command Structure

EDF platoon structure makes the commander of the platoon also the commander of his or her own squad. He or she must therefore have an ASL that is completely competent to handle the squad in his or her absence, preferably an O7, but an O6 will often do.

Infantry platoons have platoon assets distributed to the various squads but this squad

assignment is as much to determine which squad has to carry which platoon asset's extra gear. Platoon assets can be re-distributed as necessary or as desired by the platoon commander. Normally the comm tech stays with the platoon commander, but the command squad helps carry extra batteries, the medic's squad carries extra medical supplies and guards the wounded if necessary, and so on.

Platoon assets are still taken as supporting characters by the particular squad commander and if re-assigned, remain under the original player's control. This is an opportunity to have players take turns being under each other's command without one Main Character being over another.

EDF Squad Assets

Individual squads, as noted under company assets. These are the usual types of squads available for constructing larger forces:

- *Headquarters*
- *Communications*
- *Electronic Warfare*
- *Liaison*
- *Medical*
- *Maintenance*
- *Transport*
- *Aerodyne Transport*
- *Support*
- *Combat Engineering*
- *Construction Engineering*
- *Light Infantry*
- *Heavy Infantry*
- *Mobile Infantry*
- *Anti-Armor*
- *Armor*
- *Aerodyne Gunship*

Individual squads will usually look like the descriptions below. Note that for vehicles used as transport assets, the drivers are usually low-level specialists, and are usually Admin personnel who have no skills appropriate to the actual mission of that squad aside from the ability to use a weapon in the squad's defense. Transport drivers are usually attached to any existing transport units after they have finished getting a unit to its destination and deployed. Drivers of combat vehicles are fully combat trained and considered part of the squad's personnel, but usually do not engage in non-vehicle activi-

ties. You don't expect the driver of an ACPL-8 to bail out and join an infantry assault...

To build characters for these squads, you will need to use the revised Service Branches Tables.

Like all Variant Rules, these specialist rules are optional. Characters may still be built from *Platinum Catalyst*. These rules just add more options.

Ground Service Personnel

All Specialists Have:

- Athletics +1
- Firearms +2
- Sixth Sense +1

All other basic skills and gifts depend on the MOS (Military Occupation Specialty) of the character, as below.

Analyst

- Group Gift: Administration +1
- Hike +1
- Information Analysis +3

Communications Expert

- Gift: Sensor Expert
- Hike +1
- Sensor Operations +3

Construction

- Group Gift: Engineering +1
- Build +3
- Hike +1

Demolitions Expert

- Group Gift: Engineering +1
- Demolitions +3
- Hike +1

Forward Observer

- Gift: Indirect Fire Expert
- Hike +1
- Navigation +3

Heavy Weapons Expert: Grenadier

- Gift: Indirect Fire Expert
- Heavy Weapons +3
- Hike +1

Heavy Weapons Expert: Machine Gunner

- Gift: Suppression Fire Expert
- Heavy Weapons +3
- Hike +1

Heavy Weapons Expert:

Rocketeer

Gift: Sniper Expert
Heavy Weapons +3
Hike +1

Infantry

Gift: Semi-Automatic Expert
Hike +1
Longarms +2
Navigate +1

Note: This MOS matches the original Light Infantry.

Maintenance

Group Gift: Engineering +1
Hike +1
Repair +3

Medic

Gift: Doctor
Hike +1
Medical Sciences +3

Sniper

Gift: Sniper Expert
Longarms +3

Supply

Gift: Logistics Expert
Hike +1
Scrounge +3

Tactical Advisor

Gift: Planning Expert
Hike +1
Plan +3

Vehicle Commander

Group Gift: Vehicles +1
Sensor Operations +2
Heavy Weapons +1
Repair +1

Vehicle Driver

Gift: Armored Vehicle Expert
Vehicle Operations +3
Repair +1

Vehicle Gunner

Gift: Suppression Expert
Vehicle Weapons +3
Repair +1

Aerodyne Personnel

All Aerodyne personnel receive:

Astronautics +2
G-Force +1
Pistol +1
Vehicle Operations +1

Analyst

Group Gift: Administration +1
Data Analysis +3

Cargo Specialist

Group Gift: Administration +1
Plan +2
Bureaucratics +1

EW/Communications

Gift: Sensor Expert
Sensor Operations +3

Gunner

Gift: Suppression Expert
Vehicle Weapons +3

Medic

Gift: Doctor
Medical Sciences +3

Pilot/Officer (Main Character except for Air Recon transport)

Gift: Velocity Expert
Vehicle Operations +3

COMMAND REVIEW • APPLIKAND NERFUP

Variant Rule: Upgrading Gifts

In the standard rules, it's possible for characters to have access to the same Gifts twice in different steps. Normally, the character-designer is simply expected to choose a different Gift.

With this Variant Rule, a character who already has the "Expert" Gift (from the Species step, Background step, or what have you) who has the option of choosing an "Expert" Gift can choose the "Master" version instead. All requirements still apply.

For example: Perlmyr the otter chooses Sniper Expert from his list of possible species Gifts. If he trained as a Sniper, his MOS gift would be Sniper Master.

Headquarters Squad

Vehicles:

- 1 ACC command vehicle
- 1 ALP cargo vehicle

Personnel:

- 1 Commander
- 1 Secondary officer
- 2 Communications
- 2 Analysts
- 1 Specialist
- 1 Aide
- 2 Drivers

For a company level HQ the officers would be a Lieutenant Commander(09+) and a Lieutenant (07+), while for a battalion it would be a Major (011+) and a Lieutenant Commander (09+), with the rest of the personnel being various specialists (01 through 05). A headquarters squad will typically not have anything heavier than pistols or submachineguns on them, though of course, heavier weapons are going to be nearby.

A company-level HQ may be missing its vehicles if the nature of the operation precludes their transport. In such a case, most of the personnel will have portable versions of their stations, along with a small turbine generator or two and a few air-droppable supply pallets to cover the most critical supply needs.

Air Assault HQs take austerity a step further and have no equipment that they cannot carry.

COMMAND REVIEW • ΑΡΧΗΓΑΝΑ ΔΕΓΚΡΕΜ

A Crew of Expediency

The description of a squad and its personnel list gives you a good idea of the specialties involved, but the actual MOS distribution of personnel within a squad is up to the Game Host, since it is to some degree subject to the personality and influence of local commanders, plus the local pool of talent.

For example, a platoon commander might normally have regular Admin branch drivers, but it is also possible that they have snagged a couple of drivers specialists for the command vehicles. Or a repair squad might have four repair techs, but there is nothing to say that one of them is former infantry with a cybernetic leg who is being retrained for a job that has ready power access.

Communications Squad

Vehicles:

- 1 ACC command vehicle
- 1 ALP cargo vehicle

Personnel:

- 1 Commander (07)
- 1 Assistant Squad Leader (05+)
- 6 Communications
- 2 Drivers

This squad is capable of handling and routing communications for an entire battalion in a combat situation. Acting with the skill and intensity of air-traffic controllers, they monitor all communications, routing requests that the system does not handle automatically, setting up ad-hoc networks for coordinating actions, and generally getting information to where it needs to be as fast as possible. Command personnel are expected to be proficient with the hardware and software involved in this squad's duties, but with more emphasis on analysis rather than technical operation. The personnel in this squad have nothing but sidearms and rely entirely on other assets to keep them intact.

Electronic Warfare (EW) Squad

Vehicles:

- 1 ACC command vehicle
- 1 ALP cargo vehicle

Personnel:

- 1 Commander (07)
- 1 Assistant Squad Leader (05+)
- 6 Communications
- 2 Drivers

An EW squad's sole purpose is to jam enemy communications and do what they can to pinpoint and mitigate the effects of enemy EW sources. They carry a large number of portable devices for jamming enemy signals and boosting friendly ones, and squads may be detailed to place and activate these devices in particular locations, either after the fighting starts, or as carried items in their initial deployment. The EW squad is also responsible for gathering intelligence from enemy signals if possible, interpreting it, and passing the analysis on to command for further action.

With an array of directional antennas, they do not have to be right on the front lines, but are easily within artillery range and are huge signal emitters for enemy homing munitions.

Liaison Squad

Vehicles:

- . 1 APCL-8

Personnel:

- . 1 Commander(08)
- . 1 Assistant Squad Leader (06+)
- . 4 Liaisons
- . 1 Special Services
- . 1 Driver

Since the EDF has to operate within urban environments and deal with governments unused to the problems and realities of war, headquarters companies have a special squad whose only job is public relations and smoothing things over when local feathers or fur gets ruffled. These personnel have higher than normal diplomatic skills and often rely on EDF intelligence about the people they are going to meet, the better to deal with any potential problems. They have a personnel carrier for mobility. Liaison units project the EDF image to those they deal with, focusing on appearance and demeanor.

These personnel carry nothing heavier than pistols. If they need protection, command assigns a fire team.

Liaison officers are generally one grade higher than other squad-level officers, but this rank is mainly for show, providing a better impression for civilian authorities.

Medical Squad

Vehicles:

- . 1 MMA ambulance
- . 1 MMSTA field hospital

Personnel:

- . 1 Commander (08)
- . 1 Chief Medtech (06+)
- . 6 Med techs
- . 1 Driver

Medical squads either set up as a field hospital in the rear and combat ambulance, or use both vehicles as aid stations, relying on aerodyne transport for the wounded. A medical squad has only one designated driver, since only the ambulance needs a full-time driver.

If more than one medical squad is assigned to a particular unit, they will usually also have one or more ALP transport vehicles attached, each carrying a mobile barracks that can be turned into a dual operating room and small recovery ward.

Medical officers traditionally have one rank higher than normal, but this only applies within the medical service and does not have any cross-branch authority.

Medics do not have time to fight, but they are in the thick of fighting more often than not. Their combat armor is specialized to allow more convenient input from diagnostic devices, and all med techs have a version of an advanced combat helmet. Medics generally have good morale, and are trained to take maximum advantage of available protection and work quickly under cover of Suppression Fire to get their charges to safety without becoming casualties themselves.

Medical personnel *may* carry concealed pistols for self-defense *outside of medical recovery situations*, but both EDF and ILR thus far respect the inviolability of medical personnel on rescue missions. For instance, ILR medics will rescue and treat EDF personnel, and even arrange return to EDF doctors if the ILR med techs cannot stabilize an EDF patient's condition. This charity and consideration is however a purely low-level phenomenon and can and has been countermanded by higher ranking ILR officers.

Maintenance Squad

Vehicles:

- . 1 ARE recovery vehicle
- . 1 ARE cargo vehicle

Personnel:

- . 1 Commander (07)
- . 1 Secondary officer (05+)
- . 4 Repair Technicians
- . 4 Drivers

A maintenance squad has a recovery vehicle, an ALV with a machine shop module, and as much spare junk as can be crammed in and tied onto their vehicles and still have them fit into an aerodyne. The spit & polish of repair squads (actually, the lack of it) is legendary, and it is rumored that one must burn their dress uniform upon being assigned to such a squad. Repair squads often



have a bizarre sense of humor, unusual esthetic tastes and long memories for anyone who gives them grief. The only reason they can get away with this in an organization like the EDF is that they can also scrounge parts from thin air, and turn piles of junk into combat-worthy vehicles.

Maintenance crews are generally armed with submachineguns, but there is no telling exactly what else they may have lying around at any given time.

Transport Squad

Vehicles:

- . 2 ALP transport vehicle

Personnel:

- . 1 Lead driver (O3)
- . 3 Second drivers (O2)
- . 4 Cargo tech (O1)

Cargo techs use the basic skill allotment without any specialty. This is where the EDF puts goodhearted and loyal but otherwise incompetent people.

A transport squad is a 6 person squad with a couple of ALP flatbeds. Typically commanded by something like an O3, they're really just truck drivers in uniform. They know the ins and outs of the ALP, how to load and unload the cargo modules, and the arcane intricacies of getting a portable barracks in and out of shape. They are issued submachineguns but would probably have trouble telling someone where they are if asked. They are issued full armor but quite often are found with only partial or no armor, since it gets too hot or too restrictive of mobility when trying to handle dangerously heavy loads. Most transport squads have a disproportionate number of the heavier species, and they are more used to getting physical in stressful situations (+1 Brawl).

Aerodyne Transport Squad

Vehicles:

- . D-12 or D-32 cargo aerodyne

Personnel:

- . 1 Pilot (O7)
- . 1 Gunner
- . 1 EW Specialist
- . 2 Cargo specialists
- . 1 Senior Repair Tech (O5+)
- . 1 Repair Tech
- . 1 Flight Specialist

An aerodyne transport squad is 6 people and one aerodyne, usually a D-12. Aside from the pilot and gunner, there are two specialists who manage the actual cargo loading and handle the scheduling of cargo or airlift operations in combination with battalion command, and two repair techs whose only job is to keep the D-12 flying. Of this squad, the pilot is usually the only officer, but a wise pilot always pays heed to the advice of the senior repair specialist, who is in charge of ground operations by tradition, even if not in the formal command structure. A command squad for aerodyne transport will be headed by an O8, and will have an administrative specialist and a dedicated medic with a specialty in flight-related conditions. While maybe only an S4, the medical flight specialist has the authority to ground a pilot for medical reasons. This specialist will also be called on to assist medical squads when doing medevac flights of injured personnel.

Support Squad

Vehicles:

- . 2 ALV transport vehicle

Personnel:

- . 1 Senior Ombudsman (O7)
- . 2 Ombudsmen (O5+)
- . 3 General Service Personnel
- . 1 Morale Specialist
- . 1 Driver

Though most use Admin or Specialist profiles, these soldiers are most definitely in the Surface Branch and use Surface Branch ranks. They are Surface Branch's counterweight to Admin control of their resources.

This is the general purpose 4F squad (Food, Fuel, Firearms & Fun). Their job is to make sure Admin knows exactly what the ground forces

need, and to make sure they get as much of it as possible. Each squad can generally meet the full needs of two companies, and 4 support squads can handle a battalion.

The "Morale Specialists" are experts at finding morale boosters, which can range from unique entertainment to fresh food to setting up networks for allowable mingling opportunities. The "ombudsmen" are professional scroungers whose talent is coming up with anything that Admin can't deliver on or Liaison can't sweet-talk local government out of. They have a fairly loose discretionary budget and probably not enough oversight ... which is to say that they will deal with whoever can deliver the goods and make up something acceptable for the paperwork later. As long as field commanders have sufficient fuel and food and morale stays high, no one looks too closely at exactly how it was acquired.

Support squads have very little combat talent and seldom carry anything larger than a pistol or submachinegun, but they often have access to significant hardware. If you want to role-play an EDF unit that is in the thick of things, but not directly involved in combat, support units have a lot of possibilities.

Combat Engineering

Vehicles:

- . 1 ARE recovery vehicle

Personnel:

- . 1 Commander (07)
- . 1 Squad Leader (05+)
- . 4 Demolition specialists
- . 2 Drivers

Combat Engineers are trained in rapid, reliable construction and efficient, safe demolition. If there are too many booby traps for a platoon's engineer to handle, he or she brings in the Combat Engineers. For any unit that operates around either aerodynes or ground vehicles in or near combat, Combat Engineers are indispensable.

Engineer squads are issued I-56 rifles like most everyone else but unlike many other support units, Combat Engineers are often in a position to actually use them. Also, you never know what they have picked up off of wrecks, or what they did

with it. They are not as bad as maintenance units in this regard, but they do a lot of transfers of equipment back and forth.

Construction Engineering

Vehicles:

- . Varies but usually 2

Personnel:

- . Commander (07)
- . 1 Assistant Squad Leader (05+)
- . 4 Construction Specialist
- . 2 Heavy Equipment Operators

These are the guys that build (and re-build) stuff from bridges to barracks to bunkers. They are issued I-56 rifles like everyone else and can fight if they have to. Many will to protect their 'project'.

The most common vehicles are the ubiquitous bulldozer, which is armored, very sturdy, and is equipped with an excavation scoop and blade, and an A-frame crane. With these two items, some imagination, some scrounging, and a couple of trucks, construction engineers can build or rebuild just about anything if given enough time.

Light Infantry Squad

Vehicles:

None

Personnel:

- . 1 Commander (07)
 - . 1 Assistant Squad Leader (ASL) (05+)
 - . 4 Light infantry
 - . 1 Support weapon specialist
 - . 1 Platoon Specialist
- (Choose one: Communications, Demolitions, Heavy Weapons, Medic)

Any infantry squad can be broken into two fire teams, and the Assistant Squad Leader (ASL) handles the second fire team if the squad splits up.

Of the light infantry, one will typically

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Black and Gray Markets

Main characters trying to get particular goodies for their troops will have to deal with the support units, and anything that is outside the normal official allotments often involves some wheeling, dealing and favors. Not all procurements will be 100% legal — "lost" materiel or even contraband might be available for the right price.

have a sustained fire weapon like a belt-fed light machinegun. The rest will have LAKW 1-56 assault rifles, and if they can manage, under-barrel grenade launchers. It's up to the commander of the squad to finesse some grenade launchers out of EDF stocks. After all, if it were a standard-issue item, the assault rifle would come with one already on it. Light infantry squads may have one additional specialist, or a light infantry who simply has an additional talent that requires them to carry extra equipment (and less ammunition). This could be a medic, sniper or dedicated grenadier with the GAKW launcher.

EDF light infantry will often have the initial role in an assault, taking outlying areas held by hostile forces, and using their longer ranged rifles to best effect, leaving the short range urban operations to the heavy infantry.

Heavy Infantry Squad

Vehicles:

None

Personnel:

- . Commander (07) x 1
- . Assistant Squad Leader (ASL) (05+) x 1
- . Heavy infantry x 4
- . Grenadier x 1
- . Rocket specialist x 1

In practice, there is not a lot of difference between light and heavy infantry. While in theory they have different roles, most light infantry commanders try to get as much hardware as possible for their troops, and lights end up with the fire-power of heavies anyway.

The key difference is in their training. Light infantry specialize in guerilla tactics, with speed and conservation of ammunition. In the rules, Light Infantry have the Gift of Semi-Automatic Expert, which is about a 10% increase in weapon accuracy over troops who do not.

Heavy infantry specialize in controlling area and in maximizing fire-power – their main tactic is to move heavy gun emplacements, with one team moving while the other one Watches. In the rules, Heavy Infantry have the Gift of Following-Fire

Expert, allowing for multiple attacks up to Medium range; when combined with longer-ranged, greater-damage weapons, they will have fire superiority over a greater area than troops who lack their Gift.

Technically, heavy infantry has the riflemen armed with the LAKW 1-30 carbine with integral grenade launcher, one grenadier with the GAKW launcher, and one rocket specialist with the PRLW or PRLX rocket and a few reloads. One of the riflemen also carries a smaller ammunition load and a few spare rockets. This individual also acts as a spotter for the rocket specialist as needed.

Game Hosts can substitute heavy infantry for light infantry anywhere it is mentioned. The biggest difference is that heavy infantry is optimized for shorter range combat in defensive positions, such as in urban areas, and is less concerned with property damage than light infantry. Heavies are usually weighed down one encumbrance level more than light infantry, which makes a difference if there is going to be a lot of walking or running involved.

Mobile Infantry Squad (EDF)

Vehicles:

- . 1 ACPL-8

Personnel:

- . 1 Driver
- . Commander (07)
- . 1 Assistant Squad Leader (05+)
- . 3 Heavy infantry
- . 2 Support weapon specialists

A mobile infantry squad has their own ride, and can carry more gear as a result, since they don't have to walk everywhere they go. The heavy infantry all have grenade launchers on their assault carbines, and the ACPL-8 usually carries 4 PRLX rockets to be used as needed by the carried infantry (though most squads will snag as many as they can and have over a dozen if they can pull enough strings). Mobile infantry are EDF shock troops, able to deliver a reasonably powerful opening barrage of suppression fire and grenades, possibly backed by rocket fire against hard targets

and continued suppression fire from the ACPL-8s 8mm machinegun.

The disadvantage of mobile infantry is that they take more space and far more weight in an aerodyne transport, so for a limited amount of transport capacity, you can put less firepower on the ground than you can with regular light or heavy infantry.

Most Mobile Infantry Squads will greatly magnify the firepower of their vehicle with extra machineguns (sometimes as many as 6!) and grenade launchers, etc. Officially, their firepower is mediocre but in the hands of experienced crews with understanding senior officers, they can make their vehicles quite impressive.

Anti-armor Squad (EDF)

Vehicles:

- . 1 AKW-24-4

Personnel:

- . 1 Commander (07)
- . 1 Gunner
- . 1 Driver
- . 1 Assistant Squad Leader (05+)
- . 1 Anti-equipment specialist
- . 2 Heavy infantry
- . 1 Support Specialist

The main capability comes from the heavy weaponry on the AKW-24-4, though the anti-equipment sniper with the LACKW is valuable for the ability to be placed in spots the vehicle cannot possibly get to. The infantry is designed to provide close-range defense to the vehicle or sniper, and can lay down a nasty barrage with anti-vehicle grenades if needed. In addition, the AKW-24 carries enough demolition charges to block an intersection, and hold up a vehicle column long enough for the AKW-24 and sniper to get in some "quality time" with the enemy.

Armor Squad (EDF)

Vehicles:

- . 2 AKW-32M

Personnel:

- . 1 Commander (07)
- . 1 Assistant Squad Leader(05+)
- . 4 Gunners
- . 2 Drivers (use Mech driver)

An armor squad is two light tanks and crew. The ASL commands the second tank. The AKW-32M has sufficient armament to put a serious hurt on any enemy combat assets.

The crew has to do their own routine maintenance during combat ops, something that thrills them no end. On garrison or other routine deployment, they usually get help from the Maintenance Engineers but in a combat operation, the engineers are too busy actually fixing battle damage.

Armor is usually deployed by the platoon, and an 8 vehicle platoon may also include 1 or 2 AKW-66 or AKW-72s.

Aerodyne Gunship Squad

Vehicles:

- . 1 D-9 gunship aerodyne

Personnel:

- . 1 Pilot (07)
- . 2 Gunner
- . 1 EW Specialist
- . 1 Lead repair tech (05+)
- . 2 Repair tech
- . 1 Wing Support Specialist

A gunship squad is one aerodyne, the people needed to fly and shoot the weapons, and repair techs to keep it working. It also includes a Wing Support Specialist who works in a particular specialty to help the entire Wing.

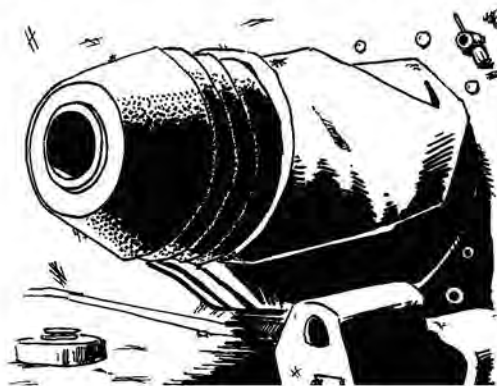
The possible Wing support specialists are Medic, Administrator, Chief Engineer and Battle Manager.

Four of these squads (vehicles) would be a Flight and 4 Flights are a Squadron. D9's technically have no spare room for passengers, but you can cram a few warm bodies into fold-down jump seats if absolutely required. The gunships need a lot of supplies and services (20,000 rounds of heavy MG and light cannon ammo per sortie), so every squadron of gunships usually has a Flight of transports to keep it going.

Only the commander's ship carries a fifth person in action, a Battle Manager.

ILR Theater Assets

ILR troops are not nearly as good on average as EDF or even most Homeguard troops. On the other hand, players will never see average ILR troops unless an ILR world is invaded. The troops the ILR uses against the



EDF in ConFed and Neutral space range from better than average to elite. The better than average troops are not as well-led or as flexible as EDF standard troops. The elite ILR troops are as good as experienced EDF troops and better than 'greenies'.

The ILR is designed for occupation and does not have the same diversity as the EDF, but it functions about the same way in practice. The ILR is much more geared around using local infrastructure for support in terms of transport, food and fuel, and its logistics is mainly concerned with having sufficient spare parts for dedicated combat vehicles.

The ILR structures its assets slightly differently, and has different proportions than a similar number of EDF troops.

For the most part, ILR forces are meant to assault lightly defended worlds (or worlds which have become lightly defended after a blistering orbital bombardment), and hold the urban areas of such worlds against all local and some EDF counterattacks. Being completely indiscriminant about what they take from the locals or what impact it has on them, they assume that they can co-opt civilian infrastructure to meet many of their logistics

needs. ILR supplies are heavy on military consumables, and light on things like transport, fuel, food and medical supplies.

The main ILR unit is the light infantry battalion, with a standard company and squad structure. Troops with more experience move up to heavy infantry battalions. After that will be a standard armor battalion and aerodyne battalion. Everything else is specialized companies that are attached to a battalion as needed. Most ILR battalions start slightly over-strength by about a company and this unit (usually of relatively experienced but less 'sturdy' soldiers) is used to replace combat losses rather than as a tactical reserve. The special forces units within each light infantry battalion serve as the tactical reserve, and have their own transport assets and priority use of aerodyne assets to get where they need to be.

Light Infantry Battalion (ILR)

- 1 Headquarters company
- 8 Rifle companies

With the exception of the elite squad in each company, the ILR light infantry battalion has no integral vehicle assets and relies on co-opted civilian transport like armored trucks for any distance too far to walk. These are placeholder units that can lay down a lot of short-range fire, but have no sustainable long-range, anti-air or anti-armor ability. However, for a short amount of time they can hit hard and fast, overwhelming opponents with aggressive use of firepower and a willingness to take losses to reach an objective.

Left by itself against an EDF infantry battalion, even without aerodynes, this unit will rarely last more than a few hours before being overrun and destroyed (or forced to retreat and regroup). Consequently, the ILR does not leave it by itself.

Heavy Infantry Battalion (ILR)

- 1 Headquarters company
- 8 Mobile Infantry companies

Effectively a light infantry battalion with a smaller number of people and some armored personnel carriers. This gives the infantry some more long-range firepower and mobility, and these units are generally drawn from experienced light infantry battalions. While this makes them better units, it is also a constant drain on the talent in the light infantry. The quality and equipment of the elite squads is largely the

COMMAND REVIEW • АРМАНД ДЕРЖУР

Veterans and Coolness Under Fire

Lapines do not have "Coolness under fire" or "Cold hearted" as species gifts, which means that basic ILR infantry will never have these traits unless they are really experienced (18 missions or more) and the supporting character improvement system is used. However, it should be assumed that any ILR combat officer who is an Adjutant or Main Character will almost invariably choose Coolness Under Fire as his Any Gift.

same in both light and heavy infantry, but the elite heavy infantry probably have more experience with using the logistics system to their advantage and may have more or better stuff than their light infantry counterparts.

Armor Battalion (ILR)

- . 1 Headquarters company
- . 2 Mortar companies
- . 2 Anti-armor companies
- . 2 Armor company
- . 1 Mobile infantry company

An ILR armor battalion would be considered the cream of the crop for normal troops. They have the best equipment and people who know how to use it. They are not all elites by any means, but unless a battalion has suffered heavy combat losses, most personnel will come from situations where they had actual combat experience, even if it is only actions against insurgents on worlds ceded to the ILR at the end of the first war. They can take a serious hit without breaking.

This battalion can lay down a heavier type of firepower than an equivalent EDF unit, but perhaps not as much of it. The inclusion of heavy mortars in the ILR force structure gives them a combat multiplier that the EDF lacks with its largely direct-fire approach. ILR mortar crews are preferred targets for EDF aerodynes, and they know it. The surviving crews are pretty good at avoiding being shredded by an aerodyne beaten zone. However, this often means abandoning the vehicle in order to survive, and the EDF doesn't worry too much about mortar crews who no longer have a mortar to fire.

Aerodyne Battalion(ILR)

- . 1 Headquarters company
- . 4 Aerodyne gunship company
(8 aerodynes per company)
- . 4 Aerodyne transport company
(16 aerodynes per company)
- . 1 Mobile Infantry company

One difference between the EDF and ILR aerodyne units is that the combat surface aerodyne units of the ILR are Surface assets attached to a surface division, not 'loans' from Aerospace as with the EDF. ILR units are meant to transport themselves down to a planet in one trip from orbit and handle their own perimeter defense. While the ILR gunships are comparable to the EDF's D9's, the transport

aerodynes are larger, and not really suited for hot landing troops. Most of the time, the transport aerodynes are used for moving light infantry from one secure area to another or shuttling elite squads around, usually with a gunship escort. Otherwise, they are if possible kept under cover and out of harm's way. The ILR also has significantly fewer gunships for a given unit of troops, most divisions having only one aerodyne battalion in support (32 gunships) and operations smaller than divisional (16 battalions) often have *no* permanent aerodyne support. At best the ILR can count on about 2 gunships per battalion. EDF on the other hand typically has a whole aerodyne gunship squadron (16 gunships) per battalion (or 2 per company!) plus another 32 transports which have their own (not insignificant) firepower.

As a strategic note, the ILR does not generally leave expensive assets like aerodynes on the ground unless the operation demands it. Normally, troops are landed by aerodyne, and aerodynes are used in the initial suppression of the enemy, but after that, most of them are recalled to orbit. This normal strategy may change as the current military situation evolves.

Light Infantry Company (ILR)

- . 1 Headquarters squad
- . 7 Light infantry squads

The basic unit of occupation and control for ILR forces. Trained mostly for urban operations, they either walk or get where they are going by armored truck. A company would be deemed sufficient to garrison a pacified population of up to 10,000 people. In a larger area, each company will have a sector that overlaps with that of other companies, with headquarters set up in civilian buildings within communication range of at least two other HQ units.

Heavy Infantry Company (ILR)

- . 1 Headquarters squad
- . 6 Heavy infantry squads
- . 1 Recon squad

Performs tasks similar to light infantry, but will be assigned to areas with greater possibility of resistance, or larger open spaces that may require long range weapons to adequately engage any opposition. The scout vehicles are used as a morale booster and flanking force, and can also be used sans its

infantry to move officers or carry ammunition or food supplies.

Mobile Infantry Company (ILR)

- III. 1 Headquarters squad
- III. 5 Mobile infantry squads
- II.. 1 Special forces squad
- III. 1 Recon squad

A mobile infantry company may be assigned to guard high value facilities, be a highly mobile reserve force, or provide a hard point that supports regular light or heavy infantry.

Armor Company (ILR)

- III. 1 Headquarters squad
- III. 4 Armor squads
- II.. 2 Mobile infantry squads
- III. 1 Special forces squad

An armor company is the minimum self-contained mobile assault force. The tanks take out hard targets, the mobile infantry protects the tanks and clears buildings, and the special forces deal with any unique problems that show up.

An armor company would be what the ILR uses to dig in to a position that they know will be assaulted. In general, ILR knows that at some point they will be operating in an environment with enemy air superiority, and deploy and use tactics designed to help them survive. Proper use of urban terrain, anti-radar chaff, smoke barrages, ECM and strategic placement of AA assets combine to give ILR armor the capability to withdraw in good order from most situations when it is clear they cannot hold their objective.

Artillery Company (ILR)

- III. 1 Headquarters squad
- III. 5 Artillery squads
- II.. 2 Mobile infantry squads
- III. 1 Headquarters squad
- III. 5 Artillery squads
- III. 2 Mobile infantry squads

Usually set back beyond the front lines and direct fire weapons, an artillery company provides central fire support to several other companies if possible. The mobile infantry provides a covering force while it is on the move, and spotting and perimeter protection when the vehicles are emplaced. Normally, the infantry will take up position

in nearby buildings to cover ground and air approaches, and the armored personnel carriers will have clear fields of fire down two ground approaches, with the ability to move quickly to cover if needed.

Aerodyne Company (ILR)

- III. 1 Headquarters squad
- III. 7 Aerodyne squads

An aerodyne gunship company represents a cost in materials that equals a light infantry battalion, so they are not that common, for which EDF infantry is grateful. Normally, one aerodyne company would be attached to one battalion and called on to support the operations of several battalions.

What is more common is for a group to be called an "aerodyne company", when in fact it is simply pilots, gunners and mechanics. These personnel convert civilian rotorcraft or aerodynes into combat vehicles by the addition of door guns, machinegun turrets or underbody demolition rockets.

Transport Company (ILR)

- III. 1 Headquarters squad
- III. 4 Recon squads
- II.. 3 Transport squads

Like an aerodyne-less aerodyne company, a transport company is mostly personnel. In this case, three squads of drivers and a brace of recon vehicles for escort purposes.

Political Company (ILR)

- III. 1 Headquarters squad
- III. 4 Political squads
- II.. 3 Special forces squad

ILR politicals serve much the same role as EDF special services, and are given maybe a little less respect and a little more fear. Politicals operate outside the normal force structure, and political companies and squads can attach themselves to any larger unit for logistics purposes, yet still operate independently. For purposes of throwing their weight around, political officers would be considered one grade higher than they actually are.

In addition to psychological warfare, interrogation and surveillance experts, political companies also have elite troop detachments which are used for special assignments. These groups will have the best equipment and training, and for any specific missions they may have undergone extensive simulator

training. Their leaders should be considered as talented as experienced main characters, with supporting characters that are very loyal and cool under fire.

ILR Squad Assets

Individual squads, as noted under company assets. This is the usual type of squads available for constructing larger forces:

- *HQ squad*
- *Light Infantry*
- *Heavy Infantry*
- *Mobile Infantry*
- *Special forces*
- *Recon*
- *Armor*
- *Artillery*
- *Political*
- *Transport*

Headquarters Squad (ILR)

Vehicles:

- 1 WA-8C command vehicle
- 1 WA-4S scout vehicle

Personnel:

- 1 Commander
- 1 Secondary officer
- 2 Communications
- 1 Analyst
- 1 Specialist
- 1 Light infantry
- 1 Aide
- 2 Drivers

Light Infantry Squad (ILR)

Vehicles:

- None

Personnel:

- 1 Commander
- 1 Assistant Squad Leader
- 4 Light infantry
- 1 Support weapon specialist
- 1 Grenadier

The main tactic used by ILR light infantry is to use semi-auto fire against any targets that can be spotted at long range, along with grenade fire, with a switch to Suppression Fire if an enemy gets that close, firing as fast as they can reload until they reach their reserve ammunition supply, at which point they are supposed to withdraw in good order to a re-

supply point. For movement, the Assistant Squad Leader and 3 light infantry will advance under cover from the remainder of the squad, and they in turn will provide cover for the rest of the squad to advance.

Individual light infantry squads will readily break if hit with overwhelming fire, and ILR doctrine is to keep firing as much as possible as long as possible, just to keep an enemy from advancing or risking their own necks to return fire in kind. Normally, a platoon will be dispersed enough to not be a single target, but close enough to provide fire support. Command may also try to have a few armored vehicles nearby as a morale booster. ILR squad leaders with some initiative may also have commandeered a local truck to move themselves around in secure areas.

Heavy Infantry Squad (ILR)

Vehicles:

None

Personnel:

- 1 Commander
- 1 Assistant Squad Leader
- 2 Light infantry
- 2 Support weapon specialists
- 2 Grenadiers

A heavy infantry squad is a little more experienced, and its troops are usually considered loyal to their immediate commander for Morale purposes. The Assistant Squad Leader is also trained as an observer for indirect fire use of grenade launchers. The support weapon specialists carry enough ammunition for extended bouts of Suppression Fire, and the grenadiers may also have a few one-shot anti-armor weapons. Even with this, ILR heavy infantry generally does not have the guts to maintain discipline through an extended firefight.

Heavy infantry tactics involve a lot of long-range grenade fire, and Danger Space fire with the light machineguns. Everyone else is usually busy Watching for other threats. However, if the grenadiers switch to canister rounds, the heavy infantry can create lethal blizzards of short-range firepower suitable for street-fighting or building-clearing operations.

Mobile Infantry Squad (ILR)

Vehicles:

- III. 1 WA-8T

Personnel:

- III. 1 Commander
- III. 1 Gunner
- II. 1 Driver
- III. 2 Light infantry
- I. 1 Support weapon specialist
- I. 2 Grenadiers

ILR mobile infantry is essentially heavy infantry with an heavily armed armored personnel carrier. This gives them some extra mobility and protection, along with a morale boost from having a friendly vehicle providing supporting fire.

Special Forces Squad (ILR)

Vehicles:

- III. 1 WA-6P

Personnel:

- III. 1 Commander
- III. 1 ASL/Specialist
- II. 1 Driver
- III. 1 Heavy Infantry
- I. 2 Support weapon specialists
- I. 2 Grenadiers

Special forces are like mobile infantry, but are hand-picked for loyalty and talent. These are the ILR troops able to pull off commando raids, rappel down buildings, perform demolitions, quietly remove "inconvenient" civilians and not flinch if asked to do things normally outside the accepted practices of war. Each member of the squad is likely to have one or more marks beyond normal in a particular specialty. For instance, the heavy infantry might be a sniper with a long-range rifle, the driver might be a medic and a grenadier might be a demolitions expert.

In terms of quality and leadership, they would be on par with a starting main character and supporting characters.

The ILR values special forces very highly and will make every effort to support them in combat and extract them from bad situations if necessary.

Aside from political and artillery units, they are the only ones likely to have remote surveillance assets, and use them to good effect.

Recon Squad (ILR)

Vehicles:

- III. 2 WA-4s

Personnel:

- III. 1 Commander
- III. 1 Assistant Squad Leader
- II. 2 Drivers
- III. 4 Light infantry

A recon squad is simply a pair of scout vehicles. These squads are used for a variety of tasks, from "officer taxis" to convoy escorts. Their job is not to engage the enemy unless they have to, but rather to keep their eyes peeled, and if they see something, pass word onto whoever needs to know.

Armor Squad (ILR)

Vehicles:

- III. 2 WA-6T

Personnel:

- III. 1 Commander
- III. 1 Assistant Squad Leader
- II. 2 Drivers
- III. 2 Observers
- I. 2 Gunners

Since they largely use the same weapons, ILR planners have lumped the role of anti-armor and anti-aerodyne missions into one unit. An armor squad is seldom seen by itself, and would usually be part of an armor company, supported by mobile infantry.

Armor units are also fairly well trained in threat evaluation and fire discipline, and tend not to waste fire on targets they either cannot hit or cannot hurt (the former being more common than the latter). Rather, they will seek to withdraw and find someplace they can be useful. Armor squads will also be used to spearhead infantry assaults, providing both mobile cover, the ability to outrange any EDF infantry weapon and HE rounds to discourage EDF from hanging around open windows.

Technically, all the WA-6Ts armament can be fired from a remote unit that unplugs from the main gunner station and has a 50 meter fiber-optic link. However, this gives the weapons the extra 25% concealment penalty for remote viewing, and normal doctrine is to always have the weapons manned. Vehicle commanders may have sufficient motive or

initiative to buck standard procedure if the EDF is causing heavy vehicle casualties.

Artillery Squad (ILR)

Vehicles:

- . 2 WA-8I

Personnel:

- . 1 Commander
- . 1 Assistant Squad Leader
- . 2 Observers
- . 2 Gunner
- . 2 Drivers

This is the minimum indirect fire unit, one mortar carrier and crew. Typically, one or more mobile infantry squads will be assigned to protect and spot an artillery unit, normally 1 squad per 2 artillery vehicles.

The WA-8I only uses its tethered drone if the range is too great for direct observation, as spotting the drone is a dead giveaway that artillery is in the area.

Political Squad (ILR)

Vehicles:

- . 1 WA-8X

Personnel:

- . 1 Commander
- . 1 Driver
- . 1 Interrogation specialist
- . 1 Information Resource specialist
- . 1 ASL/Political officer
- . 1 Electronics specialist
- . 1 Computer specialist
- . 1 Psychological warfare specialist

A political detachment handles both "morale" problems in a larger unit, and deals with interrogation of POWs and advises command on proper responses to civilian unrest or other problems. Within certain limits, politicals are outside the normal command structure and have a lot of leeway in their operations. Their vehicle has its own dedicated communication channels, and is also a secure place for the higher-ranked personnel to sleep. Not that they would feel at all vulnerable in the presence of friendly forces, but their job is very stressful and a bunk helps them recover from the strain much better than a sleeping bag on the ground. Of course, if secure civilian accommodations are available, this is to be preferred.

ILR political officers of O6 and up who have been doing their job right (collecting "interesting" information on people) wield influence as though they were at least one grade higher, just because of the career-damaging potential of a bad report. However, ILR politicals who try to exert influence like this and botch it up tend to suffer more severe consequences as a result.

ILR political squads normally operate in company-sized groups, and if they are seen in smaller groups, there is usually 1 special forces squad per 2 political squads, and 1 special forces squad permanently attached to the company-level political HQ.

Transport Squad (ILR)

Vehicles:

- . 3 Armored trucks

Personnel:

- . 1 Commander
- . 5 Drivers
- . 2 Maintenance technicians

An ILR transport squad is a low rank officer, a handful of draftees who have shown no aptitude for anything else, and some vocational tech graduates capable of using a wrench and a welder. Their job is to commandeer civilian trucks and turn them into useful armored personnel carriers. This is done by welding plates in key areas, adding hard-points for pintle mounted weapons (usually over the cab), and installing basic communication modules and smoke grenade launchers.

Transport squads will operate independently in rear areas to deliver supplies, and usually operate with light escort if there is a threat of hostile action. Transport convoys are recognized as vulnerable, and if possible, some form of air support is usually provided, even if it is only a police rotorcraft with a door gun.

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ALBEDO
PLATINUM CATALYST
MAIN CHARACTER

Name
Species Gender
Homeworld
Personality
Branch Rank
Service S.P.I.
Gifts

Body
Recovery:
Brawl
Climb
Freefall
G-Force
Hike
Jump
Melee
Run
Sneak
Spacesuit
Swim
Throw

Clout
Recovery:
Bribe
Disguise
Gossip
Impress
Innuendo
Lead
Persuade
Question

SUPPORTING CHARACTERS
Table with 10 columns: Name, Species, Service, Weapon, Attack, Def., Thresholds, Status, Recovery. Rows 1-4.

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Height
Weight
Pelt
Eyes
Build

Deflection Recovery
Thresholds Improvement
Wounded
Crippled
Incapacitated
Devastated

Drive
Recovery:
Build
Bureaucracy
Computer Sciences
Demolitions
Design
Forge
Heavy Weapons
Hyperspace Sciences
Information Analysis
Listen
Longarms
Medical Sciences
Navigate
Physical Sciences
Planetary Sciences
Pistols
Plan
Repair
Research Analysis
Scrounge
Search
Sensor Operations
Sixth Sense
Smell
Spot
Vehicle Operations
Vehicular Weapons
Weapons of Mass Destruction