# The JOURNAL of the Travellers' Aid Society

Vol. 2

TRAVELLER

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## CREDITS


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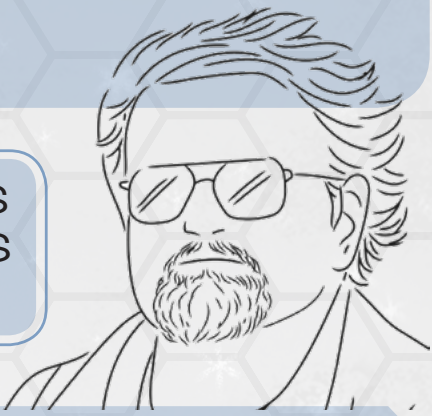
# GROGNARD

## RUMINATIONS ON 40 YEARS IN GAMING

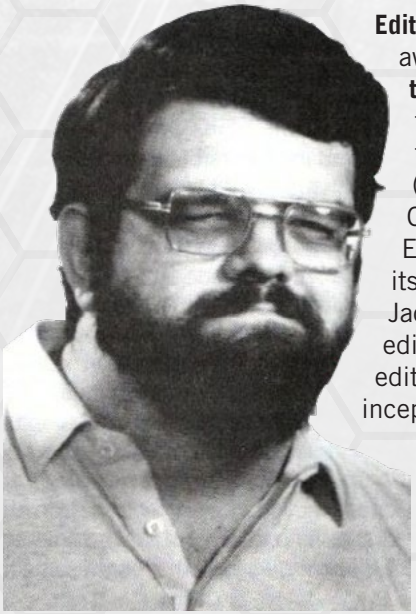


## Design Credits: Loren Wiseman

Loren Wiseman designed his first game in 1973, and over the next forty-some years he participated in the publication of more than a hundred titles.

**Design**: Loren is credited as the primary or sole designer for 37 titles by GDW Game Designers' Workshop and SJG Steve Jackson Games. He has shared design credit for another 46 titles, including shared credit (with Don Greenwood) for **Caesar's Legions** (based on his **Eagles** from GDW) published by Avalon Hill.

**Development**: Loren was better known as a developer for the **Traveller** and **Twilight: 2000** game systems, with sole development credit for 25 titles, and shared development credit for another 11 titles.



**Editing**: Loren was best known as the award-winning editor of the **Journal of the Travellers' Aid Society**. He edited the original **JTAS** from GDW from 1979 to 1985, and continued as editor (variously titled Managing Editor, Consulting Editor, or Contributing Editor) for **Challenge Magazine** through its final issue in 1995. When Steve Jackson Games produced the GURPS edition of **Traveller**, Loren became editor of the revived **JTAS Online** from its inception in 2000 though its final issue in 2015.

Overall, Loren's writing includes (full or partial) design credit on 82 titles, and development credit for an additional 48. He edited 77

bimonthly or quarterly issues of **Journal of the Travellers' Aid Society** (and its successor **Challenge Magazine**) at GDW, and then 449 weekly and later bi-weekly issues of **JTAS Online** from 2000 to 2015.

Wiseman was recognized for his excellence and expertise with the H G Wells Award for "Twilight: 2000 Going Home" (1986), and the H G Wells Award three years running for the "Journal of the Traveller's Aid Society" (1979-1980-1981). In 2004, Loren received the highest of honors within the gaming community: he was inducted into the Adventure Gaming Hall of Fame, and the above recounting of his credits gives some insight into the rationale.

## Primary Design Credit (37 titles):

| | |
|---|---|
| 1973 | Salem Witch Trials |
| 1974 | Eagles |
| 1977 | Pharsalus |
| 1980 | Traveller Supplement 6 - 76 Patrons |
| 1981 | Traveller Book 0 - Introduction To Traveller<br>Traveller Double Adventure 4a - Marooned |
| 1982 | Traveller Adventure 7- Broadsword |
| 1985 | Twilight: 2000 Adventure - Going Home |
| 1988 | 2300 AD Sourcebook - Colonial Atlas |
| | 2300 AD Sourcebook - Ground Vehicle Guide<br>Twilight: 2000 Adventure - Howling Wilderness<br>Twilight: 2000 Adventure - Mediterranean Cruise<br>Twilight: 2000 Adventure - Boomer |
| 1989 | Twilight: 2000 Sourcebook - Heavy Weapons Guide<br>Twilight: 2000 Adventure - Return To Warsaw |
| 1990 | Merc: 2000 Core Rules<br>Twilight: 2000 Adventure - White Eagle |
| 1991 | Merc: 2000 Sourcebook - Gazetteer<br>Twilight: 2000 Adventure - Bangkok<br>Twilight: 2000 Sourcebook - Infantry Weapons of the World<br>Twilight: 2000 Sourcebook - NATO Combat Vehicle Handbook<br>Twilight: 2000 Sourcebook - Nautical/Aviation Handbook |
| 1992 | Twilight: 2000 Sourcebook - Heavy Weapons Handbook<br>Twilight: 2000 Referee's Screen |
| 1993 | Twilight: 2000 Adventure - Operation Crouching Dragon |
| 1994 | Twilight: 2000 Adventure - Rendezvous in Krakow (Vistula Epic 1) |

| | |
|---|---|
| 1998 | GURPS Traveller Core Rules |
| 2010 | Traveller Deckplans - 20-Ton Launch<br>Traveller Deckplans - 30-ton Ship's Boat<br>Traveller Deckplans - 30-ton Slow Boat<br>Traveller Deckplans - 40-ton Pinnace<br>Traveller Deckplans - 40-ton Slow Pinnace<br>Traveller Deckplans - 600-ton Subsidized Liner<br>RPG Floorplans - Private Railroad Car, 1900-1935<br>RPG Floorplans - Roman Taverns, ca. 79 AD<br>RPG Floorplans - Small Hotel, 1900-1940 |

## Shared Design Credit (42 titles):

| | |
|---|---|
| 1975 | Caesar's Legions |
| 1980 | Traveller Supplement 7- Traders & Gunboats |
| 1981 | Traveller Supplement 8- Library Data (A-M) |
| 1982 | The Traveller Adventure<br>Traveller Supplement 11- Library Data (N-Z) |
| 1983 | Traveller Module 1- Tarsus (boxed) |
| 1984 | Traveller Alien Module 2- K'kree<br>Twilight: 2000 V1.0 Core Rules |
| 1985 | Twilight: 2000 Adventure - Black Madonna<br>Twilight: 2000 Adventure - Free City of Krakow<br>Grognard 463<br>Twilight: 2000 Adventure - Pirates of the Vistula<br>Twilight: 2000 Adventure - The Ruins of Warsaw<br>Twilight: 2000 Sourcebook - US Army Vehicle Guide |
| 1986 | Traveller Alien Module 7- Hivers<br>Twilight: 2000 Sourebook - RDF Sourcebook |
| 1987 | 2300 AD Sourcebook - Ships of the French Arm.<br>Twilight: 2000 Sourcebook - Soviet Vehicle Design |
| 1988 | 2300 AD Sourcebook - Equipment Guide.<br>Space: 1889 Core Rules |
| 1989 | 2300 AD Sourcebook - Earth/Cybertech<br>Space: 1889 Adventure Anthology - Tales from the Ether<br>Twilight: 2000 Sourcebook - NATO Vehicle Guide |
| 1990 | 2300 AD Adventure - Rotten to the Core.<br>Twilight: 2000 Sourcebook - American Combat Vehicles Handbook<br>Twilight: 2000 Sourcebook - Soviet Combat Vehicles Handbook<br>Twilight: 2000 Sourcebook - Twilight Encounters |

| | |
|---|---|
| 1992 | Dark Conspiracy Adventure - Among The Dead |
| 1993 | Traveller: The New Era - Core Rules<br>Traveller: The New Era Sourcebook - Path of Tears<br>Traveller: The New Era Sourcebook - Players' Forms<br>Traveller: The New Era - Brilliant Lances<br>Traveller: The New Era - Fire Fusion & Steel<br>Twilight: 2000 v2.2 Core Rules |
| 1994 | Traveller: The New Era Sourcebook - Star Vikings<br>Traveller: The New Era - Smash & Grab<br>Traveller: The New Era - World Tamers Handbook |
| 1995 | Traveller: The New Era Sourcebook - Aliens of the Rim |
| 2001 | GURPS Traveller Alien Races 4<br>GURPS Traveller Modular Cutter<br>GURPS Traveller Planetary Survey 1 Kamsii<br>GURPS Traveller Planetary Survey 2 Denuli<br>GURPS Traveller Planetary Survey 5 Tobibak |

## Editor

| | |
|---|---|
| 1979-1985 | **Journal of the Travellers' Aid Society**, Game Designers' Workshop. 24 issues. Editor. |
| 1985-1995 | **Challenge Magazine**. Game Designers' Workshop. 57 issues (numbered 25 through 77). Variously: Editor (2 issues), Managing Editor (18 issues), Associate Editor (13 issues), Consulting Editor (22 issues). Apparently uncredited on two issues. |
| 2000-2015 | **JTAS Online**. Steve Jackson Games. 475 issues (weekly Jan 2000 through Aug 2001; biweekly thereafter). Editor. |

# SPACE BAZAAR

At the waypoints and space ports of the Third Imperium – just as in the towns and cities of old Earth – there are gathering places where merchants, hawkers and peddlers sell their wares. Oddities from far off worlds, prototype weapons and armour and curious plants and animals are all available for the right price.

The properties of some items are accurately described and explained in a manual. More often, however, the old adage 'buyer beware' is all too appropriate. Now and then, a find of exceptional worth may be acquired from a merchant who has no idea what he has stumbled upon.

Whether it is a 'star boot sale' or a grand auction, there are all sorts of bargains to be had by Travellers with sharp eyes and the knowledge of how to strike a deal.

## >> SECTION 1: ALIEN ORGANISMS <<

Many bazaars and markets specialise in the acquisition and sale of alien life forms. They may be collected as pets or guardians, used for biological research, or for a host of other reasons.

### Curas Worm

Curas worms are symbiotic organisms that live inside the digestive tracts of other animals. In exchange for the food they siphon off from their hosts, they provide greatly increased regenerative capabilities.

So long as a curas worm is well fed – this requires the host organism to double its usual consumption of food and water – it produces regenerative chemicals and enzymes which are distributed throughout the host's system.

As a result of this process, an injured host recovers from wounds more quickly. A host maintaining an active lifestyle recovers from injuries after one hour's rest as though they have taken a full day of rest. A host taking a full day of rest recovers 2D + END DM worth of characteristic points.

| Item | TL | Kg | Cost |
|---|---|---|---|
| Curas Worm | - | - | Cr2500 |

## Daskaryn Egg

Ferociously protective of creatures they perceive as part of their pack, daskaryn are in some ways the perfect guard-beasts. Once hatched from an egg, daskaryn use an acute sense of smell to assimilate information about their brood-siblings. Many free traders take a daskaryn on board as a ship's pet and 'guard dog'. They can be 'ship-trained', though do tend to get restless on longer voyages.

Any creature that nestles up to a hatchling within the first 2D hours of its life becomes part of its pack. From this point onward, the daskaryn will do all that it can to protect its kin – even laying down its own life if required.

Daskaryn resemble feathered, slightly reptilian wolverines. They have warbling voices that can produce bird-like tweets and whistles when they are happy, and deeper growling sounds to indicate they are angry or feel threatened. A daskaryn that has already hatched is of little value as it will no longer bond with new creatures, but daskaryn eggs are typically sold for Cr500.

| **Animal** | **Hits** | **Speed** |
|---|---|---|
| daskaryn | 28 | 7 m |
| **Skills** | Athletics (dexterity) 1, Melee (natural) 2, Recon 1, Persuade 1, Survival 2 | |
| **Attacks** | Teeth (2D) | |
| **Traits** | Armour (+2) | |
| **Behaviour** | Scavenger, Intimidator | |

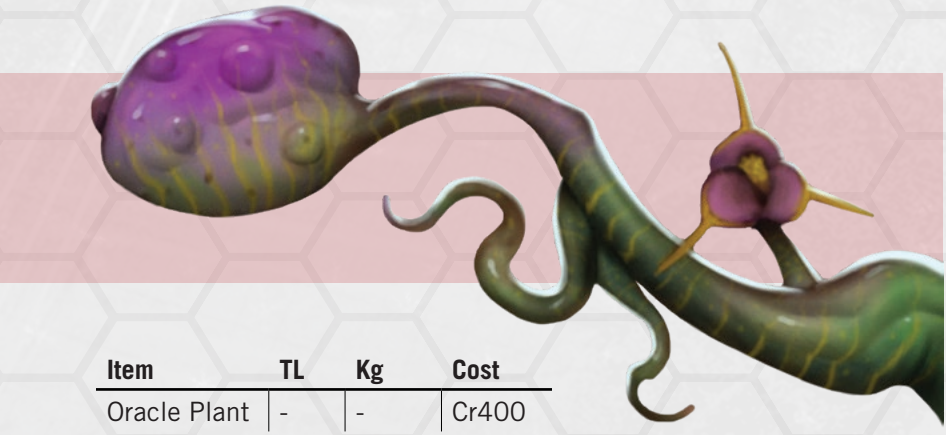
## Oracle Plant

Oracle plants contain hallucinogenic chemicals, which certain cultures believe facilitate visions – both of other places and of the future. In fact, the consumption of oracle plant stems stimulates the parts of the brain controlling psionic abilities.

A Traveller with no psionic talent (PSI 0) who consumes the stems of an oracle plant experiences vivid and debilitating hallucinations for 10D minutes. It will only be by pure coincidence that some of the events glimpsed in their visions might turn out to be relevant to the future, as their mind will simply be extrapolating likely outcomes or musing on recent events.

A Traveller with PSI 1+, but who has never received training, may experience a genuine vision. To determine whether or not this occurs, the Traveller should test to see whether they acquire Clairvoyance – and only Clairvoyance – as if they had just received psionic training (see page 196 of the Traveller Core Rulebook). If successful, the Traveller permanently acquires Clairvoyance and experiences their first use of the talent during the vision. If unsuccessful, the Traveller becomes locked inside a nightmare hallucination for 10D minutes, during which time they are rendered comatose. At the end of the nightmare, the Traveller permanently reduces their PSI by -1.

A Traveller with a PSI 1+ who has already received training may consume oracle plant stems to temporarily boost their abilities. The Traveller feels light-headed for 1D minutes (suffering DM-1 on all checks) after first eating the stems, but once this passes they benefit from DM+2 on their next PSI-related check, so long as the check is made within 24 hours of consuming the stems.



| Item | TL | Kg | Cost |
|---|---|---|---|
| Oracle Plant | - | - | Cr400 |

# >> SECTION 2: ALIEN ARTEFACTS <<

Many of the so-called alien artefacts picked up at stalls and markets are nothing more than flotsam and jetsam from ancient civilisations. Some however – such as those presented here – are genuine treasures, the like of which Travellers dream of finding.

No prices are listed for these items – the sky really is the limit, and they could sell for tens of thousands, or even millions. However, if their function has remained a mystery to the seller, they may just be found for as little as Cr2D x 100.

## Purification Globe

This 30cm silver sphere is able to create a safe zone where most organic life is able to survive. Once activated, the sphere neutralises all toxins, bacteria and viruses which would be harmful to the Traveller holding the sphere. It also screens out harmful radiation and is able to modify the temperature – up or down – by as much as 200 degrees kelvin, in order to best suit the needs of its owner.

The range of these purification effects extend as much as 3 metres in all directions from the globe.

The globe cannot produce gas – it may only filter an existing atmosphere of harmful microbes and such like – so it cannot protect a Traveller from vacuum or within an atmosphere which is itself unable to sustain the wielder.

Activation of the globe requires it to be held and the Traveller to concentrate on starting it up. This takes a single round. Thanks to an internal energy source, it can run indefinitely.

## Holographic Map

Stored inside an innocuous looking item such as a disk, crystal or ornament is a three-dimensional map of an uncharted region of space. The holographic projector which reveals the map will remain dormant until a specific condition is met. Typical examples include:

- Being held by a member of a certain race
- Being held by someone with PSI 1+
- Being exposed to radiation from a certain type of star
- Being exposed to a certain pressure
- Hearing a command phrase spoken aloud

Once the trigger condition is met, a fully interactive, holographic star map is projected into the air. There is no way to be certain of the map's accuracy, but it may well reveal undiscovered stars, worlds, asteroid belts and so forth. To the right Traveller, such information could be very valuable.

## Interpreter

This tiny gelatinous ganglion works by attaching itself to a Traveller's vocal chords and extending tiny filaments up into their brain. It then greatly enhances both the creature's ability to learn and understand new languages and generate the necessary sounds to speak such languages.

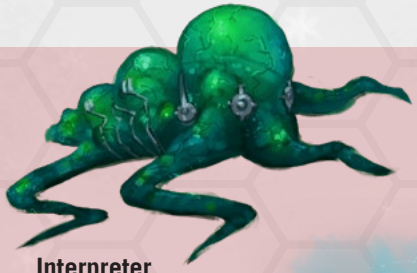
Typically, the interpreter remains dormant until swallowed. From there, it makes its own way to the vocal chords and implements whatever neural connections are required to function properly.

After only 4D hours of exposure to a new language, a Traveller with an interpreter will acquire this language at a skill level of 0. If the Traveller continues their exposure to this language, their skill level will increase by +1 every D3 days, to a maximum skill level of 2.

## Psi-Mask

This potent artefact was devised by a race with no psionic abilities of its own, but feared those of its enemies. It is half black, half crimson with narrow slits for the eyes and mouth. A tiny gravitic device allows it to float in place.

A creature trying to use a psionic ability against someone wearing a psi-mask suffers DM-2 to their PSI-related check. Anyone – including the wearer of a psi-mask – who tries to use a psionic ability within 10 metres of this artefact suffers DM-1 to any PSI-related check.



Interpreter

Holographic map

Psi-Mask

## Exo-bionic Glove

Resembling an insectoid claw made from green and silver metal, this gauntlet was most likely designed as both a weapon and badge of office. Situated just behind the knuckle joints of the index and middle fingers, and built into the workings of the glove, are a retractable blade and venom-projector.

The knuckle blade may be extended or retracted with the use of a minor action. The venom projector is both poisonous and corrosive. If it successfully damages a living creature, the target must resist the poison effects by passing a Very Difficult (12+) END check or suffer an additional 1D damage (ignoring armour) for an interval of 1D rounds.

In addition to providing the use of these weapons, the glove enhances the wearer's grip and physical strength. Any checks making use of the augmented hand (which includes melee attacks) benefit from this, granting a temporary bonus of STR +3.

| Weapon | TL | Range | Damage | Kg | Cost | Mag. | Mag. Cost | Traits |
|---|---|---|---|---|---|---|---|---|
| Exo-bionic Glove | - | - | - | 1 | - | - | - | - |
| - Knuckle Blade | - | Melee | 2D | - | - | - | - | - |
| - Venom Projector | - | 15 | 3D | - | - | 6 | 500 | - |


## Gene-splicer

This machine is a collection of odd glass tubes, wires, pumps, circuits and needles, just small enough to be held by a single adult male. The splicer works by taking a genetic sample from two separate creatures and synthesising a formula that will transform the physical form of one subject to match the other.

The effects of the metamorphosis are permanent, though a counteragent may be formulated from the original subjects' DNA which reverses the process.

A Traveller undergoing a gene-splicing transformation enters a cocoon formed from a resin secreted through the skin. 1D hours later, they emerge in their new form.

The transformed Traveller acquires the STR, DEX and END of the sampled creature – along with any natural weapons, armour or other traits. However, they maintain their own INT, EDU and SOC, along with their memories and skills.

Each day a Traveller spends in its new form increases the likelihood of genetic decay. When the transformation first occurs, the referee should secretly roll 1D. After this number of days has elapsed, the Traveller begins to lose 1 point of either STR, DEX or END per day until they resume their original form. Determine which characteristic is reduced at random. If these reductions reduce a characteristic to 0, the Traveller dies.

In addition, if this genetic decay reduces one of the Traveller's characteristics below their original score (i.e. before the transformation), this damage becomes permanent and will not be recovered even if the Traveller is later returned to its original form.

# >> SECTION 3: ARMOUR <<

Although the widespread availability of armour allows Travellers to be shielded against harmful environments and weapons, there are certain locations and situations which are so unusual as to require specialised forms of protection.

## Chrysalis Armour

By employing a lightweight frame of supports woven into the fabric of an everyday garment, chrysalis armour is able to fold out and retract in much the same way as a beetle's wing. Once deployed, it covers vulnerable body parts with a translucent plastic film that is both extremely durable and supple.

Favoured by those who do not wish to openly don armour, chrysalis suits can move between their retracted and unfolded state with a minor action.

| Armour Type | Protection | TL | Rad | Kg | Cost | Required Skill |
|---|---|---|---|---|---|---|
| Chrysalis Armour | +6 | 13 | - | 1 | Cr7000 | None |

## Rhino V Assault Shield

Fashioned from an exceptionally tough alloy, the Rhino V is a personal shield that can deflect fire from all but the most powerful of weapons. It is designed to be carried ahead of a Traveller who is advancing upon an enemy position.

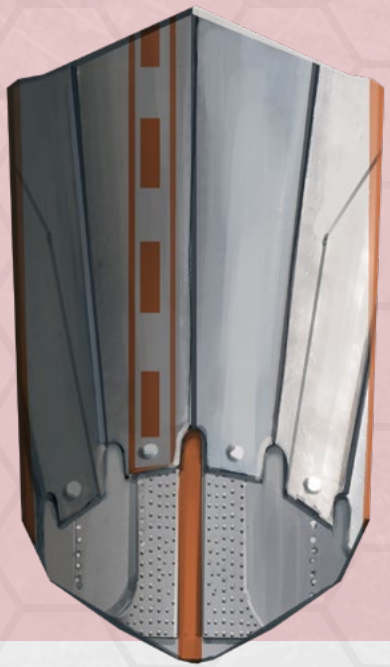
The Rhino V provides additional Protection against all attacks from the front, in addition to any Protection offered by armour the Traveller is already wearing.

Due to the bulky nature of the Rhino V, a Traveller using one may not dodge incoming fire or use the shield to parry blows. In addition, if the Traveller has STR of less than 9, only one minor action may be used to move in every round.

| Armour Type | Protection | TL | Rad | Kg | Cost | Required Skill |
|---|---|---|---|---|---|---|
| Rhino V Assault Shield | +10 | 9 | - | 12 | Cr2000 | None |

Chrysalis Armour

Rhino V Assault Shield



Woodpecker Autopistol

# >> SECTION 4: WEAPONS <<

Whether it is under or over the counter, there is always a lively trade in weaponry. For Travellers looking to gain an edge over their enemies, purchasing a uniquely modified weapon or something recovered from an alien world may be just what is needed.

## 'Woodpecker' Autopistol

Disregarding all protocols for balancing and maintaining a weapon, the firing rate of this autopistol has been significantly increased. As a result, it can deliver far more firepower than most weapons its size, but has a severe recoil that requires a strong grip to control.

| Weapon | TL | Range | Damage | Kg | Cost |
|---|---|---|---|---|---|
| Woodpecker Autopistol | 9 | 10 | 3D-3 | 1 | Cr500 |

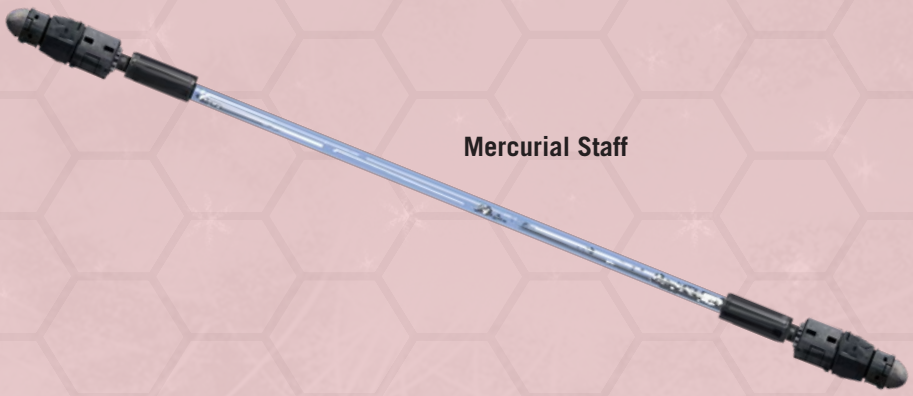
| Magazine | Magazine Cost | Traits |
|---|---|---|
| 9 | Cr15 | Auto 3 |

## Mercurial Staff

Utilising a blend of super-light plastic polymers fashioned around a hollow, liquid metal-filled core, this weapon is able to deliver an extremely hefty blow. As it is swung – at great speed due to its lightness – the liquid metal rushes towards the end, increasing the force of impact. The metal used in the construction of these weapons is approximately five times denser than mercury and has a correspondingly greater 'hit'.

| Weapon | TL | Range | Damage | Kg | Cost | Traits |
|---|---|---|---|---|---|---|
| Mercurial Staff | 9 | Melee | 2D+3 | 2 | Cr1000 | Smasher |

Mercurial Staff



Bio-gloop Gun

Nova Gun

# >> SECTION 5: ALIEN WEAPONS <<

One of the most tantalising aspects of finding an alien weapon can be an uncertainty regarding its capabilities. Taking a merchant's word for it is never a good idea, and a demonstration is highly recommended. Though notoriously diffcult to maintain and repair, many Travellers regard an alien sidearm or blade as a badge of honour – and will pay top-credit to own one.

## Bio-Gloop Gun

This organic-tech carbine, into which the wielder slots his forearm, fires blobs of acidic blue gunk. Though the range of these projectiles is limited, they rapidly digest organic matter. However, bio-gloop has only a limited effect against non-organic materials. Amongst other things, this makes it safe for use aboard space ships.

The Protection afforded by armour that is non-organic in origin (in most instances, everything except leather) is tripled when hit by bio-gloop.

| Weapon | TL | Range | Damage | Kg | Cost |
|---|---|---|---|---|---|
| Bio-Gloop Gun | 12 | 15 | 5D | 3 | Cr7500 |

| Magazine | Magazine Cost | Traits |
|---|---|---|
| 15 | Cr125 | - |

## Nova Gun

Wherever this weapon first originated, its angular design speaks of a culture prizing elegant simplicity. A shot from a nova gun creates a bright rainbow-hued beam of light.

Containing a capacitor which must be allowed to charge for 1 round before each shot is fired, the nova gun is a weapon unsuited to frantic firefights but has found use as a sniper rifle. A nova gun includes an x-ray laser sight as standard.

| Weapon | TL | Range | Damage | Kg | Cost |
|---|---|---|---|---|---|
| Nova Gun | 13 | 550 | 4D+3 | 7 | Cr22000 |

| Magazine | Power Pack Cost | Traits |
|---|---|---|
| 100 | Cr2000 | Scope, Zero-G |

# BATTLE FLEETS OF THE MARCHES

The Spinward Marches lie at the outer edge of Imperial territory. It has frontiers with the Zhodani Consulate and Vargr Extents, and with smaller powers such as the Darrian Confederation and Sword Worlds Confederation. Such a region can never be free from the threat of invasion, in addition to more common insurrection, rebellion and piracy faced by regions well inside the Imperial frontiers.

It is Imperial policy to position sufficient naval assets within a sector to deal with most threats without requiring reinforcements to be sent from neighbouring areas. In the event of a major confrontation these 'warfighting' formations would be expected to defend as best they could until additional fleets arrived; in peacetime they deter enemies and reassure friends.

Naturally, the allies and enemies of the Imperium maintain their own naval forces, which are typically organised in a similar manner. These fleets have clashed in the past and may again; Sword Worlders versus Darrians, Imperials versus Zhodani or Vargr… or a general conflagration involving all the powers of the region. In such an event the battle fleets of the Marches will be the first to engage the enemy.

## SHIP AND FORCE ORGANISATION

In theory, the organisation of an interstellar naval force follows a simple ship-squadron-fleet progression, with individual vessels assigned to squadrons and squadrons grouped into fleets. This is useful for administrative purposes, but it is not always possible – and often not desirable – to put together a neatly organised squadron with exactly the right number and type of vessels.

For small operations, a naval force is usually formed by detaching the necessary vessels to get the job done from larger formations. This might be a single ship in some cases, but more commonly will be a group of warships and supporting vessels. Larger tasks may be undertaken by one or more squadrons, possibly grouped into a fleet.

Temporary formations are designated by the term 'task' in their title.

**Task Unit**: A single vessel
**Task Group**: A group of 2-6 vessels, usually of differing types, operating together
**Task Force**: A larger force, usually composed of vessels of differing types.

Some task forces remain in existence for many years, with vessels rotating out to other duties. However, a long-term force is normally given the title of squadron, even if composed of many different kinds of ship. Thus the term squadron can mean either a neat, formally organised component of a fleet or a long-standing force comprising whatever ships are available.

The distinction is normally apparent from the squadron's title; the 2099th Destroyer Squadron is a formal administrative formation whilst the Andor Blockade Squadron is a deployed force. A ship type and/or a number normally indicates a formal squadron; a mission-oriented title suggests the squadron is a placeholder assigned whatever vessels are necessary.

Squadrons contain two to eight vessels of the same general type. The ideal is four identical ships, but this is not always possible. If two of the five available cruisers are notably slower or less well armed than their potential squadron mates, it might be better to create two understrength squadrons than one larger one.

By convention, a four-ship squadron contains two divisions of two ships, with the senior ship of each division providing leadership. In small-ship squadrons, the senior ship of the division (usually the one with the most experienced commanding officer) is the command vessel, but the squadron overall will be led by the senior captain rather than an assigned 'flag' officer. Squadrons of cruiser-sized and larger ships are generally assigned a commodore or admiral as commanding officer. In this case the flag officer commands the squadron as a whole whilst the captain of the flagship commands his vessel.

Some other terms are used from time to time. A collection of minor warships, up to destroyer class, might be termed a flotilla. A flotilla might comprise one or more squadrons as well as individual ships. An entire flotilla will rarely operate together, so the formation is typically an administrative one, with ships and squadrons detached as needed.

# SQUADRON TYPES

Many types of squadron are possible, but those listed here are by far the most common.

## BatRon (Battle Squadron)

Battle squadrons are intended to engage and defeat enemy forces, and are composed of dreadnaughts, battleships or battle riders. It is highly unlikely that a BatRon would deploy without the support of a number of couriers, escorts and tankers, and possibly one or more cruisers. These supporting elements may be grouped into their own squadrons as part of a major fleet.

If supporting a single BatRon, the supporting ships are temporarily designated the BatRon Support Group and placed under command of the senior captain within the support group. The force as a whole will still be referred to as a BatRon however – a light cruiser, two destroyers and three supply ships are insignificant alongside a full battle squadron. Thus when a BatRon is reported as arriving somewhere, it will usually be accompanied by its support force.

## CruRon (Cruiser Squadron)

Cruiser squadrons are the most varied of Imperial Navy squadrons. Heavy or light cruiser squadrons are composed of general-capabilities vessels and can carry out a range of tasks. Cruiser squadrons often support BatRons, ideally without engaging enemy capital units directly, or provide support for assault forces. CruRons are usually broken down to provide a powerful command ship for a task force or carry out operations that do not require a full squadron.

Specialist CruRons such as bombardment or missile cruiser squadrons are, in theory at least, optimised to a particular task. Usually this means all vessels in the squadron are designed for that specialist role, but often a squadron is filled out with more generally-capable vessels. Thus a missile cruiser squadron might in fact include three missile cruisers and a heavy cruiser with a fairly small missile armament. Most CruRons contain a support group including a bulk ordnance carrier and escorts to protect it.

## AssaultRon (Assault Squadron)

AssaultRons are not intended to engage enemy warships. They typically contain a mix of ships tailored to a task rather than identical warships. In general, AssaultRons fall into two categories:

Transport Squadrons are equipped for the transportation and logistical support of ground troops. The emphasis is on transportation capability rather than combat effectiveness, and the squadron will emphasise supply ships over troop transports.

Invasion Squadrons are intended for direct assault on defended worlds. The emphasis is on the ability to get troops on the ground on a hostile world and give them fire support. An invasion squadron will have more troop transports than supply ships, and will usually be assigned more powerful escorts or bombardment vessels.

## TankRon (Tanker Squadron)

The term TankRon is used to refer to any force optimised for the resupply of warships on deployment, since almost all such formations include fuel carriers. Individual tankers and supply ships might be assigned to a task force or squadron, but specialist TankRons are deployed when large-scale fleet movements are required.

## ScoutRon (Scout Squadron)

The term ScoutRon is used to refer to reconnaissance squadrons, which may be covert intelligence-gathering vessels or more conventional warships conducting information-gathering operations. The term is also

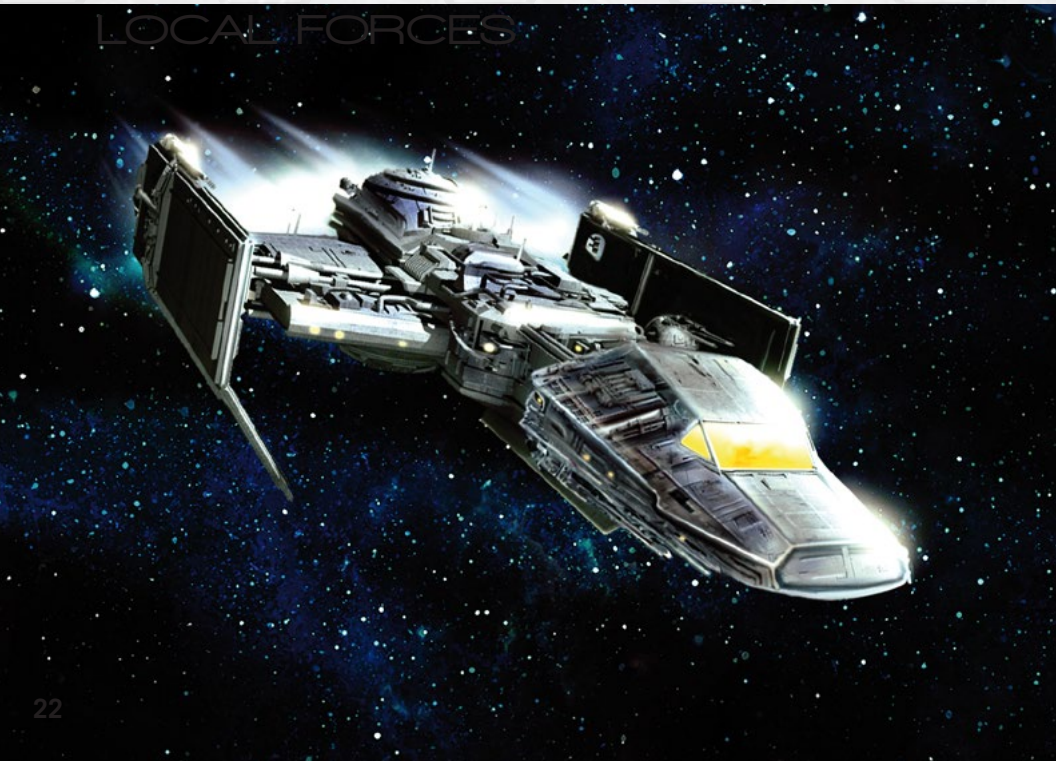
used for formations containing ships on secondment from the Imperial Interstellar Scout Service, which for obvious reasons are usually assigned to these tasks.

## FLEETS

A small naval formation sent to deal with a problem might be termed a task force or identified by the name of its most powerful squadron-sized element. For example, if news reports stated that the 8104th Heavy Cruiser Squadron undertook an operation in the Aramis subsector, this might actually mean a force comprising the cruiser squadron, two destroyer squadrons, and an assortment of supporting vessels was assigned. Such a force might be led by the senior captain or commodore of the main squadron, or could be assigned a flag officer to command it for the duration of the mission. However, for larger-scale operations where multiple major squadrons are assigned, a formally organised fleet will be created and assigned an admiral of appropriate rank.

A fleet, by definition, contains two or more squadrons of major warships. This might be a CruRon and a BatRon, or multiple BatRons if the situation requires it. A fleet will usually, but not always, include capital ships (dreadnoughts, battleships and battle riders) and whatever supporting assets are required. A small fleet will have a single admiral in overall command from whatever ship he chooses as his flagship. A larger fleet may be subdivided with admirals commanding elements and a more senior flag officer in overall command.





Most worlds that can afford it make some provision for their own defence. This may be nothing more than a couple of fighters or a missile battery near the starport for minor worlds, but those with a major economy may deploy a large force of system defence boats (SDBs) and heavier non-jump-capable warships. The latter are termed monitors, and may be custom built or created by removing the jump drives from an old warship.

System defence forces of this sort are normally referred to as 'the system squadron' in official communications though composition varies a great deal. A force of relatively small craft might be considered a system flotilla; a very powerful defensive formation may even be granted the title of system fleet. These forces are owned and controlled by their homeworld government and prevented by law as well as physical capability from being sent to fight elsewhere.

Some worlds also contribute forces to the fleets of the Imperium. By long-standing tradition these are called colonial assets. The origins of this term are debated by historians, with no definitive answer available, but whilst inaccurate it is traditional and widely accepted. Colonial vessels tend to be of lower capability than their navy counterparts – they are often cheaper or obsolete vessels transferred from the navy – but increase the coverage a sector fleet can manage. This is particularly useful in a security or commerce-protection situation, and frees more potent navy assets for 'warfighting' missions.

The Zhodani Consulate takes a more rationalised approach, with the equivalent of colonial forces being heavily subsidised in border areas to create a local defence based on strategic requirements rather than economic capability and willingness to contribute to regional defence. The naval power of the Sword Worlds Confederation can be considered to be entirely the equivalent of Imperial colonial forces – there is no Sword Worlds navy, other than what member worlds choose to contribute. Likewise, Vargr forces are often comprise whatever vessels can be obtained, without much of an overall plan.

## SPACE COMBAT

The jump drive creates a very complex tactical and strategic situation, since an enemy is able to entirely bypass heavily defended systems at will. Using tankers greatly increases this capability, though sooner or later a fleet will have to obtain its own fuel. This can be done by skimming gas giants in a backwater system before pushing on to a target deep within enemy space.

Similarly, communications lag caused by a lack of instant faster-than-light data transfer means that any information a commander has is inevitably out of date. If a courier arrives from a system just two jumps away with news of an attack, the earliest a response can arrive is four weeks after the battle – even if the fleet was ready to move instantly. It is almost

impossible to bring an enemy force to action by responding to information about its movements.

Squadron and fleet commanders must therefore attempt to predict the actions of their counterparts. This can be done partly by considering the most valuable and vulnerable targets an enemy fleet might aim for, and partly by forcing actions. For all the mobility of a jump-capable fleet, it needs support and resupply, and damaged ships must be sent home for repairs. Bypassing fortified border systems leaves a barrier behind an intruder fleet, which may funnel ships and squadrons through lightly defended areas or require them to marshal in predictable locations to prepare for a jump across the border. It is here that a fleet commander can spring an ambush.

Thus whilst deep raids are possible or even likely, an invader needs to force a corridor into enemy territory in order to protect his line of supply and reinforcement. A major interstellar war tends to be characterised by sieges of fortress worlds in the border zone that cannot be quickly overrun, accompanied by a rapid advance towards strategic assets such as political centres, major industrial sites, and naval bases. Lighter forces will skirmish along the flanks of the main combat zones or harass commercial shipping to weaken the enemy economy.

Concentration of force is the key to success in major fleet actions. A fleet whose battle squadrons are scattered all over the sector will be defeated piecemeal by a more concentrated force, and will not even inflict significant losses on the enemy. A major conflict can sometimes end up taking the form of two major concentrations of warships trying to find one another for a decisive battle, whilst cruisers and destroyers make raids or chase down raiders. The term ‘stalemate’ does not necessarily mean both sides are sitting still; sometimes quite the opposite is true, and every day a fleet spends away from its bases erodes a little of its strength. A weaker fleet can force an enemy to withdraw or come to the negotiating table by avoiding a decisive battle whilst continuing to pose a threat. In the end, a commander who keeps his force concentrated and wields it intelligently will defeat one who merely possesses the biggest and best battleships.

## BATTLESHIPS VS BATTLERIDERS

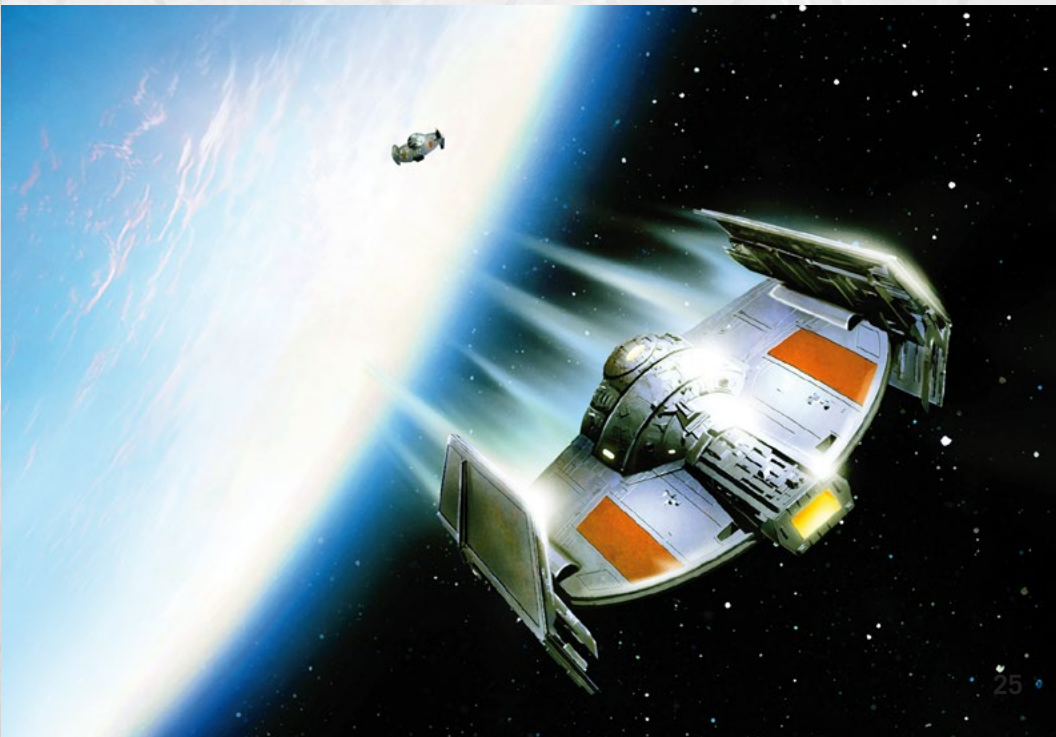
In theory, a force of non-starships will defeat an equivalent tonnage of starships, as the latter must give up some of their potential in favour of fuel tanks and jump drives. However, the argument is not that simple. A force of battle riders must include a tender to carry them if it is to be able to do more than conduct static defence,

and the tender must be protected. There is also the consideration that a force of battle riders cannot easily jump out if a fight is going against it. The riders must be recovered, and if the tender is attacked during this process the whole force may be lost.

At present, Imperial thinking is in favour of the more flexible battleship as a capital unit, but battle riders do have useful capabilities. They can be delivered to a fortress system to augment its defences and the tender withdrawn. This leaves the riders stranded if an overwhelming enemy force appears, but in the meantime the system defences are greatly enhanced. The technique is used to bolster systems that absolutely must not be lost, freeing the tender to carry other riders into action or to deliver further reinforcements.

In more mobile operations, a tender/rider force has advantages if its side controls the initiative. For example, a conventional fleet might enter a system and provide screening for a battle rider force which then leads the assault on a heavily defended world. If the enemy is pinned by a need to protect a valuable objective it cannot act against the tenders, freeing the rider force to engage as it pleases.

The battleship vs battle rider debate has been ongoing for centuries, with swings one way then the other. Neither doctrine has yet won out, and it is likely that neither ever will.



# LAST FLIGHT OF THE THEMIS

***Location*: Intelia (C574653-6) Tobia subsector, the Trojan Reach**

The far trader *HighLine Themis* was lost en route to the Tobia Cluster in the Trojan Reach. This route is not without its hazards, but could hardly be considered a dangerous transit. The inquest produced a vague and inconclusive verdict and the matter smells of a cover-up.

Three people are seeking to discover what really happened to the *HighLine Themis*, and engage the Travellers to assist them. The situation is complex however, and all of the investigators have their own agenda.

In fact, *HighLine Themis* was involved in smuggling operations. If this is revealed there might be serious repercussions for the parent company and also for some of the individuals who received insurance or compensation payouts – a ship engaged in illegal activities might not be covered by her insurance policies.

## INTELIA

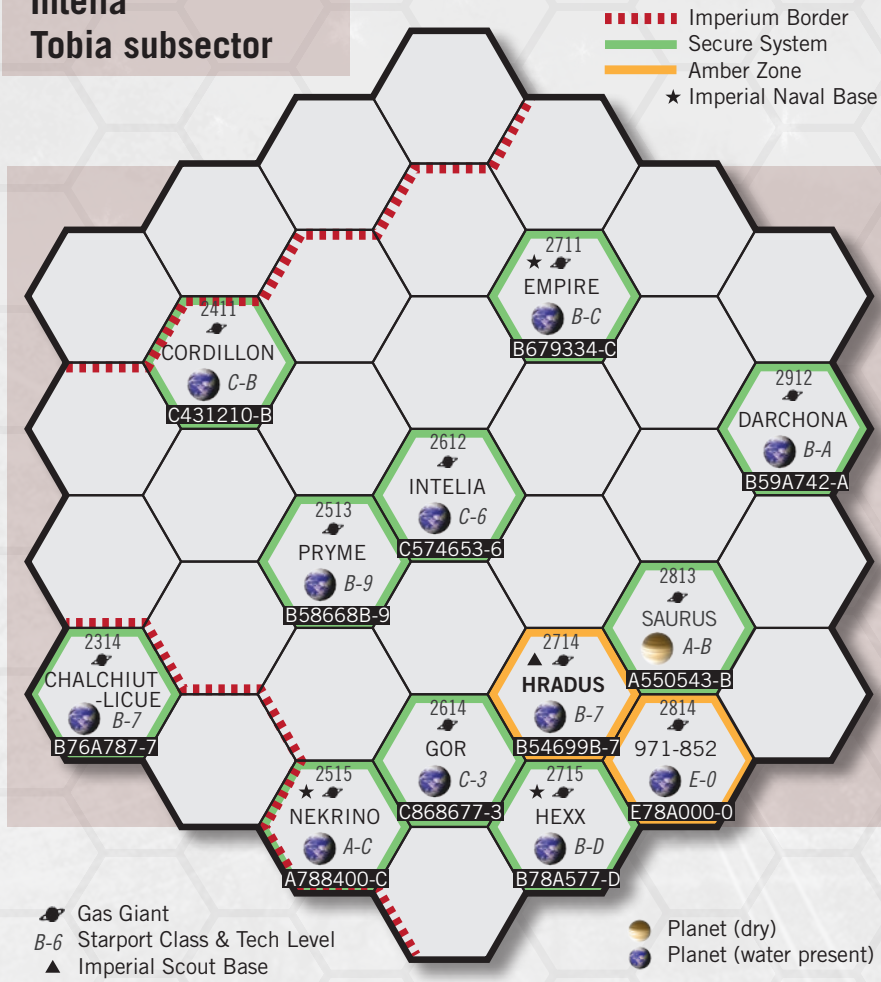
Intelia is a typical backwater world in the Tobia subsector. It has a standard, albeit tainted, atmosphere and sufficient water to sustain a mid-tech population without much outside assistance. The population of seven million is insufficient to create a significant industrial base, ensuring Intelia remains unimportant in both economic and political terms.

The world is sometimes used as jump-2 link for vessels headed into the Tobia Cluster from coreward, though most traffic uses the better-equipped port at Darchona. Those ships that do come through engage in a little trade which brings in offworld Credits, but visits by anything bigger than an itinerant free trader are uncommon.

Much of the population is concentrated around the main starport, which lies close to the Gwydion Mountains and is named after them. The mountains are not normally a barrier to starships attempting to land, but they do contribute to occasional bouts of extremely changeable weather, with snow or rain blown in by gusty winds. The approach to Gwydion Starport has been described as 'notoriously interesting' in starfarers' almanacs for some years, but few serious incidents ever occur.

## REFEREE'S INFORMATION

*HighLine Themis* was recently refurbished by Combined Port Services, a newcomer to the starship-support market trying to create a niche for itself




by offering cut-price refits. CPS can afford to do this only by cutting corners and using substandard materials. Among them is Novyx, a highly versatile material suitable for seat padding, wall insulation, mattresses and the like.

Novyx has not been on the market long, and has already been connected with several incidents of fire aboard starships and installations. It meets all safety standards when used correctly, but the foaming-and-shaping process must be carried out to very precise tolerances. Even slight inconsistencies destroy the material's impressive fire-retardant capabilities.

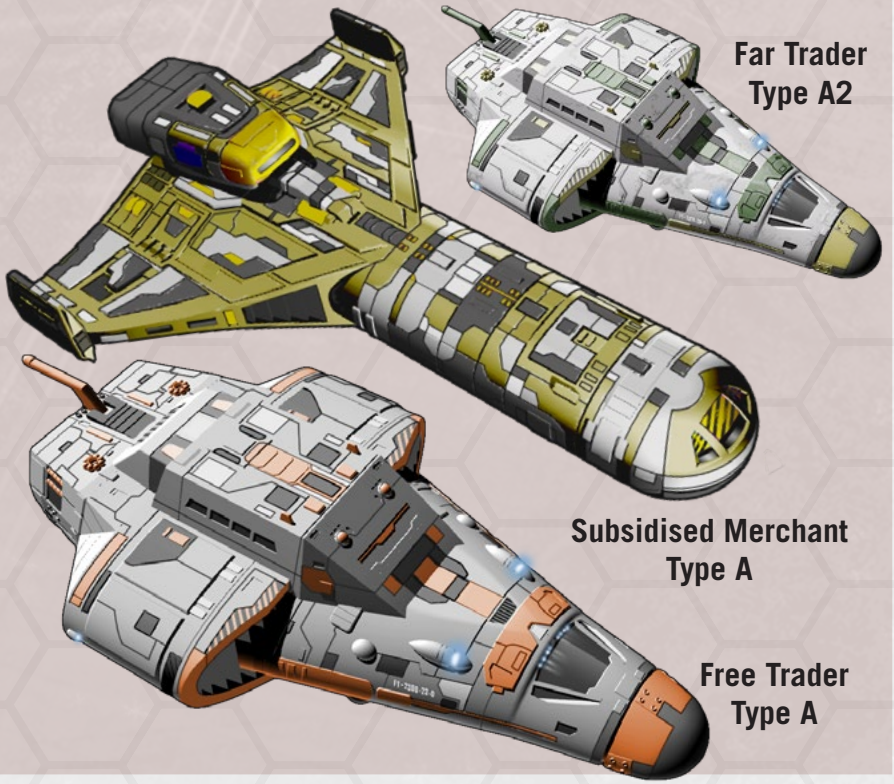
When Novyx burns, it releases a mildly toxic gas which can cause disorientation. This has resulted in fatalities where victims were unable to escape endangered compartments. As a result, any ship or installation using Novyx is subject to stringent testing. CPS avoided this by claiming it had used a different, more expensive, material.

## Library Data

The following is widely available through data terminals and standard encyclopaedia. It can be considered to be reasonably accurate as far as it goes, but simple common sense should indicate that the publicly available information is unlikely to be the whole story.

HighLines Shipping: HighLines Shipping developed from a collective bargaining agreement set up by group of small-ship operators, gradually taking on the trappings of a formal shipping line. Today, the company has over forty interstellar vessels among its assets, though almost all are small. Free traders, far traders and subsidised merchants make up the majority of the company's haulage capability, with three small liners and a large freighter assigned to regular routes.

Most vessels operate on an 'area' rather than 'route' basis, essentially undertaking tramp trading in the manner of an independent free trader but with the backing of a well-established company. HighLines Shipping has agreements with some of the larger players in the local market to pick up the slack in their service. Its captains usually know when and where their services will be required and set up an itinerary that allows them to fulfil these secondary contracts whilst retaining the freedom to chase local opportunities. This model has worked well to date and the firm is respected as reliable and honest.



**Far Trader Type A2**

**Subsidised Merchant Type A**

**Free Trader Type A**

# --THE LOSS OF *HIGHLINES THEMIS* --

**--Findings of the Court of Inquiry,**
**--Gwydion Starport, Intelia/Tobia:**

-During final approach to Gwydion Starport, the far -trader HighLine Themis reported encountering -severely gusty conditions resulting in a rapid loss -of altitude. HighLine Themis was temporarily lost to -starport sensors against the Gwydion Mountains. -HighLine Themis returned to contact moving at high -speed in an uncontrolled manner, almost immediately -contacting the ground and resulting in total loss of -the vessel.

-All fatal casualties occurred in the -frontal section of the ship. Some fire damage was -observed by investigators, though suppression -systems appear to have functioned normally as did -emergency beacons.

-Sensor data confirms windy conditions. There are no -indications of abnormal atmospheric events.

-Investigation determined that HighLine Themis contacted -a terrain feature whilst manoeuvring to correct rapid -descent, resulting in total loss of control. Subsequent -nose-first collision with the ground occurred too -quickly for the pilot to react.

-Testimony of the sole surviving crewmember, -who was in the aft engineering spaces, indicates that the -vessel was 'jerking around, probably due to wind' and -under full power when the stern of the vessel pitched -violently upward. Contact with the ground occurred -almost immediately. Survivor stated that he owed his own -survival to the pilot's attempt to correct the downward -pitch of the nose, and that he felt HighLine Themis -answering her helm during the last seconds before impact.

-This inquiry concludes that HighLine Themis encountered -adverse atmospheric conditions which may or may not -have been compounded by pilot error. It is not possible -to demonstrate blame to any satisfactory degree, and -therefore that a verdict of Accident Due To Adverse -Conditions be entered without comment on the actions of -crewmembers.

# THE SITUATION

HighLines Shipping is a reputable firm, but that does not mean its personnel are above the occasional foray into smuggling or carrying minor items on a personal basis without going through proper channels. On the occasion of her loss, *HighLine Themis* was attempting to make delivery of a small quantity of high-value goods to a client on Intelia.

The method of delivery was one which will be familiar to Travellers who have been involved in smuggling or trying to counter it. On approach to Gwydion Starport, the pilot of *HighLine Themis* reported encountering gusty conditions and a sudden loss of altitude. This took his ship into the radar clutter caused by the mountains, at which point he accelerated to an illegally high approach speed.

The intent was to get the ship on the ground before local officials realised she was there, allowing the contraband to be offloaded before customs inspectors could reach the ship. With an excuse for irregularities in the landing already in place, the crew would at most be faced with a token fine.

This trick had worked before, and would have on this occasion had an unrelated disaster not struck. During the ship's recent refurbishment, substandard padding materials had been used in the bridge seating, along with inadequate safety checks when reassembling the pilot's chair. A bare contact started a fire which would not have taken hold had proper materials been used, and released toxic vapour which caused the pilot to become dizzy and light-headed.

*HighLine Themis* was genuinely encountering gusty conditions. This, coupled with the fact that she was boosting hard and too low on her approach, sent her careering steeply towards a ridgeline short of the port. Her pilot attempted to correct, but too late and in an erratic fashion. *HighLine Themis* clipped the top of the ridge in a tail-down posture, driving her nose sharply downward which caused her to accelerate into the ground. All but one of the crew and passengers aboard the vessel were killed.

# THE INQUIRY

A backwater port such as Intelia will usually lack a proper accident investigation team. This creates a choice between leaving a wreck sealed off for several weeks before investigators can arrive, or co-opting whomever is available for a more urgent inquiry.

In the case of *HighLine Themis*, a team was put together from the officers of a couple of passing far traders and some starport officials. Their investigation was rather cursory, and resulted in a verdict of 'blame not proven' which vaguely suggests that pilot error was probably a factor but there was insufficient evidence. The loss of *HighLine Themis* was recorded as a tragic accident and the insurers paid out.

Most of those involved in the rushed and rather ham-fisted inquiry were entirely happy to see the matter concluded so they could move on and conduct business elsewhere. Some of those involved had another motive, however. The ship was a semi-regular visitor to Intelia, and her crew were at least familiar to many of those investigating the crash. When it became apparent that the ship had been involved in smuggling, they faced a dilemma.

If the vessel was engaged in illegal activity, the insurers might refuse to pay out, and in any case the pilot's reputation would be destroyed. With nothing else they could do for their friend, some of the investigators agreed to push the matter through to a hasty conclusion without properly recording or analysing the evidence. As a result, there are questions surrounding the loss of *HighLine Themis*, but next-of-kin received insurance payouts and the reputations of the crew remain intact.

## A NEW INVESTIGATION

The Travellers are approached by a lawyer acting for three people connected with the *HighLine Themis* and her crew. All have concerns about the verdict of the inquiry, and want to learn the truth of what happened. They have access to a similar Type A2 far trader loaned by HighLine Shipping, but would be willing to travel aboard the Travellers' ship if this is more appropriate.

The Travellers are to convey the three interested parties to Intelia and assist them in gaining access to the wreck of *HighLine Themis*. The Travellers will then help carry out an investigation into the crash, which may mean interviewing some of the personnel involved in the original inquiry.

The primaries in the investigation will pay double standard salaries for crew and will meet expenses for fuel and other reasonable costs during the investigation. If the Travellers discover evidence of a cover-up or other inappropriate behaviour on the part of the inquiry team, they can expect a bonus starting at Cr10000 and perhaps more if HighLines Shipping is able to act upon the information gathered.

## THE THREE PRIMARIES

There are three primaries in the investigation. Each has a secret. The first part of their description is apparent to everyone. The section in italics is for the use of the referee, and reveals their true motivations.

**Alicia Martik**: Alicia is the sister of the deceased pilot. She is knowledgeable about starships and has served as an apprentice astrogator aboard one. Alicia has publicly stated that there was something wrong with the verdict – her brother was simply too skilled to fly his ship into a ridge, storm or no storm. Her stated goal is to remove any suspicion that the incident was her brother's fault. She maintains it was an accident that nobody could have avoided.

Alicia Martik

Ensal Haive

Var Lindahl

*Alicia knew about the packages being smuggled and wants to retrieve them. She would like to ensure her brother's reputation is not damaged, but she is a pragmatist who will put financial gain ahead of this ideal.*

**Ensal Haive**: Ensal is a relative – 'actually a sort of third or fourth cousin a couple of times removed, but we were close as kids' – of the ship's astrogator. He holds a (very) small stake in HighLine Shipping, as do some of his relatives. All of them want to know what really happened.

*Ensal is not a relative of any of the crewmembers, and his stake in the company was recently purchased to legitimise his inclusion in the investigation. In fact Ensal is a representative of Combined Port Services, and wishes to determine if his company was in any way responsible for the incident, and to suppress evidence if it was.*

**Var Lindahl**: Var is a security officer with HighLines Shipping. His wife was a passenger aboard *HighLine Themis* and was killed in the crash. For both personal and professional reasons he wants answers, and is openly sceptical about the findings of the inquiry. He sometimes argues with Alicia, since she is adamant her brother could not have caused the crash, and Var thinks pilot error might well have been a factor.

*Var is a former Imperial Army intelligence officer, with good investigative skills. He has seen many vague reports in the past that were covering for something, and is deeply suspicious of the inquest's findings. Although he has the detachment and habits of a career intelligence analyst, he also has a great deal of anger. If he becomes convinced that a given person is responsible for his wife's demise he might become violent.*

## GWYDION STARPORT

Gwydion Starport is a small place, with just a handful of officials and a modest workforce. First impressions are of a typical minor port; personnel are competent enough for the most part but there are no high-end experts in any field on permanent contract. The port occasionally hires starfarers who are between trips or berths to fill out its roster. These vary considerably in skill and motivation.

## THE SURVIVOR

Currently, Davin Vaaskin – former engineer aboard *HighLine Themis* – is working as a maintenance technician at the port. He is bored and wants to move on, but there are few ships and none have had an opening. A job offer or even just passage to a bigger port where there are more opportunities (and where he is not 'that guy who crashed') would go a long way towards persuading him to open up to investigators.

Davin was not aware of the smuggling, but the ship had made 'peculiar choices of approach pattern' on other occasions and he had suspicions.

He is a very honest man who would never condone any sort of illegal activity, so was kept out of the loop by his crewmates.

Davin recalls that – according to his repeaters in the drive room – conditions outside were a bit rough but nothing serious. He recalls a few sudden jerks that felt more like the pilot was pitching the ship than the result of gusts, but at the time he assumed the ship was avoiding bird flocks or some idiot out of their approach lane.

*HighLine Themis* dropped very rapidly and accelerated hard, which seemed strange, and then he felt the tail section hit the ground. He was in the process of strapping into his chair at the time and was well restrained during the crash, sustaining an array of minor to moderate injuries rather than being killed. He is not sure how long he was unconscious after the crash.

Davin was able to reach the bridge after regaining consciousness but found the whole front of the ship smashed in. Everyone was dead and the forward compartments badly distorted. A rescue team from the port arrived soon after Davin got the bridge valve open. He was taken to hospital almost immediately and has only visited the wreck once since. This was in part to retrieve personal effects and in part to guide the investigation party.

Davin was not impressed with the inquiry, but he believes that it was just a bunch of people doing the best they could. He does not suspect a cover-up, but is sure the investigators will have missed something. He will assist the Travellers if they give him a reason to, such as a ticket offworld. However, his assistance will mainly take the form of confirming that nothing seems out of the ordinary aboard the wreck. He can confirm details such as the recent refit if asked, but really has no idea what is relevant and what is not – as far as he is concerned his crew were killed in an accident with many questions remaining unanswered, and he does not know which ones to ask.

## THE INQUIRY PANEL

Most of the members of the inquiry were starport officials and technicians or crewmembers from other vessels. A few have moved on since, but those that remain are – on the surface at least – cooperative. Their initial data and findings are a matter of public record, and they will talk the Travellers through it if convinced that the matter is any of the Travellers' business.

The findings of the panel are, superficially at least, reasonable. However, it is obvious that the inquiry was rushed to a conclusion. Everyone involved will say the same thing about that – they were all needed at their own posts and had to get the job done as fast as possible. This is not untrue, but in some cases the investigators had an ulterior motive.

Some of the investigators knew or suspected that smuggling was involved and preferred to hide that fact. These individuals will attempt to quietly obstruct the Travellers and prevent them from gaining access to the wreck – or at least limit the amount of time they have available aboard.

## SIMULATIONS

There is no facility on-planet to run a detailed simulation of the conditions on that day, but a starship's computer could – if properly programmed – made a credible job of it. Any such analysis will take a few days but eventually demonstrated that conditions capable of moving the *HighLine Themis* in the manner she is supposed to have moved, or forcing her to take the actions she did, would be extremely unlikely. The day was indeed gusty but the ship would have been able to cope. Thus either the pilot made an enormous mistake or carried out some manoeuvre that took his ship fast and low, despite the fact that this was prohibited by starport regulations.

## THE WRECK

The wreck is a few kilometres outside the port, and still off-limits as a crash site. The area is sparsely inhabited so there have been few visitors, though it is apparent that people have been in and out of the ship.

The vessel was sealed up as much as possible after the inquiry, but the smashed-in forward section permits access to anyone trying hard enough. If the Travellers manage to obtain official permission to access the wreck they can use the ship's codes and open her airlocks. If not, they will have to find a way in.

The ship is, as might be expected, trashed. Loose objects slid and freight containers shifted, wrecking the cargo bay. The shipment of agricultural equipment in the hold is thoroughly destroyed, but investigation will show it is indeed what the manifest says. Similarly, there are no indications of anything aboard that should not be, unless the Travellers know where to look.

The smuggled packages are small – just two nondescript holdalls filled with advanced electronic components – and concealed behind a movable panel which has not been found. Alicia knows where to look and will try to secure the bags as soon as she can.

Of all the compartments in the ship, only the bridge shows signs of fire damage. If the Travellers investigate this they will find that the fire seems to have started in the pilot's seat and only taken hold after the crash. This is a very strange occurrence; fires would normally start in major components if caused by a crash – high-powered sensors and similar

equipment would be far more likely to short-circuit and catch fire than a control panel on a crewmember's chair.

This might be enough to arouse suspicion, and Ensal will certainly want to take a closer look at the upholstery. A detailed investigation will show the point of origin of the fire was a badly refurbished control set on the pilot's chair which set a section of the padding alight, and this will point to problems with the CPS refit. The chair was not on fire as such when the crash occurred though; the upholstery was simply smouldering internally. The fact that the pilot was burned post-mortem whilst his body lay in his seat might make the Travellers realise that a fire in the cockpit was not the sole cause of the crash.

Experienced Travellers are likely to spot that the bridge and other parts of the ship were recently refurbished. This is confirmed by records of spaceworthiness inspections in the log.

The bridge flight logs have been accessed, and a thorough analysis suggests that *HighLine Themis* made manoeuvres not forced by the wind. A pilot might drop low to avoid gusty conditions but accelerating hard at the same time would be reckless. The ship's movements are not consistent either with being blown around or wanting to avoid it. It instead appears that the pilot chose a low and fast approach.

These facts would have been apparent to anyone conducting a proper investigation. This might suggest incompetence, cover-up, or simply a lack of time to do a proper job.

## CONCLUSIONS

The Travellers and the three primaries in the investigation have access to some or all of the following facts.

- The ship dropped low and fast voluntarily, though this may have been an ill-conceived attempt to get under the wind.
- The fire was localised to the pilot's station on the bridge and appears to have started within his chair.
- *HighLine Themis* was carrying contraband.
- The pilot's chair and other components have been refurbished to a poor standard and Novyx is present – but the ship's spaceworthiness certification says other materials were used.

The reality of the situation is that *HighLine Themis* made a mildly hazardous manoeuvre in order to facilitate illegal activity. The crash was caused by faulty wiring and unsafe materials, but could not have occurred without the vessel being placed in a dangerous situation.

The three primaries all have their own agendas and will react differently. Even when the Travellers figure out what happened during the last flight of the *HighLine Themis* they will have to make some decisions. Insurance payouts may be cancelled if evidence of illegal activity is discovered, and there are possible repercussions for the parent company as well.

The Travellers might decide that the truth is more important than anything, or may choose to exploit the information they uncover. CPS and HighLine Shipping both have something to lose if information gets out, and the officials who ran the original inquiry could face censure if their efforts are found to be inadequate.

How the Travellers choose to handle the inquiry and use what they find is up to them. What happens after that is, as always, at the discretion of the referee.

# GITHIASKIO

The Githiaskio, also known as Squids or Whooiihee in imitation of their whistling speech, are a race of intelligent aquatic sophonts who originated on Githiaski in the Antares sector. Today, they are widespread throughout Imperial space and beyond. Despite their very different physiology, their psychology is remarkably similar to that of humans.

The Githiaskio are bisexual, semihomeothermic, and give birth to single live young. They average 2 to 2.5 metres in length, about half of which is tentacle, and are about 50 cm in diameter at their thickest point. They have roughly cylindrical bodies, which taper into a muscular swimming 'fluke' at one end and divide into six tentacles around a feeding orifice at the other. A cluster of sensory organs is mounted mid-way along the body. Githiaskio eyes focus poorly; their prime sense is sound. They are very sensitive to light and waterborne chemicals.

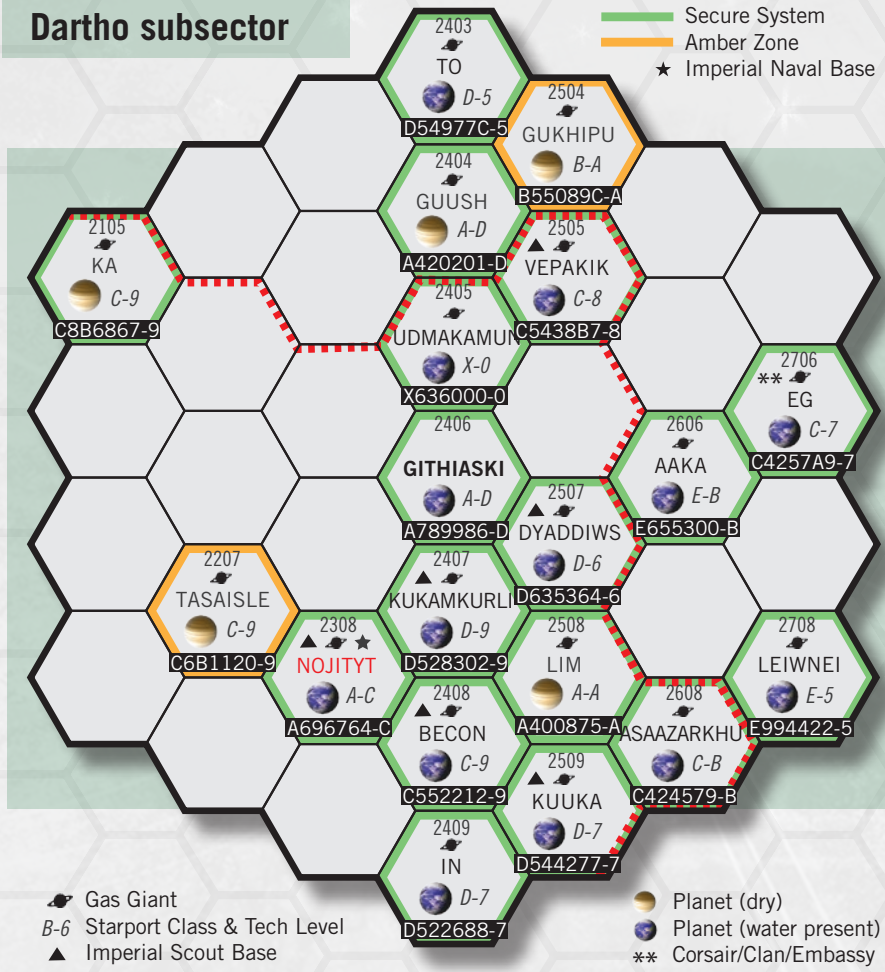
Githiaskio speech has been described as 'whistling underwater'. It is quite complex, relying heavily on pitch intonation. Githiaskio and humans can learn to understand each other's speech, but neither can speak the other's language other than in a very primitive manner. This is further complicated by the fact that one language is spoken underwater and the other in air, requiring microphones and speakers suitable for both environments.

Since Githiaskio require oxygen for their respiration, a world with a breathable atmosphere (for humans) is necessary to support them. Most worlds with a thin or better atmosphere are acceptable, and they can tolerate a high salinity. However, certain chemicals make conditions intolerable for Githiaskio.

Githiaskio can tolerate depths of up to 700 metres, assuming normal 1g conditions. However, sudden drops in pressure create problems similar to nitrogen narcosis (also known as 'the bends') experienced by humans. Higher pressures require the use of cumbersome protection, but when using such equipment Githiaskio can dive deeper than a similarly equipped human.

Githiaskio bodies have almost neutral buoyancy. They can swim at 15 kph for long periods, or twice that in short bursts. Exposure to air is not immediately fatal, but a Githiaskio will suffocate in a few minutes if taken out of water. Irritation and dehydration also occur, but can be tolerated for a time if water is available to breathe. Gravity is also a problem for Githiaskio. Deprived of the support of water they will suffer internal injuries even if an environment suit is available. However, they are entirely

## Githiaski
## Dartho subsector




at home in microgravity conditions and suffer no ill-effects over prolonged periods in zero-g.

## HISTORY

The Githiaskio name for their planet can best be represented as Llaaaiihoin (with a heavy vibrato on the first syllable, and high pitch on the last), but the human name is used in most databases. Githiaski is a mineral-poor world on the fringe of the Lesser Rift. The First Imperium paid little attention to the world; its intelligent inhabitants were not suspected to exist until accidental contact with a merchant ship during the Long Night.

As the world has only a few small continents, mostly consisting of salt marshes and swamps, regular contact with the Githiaskio came only with the rise of the Third Imperium.

The Githiaskio attracted scientific interest once their curious evolutionary history came to light. Githiaski's seas teem with life, but forms analogous to vertebrates never appeared; rather the dominant phylum has developed a supportive inner 'cage' of gristle-like material. The Githiaskio's distant ancestors may have resembled Terran marine worms which bury themselves in the seabed, leaving only a bundle of tentacles exposed; their closer relatives were certainly squid-like in form.

The Githiaskio evolved from a race of omnivore scavenger-gatherers, inhabiting shallow seas which had abundant marine vegetation. Intelligence seems to have appeared when a period of heavy volcanic activity produced repeated shifts in marine currents and serious water pollution. Small family groups of Githiaskio were forced into closer cooperation for wider searches for food, and intelligence became a key survival feature. The parallel here with human history is certainly interesting, particularly as this ancestry has produced creatures so intellectually similar to Humaniti that human psychoanalysis will work on Githiaskio.

When contacted, the Githiaskio had developed a sophisticated culture, but not high technology civilisation. This was due to a lack of metals, which are effectively impossible to refine or work underwater. Their skill in stonework and the use of vegetable fibres was impressive, however, and is still admired. Since the Imperium expanded into their region of space, the Githiaskio have become valued (if independently-minded) citizens, trading their unique underwater and zero-g abilities for high-technology items that have enabled them to develop an advanced society in a remarkably short time.

## SOCIETY

At the time of first contact the Githiaskio had developed several distinct, complex cultures which could be considered to be around TL1-2. They lacked any metal items except for an occasional nearly pure lump which could be worked into something useful or decorative. Various aquatic animals had been domesticated, and sailing vessels developed with submerged hulls and exposed rigging.

The major cultures of Githiaski still display distinct identities, but dealings with the Imperium have encouraged development of a coordinating bureaucratic organisation with some power over the various nations. Nonetheless, Githiaskio societies are no more fit subjects for generalisation than are human equivalents.

Aware that they need imported technology to build and maintain an advanced society, the Githiaskio have produced organisations dedicated

to earning interstellar currency. Thus, the world has a small but well-advertised tourist industry, and Githiaskio are frequently found working off-planet in underwater jobs of all kinds. They are also particularly adept at zero-g work and often involved in orbital construction projects. Some can also be found in academic posts.

The Githiaskio have little in the way of their own armed forces. There is a police force with some paramilitary capabilities but for the most part the Githiaskio rely on the Imperium for protection and provide personnel to the Imperial Navy and Marines. Vessels in the region of space around Githiaski are often greeted by highly agile Githiaskio boarding parties. Specialist zero-g and underwater regiments are maintained by the Imperial armed forces in several regions, and have a long and honourable tradition of excellence.

## GITHIASKIO TRAVELLERS

Githiaskio can be encountered throughout Charted Space and are psychologically so similar to humans that almost all their activities are identical – only conducted underwater. They work best with tools made specifically for them, but can use human equipment if necessary. If so, Githiaskio will not benefit from a positive DM for DEX but suffer no penalties.

Custom tools and weapons for Githiaskio tentacles cost much the same as human equivalents in the region around Githiaski, but farther afield they are harder to find and must usually be custom-made at +10-60% (2Dx5%) increase in cost. Sealed environments such as spacecraft, installations and so forth can be outfitted for Githiaskio at a cost of Cr2000 per ton of living space converted.

Special armour, other than battle dress and vacc suits, can be produced at +50% over cost. However, simple sealed suits do not provide enough support for Githiaskio to operate out of liquid under gravity. Powered 'support suits' can be created at a cost of Cr300000, but these are still uncomfortable to use. Support suits are clumsy compared to the natural fluidity of Githiaskio, and are thus highly frustrating for the operator.

Githiaskio are thought to have the same potential for psionics as humans, but adopted the prevailing attitude to their practice. As a result, there has been little investigation into their potential or any special talents they may have.

### Careers

Githiaskio can enlist in any career. Those with civilian backgrounds will usually have been trained on their homeworld, and their skills will be geared towards their own species. Melee skills will almost invariably be used with spears, which are still the standard hunting and self-defence weapon for 'backwoods' Githiaskio.

Those with military or mercantile training will possess less parochial knowledge, but nonetheless have slightly unusual career histories. Interstellar organisations have many uses for aquatic beings, but have to make special arrangements; the army and marines tend to form submarine specialist units attached at corps or army level as needed. Scouts and merchants tend to assign Githiaskio to special exploratory ships or base duty on water worlds.

## Characteristics

All characteristics are determined as described on page 8 of the *Traveller Core Rulebook*.

## Traits

All Githiaskio Travellers possess the following traits:

**Highly Agile**: In zero-g conditions and when underwater, Githiaskio gain DM+3 to all actions concerning movement, agility, fitting through narrow spaces, and any other situation where their unique physiology gives them an advantage.

**Many Arms**: In water or microgravity, Githiaskio can use can use two tentacles to maintain handholds or to facilitate movement, leaving four free to carry out other tasks. In unarmed combat, up to three tentacles can be used to strike each round. This equates to three melee attacks each dealing 1D-1 damage.

# 4518TH LIFT INFANTRY

The 4518th Lift Infantry is one of the most famous military units in the Spinward Marches. Also known as The Duke of Regina's Own Huscarles, it is a unit of the Imperial Army yet also a private bodyguard and fighting force.

Most units of the Imperial Army are raised and funded by the Imperial authorities and are known as Imperial Formations. Other forces are provided by their owners under a system of treaties and warrants that slot the formation into the Imperial Army command structure for the duration of its deployment. Units not equipped or trained to Imperial Army standards are termed Attached Formations, whilst those designed to operate alongside Imperial troops using the same equipment and ammunition are known as Contributed Formations. Whilst in Imperial service a Contributed Formation will function like any Imperial unit and is subject to the same regulations; they can be returned to 'home service' at the end of deployment.

## HOUSEHOLD TROOPS

The 4518th Lift Infantry began as a bodyguard force for future dukes of Regina, who at the time held baronial status. Its personnel were drawn from veterans of the Imperial armed services, but the unit itself was not a combat force. Its primary role was to secure the baronial residence and industrial installations, with part of the unit trained to perform ceremonial duties. Overall, personnel were armed security guards rather than soldiers.

The move from personal security force to military unit began in the aftermath of the Civil War. The Spinward Marches was, like many other sectors, stripped of much of its naval and ground forces. Not only was this an external security risk but piracy and lawlessness also rose rapidly. Some members of the Imperial nobility exploited the situation to expand their own influence, even engaging in private wars against opponents.

As the Imperium lacked the resources to tackle the problem, the Civil War's victor, Arbellatra Alkhalikoi, granted some nobles the right to expand their forces and use them to restore order. Among them was Baron Caranda of Regina. It is not known if Caranda was a trusted friend or loyal opponent, but it is clear that Arbellatra respected him.

With the assistance of a cadre of Imperial Marines, Baron Caranda was able to rapidly recruit a large force and train it to an acceptable level. This was not easy for anyone involved, and to this day the training process used

by the 4518th remains notoriously tough. However, by late 622, the Baron of Regina's Own Huscarles, as the force was then known, could field five battalions of infantry and an assortment of small specialist formations which either provided technical functions or acted as placeholders for units that would be fielded eventually.

The Huscarles were used to suppress opponents of the new regime or those deemed not to be acting in the best interests of the Imperium. It is not clear how disloyal or how much of a threat to stability many of these opponents were, but this was an era of civil war and resources were stretched too thin to take risks. All that can be said with certainty is that Baron Caranda was on the winning side.

Order was not immediately restored when Arbellatra won the Civil War. Some nobles and world governments refused to accept the situation. Menorb was one such, and troops required to fight a lengthy ground campaign were simply not available. However, elements of Baron Caranda's personal forces had begun training as jump troops capable of landing directly from orbit.

First Battalion made the now-famous drop on Menorb, landing in urban areas to quickly seize centres of governmental control. The meteoric assault from orbit was costly, especially since the troops involved were inexperienced and had just completed jump training. However, losses in getting on the ground were offset by the paralysis of the Menorb government and military. The world fell with no significant resistance.

The spectacular success of the Menorb Campaign undoubtedly demoralised other potential rebels, and the strategic situation improved rapidly. Caranda was elevated to Marquis of Regina immediately and Duke of Regina when Arbellatra formally became Emperor.

## POST-CIVIL WAR

The Imperial Army was reorganised after the Civil War, and at the same time it became fashionable to refer to household troops as Huscarles. This is generally assumed to be in emulation of the Duke of Regina's force, but it may be that the practice was already in place at the time and became more widespread during the early post-Civil War period.

The Duke of Regina's personal force was permanently assigned the status of a Contributed Formation and integrated into the command structure of the Imperial Army. Since at the time most of the unit's battalions were equipped as lift infantry (infantry with grav transport), the unit was designated the 4518th Lift Infantry. At any given time, elements of the force will be on Imperial duty whilst the remainder are retained in the personal service of the Duke. The 4518th is one of very few 'Not A Day' formations among the army's Contributed Forces; there has never been a

day since 629 that at least some personnel wearing the cap badge of the 4518th have not been on duty somewhere in Imperial service.

At times the 4518th has deployed en masse; more commonly its sub-units are scattered all across the sector carrying out a range of duties. Some of its actions are undertaken through the Imperial Army command structure, some on behalf of the Duke who was in turn under orders from the Emperor, and some 'privately' on behalf of the Duke alone. The unit is equally efficient in all cases.

## LATER SERVICE

Like other Imperial Army formations, the 4518th has served in many capacities over the years. Sometimes the deployment of army units to a troubled area is sufficient to bring about stability, or forces may deploy to assist after a disaster. A troubled region must sometimes be pacified by force – or a least the threat of it. The unit has also served in anti-piracy campaigns and provided security and manpower to civil engineering projects.

First and Second battalions have always been equipped as Lift Infantry, but other elements of the unit have changed their role over time. The size of the regiment has also varied, generally between three and seven battalions, plus supporting forces. The 4518th has always retained a small space force of fighters attached to its headquarters.

During the Psionics Suppressions the 4518th formed specialist anti-psionic units, and retained an anti-psionic cadre thereafter. These personnel are currently attached to the regiment's headquarters as part of the intelligence apparatus, but plans exist to provide more widespread training at need. The regiment served in both the Third and Fourth Frontier Wars. In the Third Frontier War the 4518th fought in the Jewell subsector, mainly on Farreach and Foelen, whilst in the Fourth Frontier War it was mainly assigned to Menorb, Boughene and Pixie.

## REGIMENTAL ORGANISATION

Regimental organisation is primarily for administrative purposes. It is highly unlikely that the entire force would deploy as a single unit, but if it did its internal organisation would suffice for command and control in the field. More commonly, elements of the regiment are detached for duty alongside other forces or alone, as part of a command structure tailored to the situation in the field.

Each element of the regiment can be deployed to provide specialist functions as needed. In theory, the regimental headquarters alone might be sent to take command of a force already in existence, though more commonly the regimental HQ accompanies the largest sub-element of the regiment in the field, or remains at base to oversee the unit as a whole.

## REGIMENTAL HQ

- Mobile Command Post — G/CARRIER
  - Commander
    - Drivers, technicians & guards
- Mobile Command Post — G/CARRIER
  - Assistant to the Commander
    - Drivers, technicians & guards
- Mobile Command Post — G/CARRIER
  - Intelligence Officer
    - Drivers, technicians & guards

**Attached Units**

- Artillery Battery
- Medical Unit
- Fighter Squadron
- Ortillery Platforms

## GRAV MOBILE COMPANY (X5)

**Lift Infantry**

(Fire Support)

- A — ALPHA COMPANY
- β — BETA COMPANY
- Y — GAMMA COMPANY

**Support Units**

- Δ — DELTA COMPANY
  3 PLATOONS

**Epsilon Company**

- Artillery Battery
- E
  - Anti air/armour missiles
  - MLRS

**Battalion HQ**

- Support
  - Logistics Transports
  - Repair Workshop

## Regimental Headquarters

Regimental HQ consists of three g/carriers, each equipped to serve as a mobile command post. Usually one vehicle is assigned to the regimental commander, one to his assistant, and one to the intelligence officer. Around thirty troops are assigned to HQ as drivers, technicians and guards. A space fighter is normally assigned for reconnaissance purposes to the HQ as well, though it is supported by the fighter squadron.

The regimental HQ is normally accompanied by attached units. These include an artillery battery identical to those supporting the infantry battalions and a medical unit with its own vehicles. The regiment's fighter squadron is also attached to the HQ, along with three modified system defence boats which serve as ortillery (orbital artillery) platforms. Any of these units can be detached at need.

## Lift Infantry Battalion

At present, the regiment has three lift infantry battalions (First, Second and Fourth battalions), each consisting of five fully grav-mobile companies. Alpha, Beta and Gamma companies are lift infantry, riding armoured grav transports which provide fire support. The company command vehicle also has limited electronic warfare capability.

Each battalion is supported by a grav tank company (Delta company) consisting of three platoons of four tanks, one of which carries the platoon commander. Usually one tank platoon is assigned to support each lift infantry company, but this can vary depending upon circumstances.

The fifth company (Epsilon company) is a grav-mobile artillery battery with two sections of four vehicles each. First section is armed with multiple-launch rocket systems (MLRS), while the second section has guided missiles suitable for anti-air or anti-armour use.

Battalion headquarters includes additional support elements such as logistics transports and a small workshop to maintain vehicles used by other elements of the battalion.

## Lift Cavalry Squadron

The 4518th can field two lift cavalry squadrons, each with four troops. A squadron is the armoured-vehicle equivalent of a battalion in Imperial parlance and a troop the equivalent of a company, though some forces use different definitions.

Each lift cavalry troop contains three lift cavalry platoons of identical composition. A platoon has two grav tanks, an infantry component riding a grav APC, and a platoon command vehicle based on the standard APC but equipped for command and fire support functions.

## 4518TH

Squadron x2

Troops x4

Lift Cavalry Platoons x3

Infantry/Grav APC

Grav Tanks x2

Platoon Command

Fire function

## JUMP TROOPS BATTALION

Jump Troops

Assault Troops

A ALPHA COMPANY

β BETA COMPANY

Ω GAMMA COMPANY

Support Units

Δ DELTA COMPANY

Grav Tanks

Fire Support Platoon

MLRS-mounted Grav Vehicles

Spport Section

Repair Workshop

## Jump Troops Battalion

The jump troops battalion is an infantry force trained and equipped to make a direct assault from space. Alpha, Beta and Gamma companies are jump troops; there are no vehicles assigned to these companies and, given the nature of orbital assault operations, personnel are expected to be self-reliant and capable of displaying a high degree of initiative.

Delta Company is equipped with grav tanks and can accompany assault troops down from orbit. There is also a fire support platoon armed with MLRS launchers mounted on grav vehicles and a support section which maintains and repairs the battalion's equipment.

# INSIGNIA

The current regimental crest for the 4518th Lift Infantry Regiment (the Duke of Regina's Own Huscarles) was authorised in the year 1000 by the Imperial Division of Heraldry, and reflects the history of the unit since its establishment. The emergent unicorn (more properly called the 'bridled steed') refers to the constellation spanning the Cronor and Jewell subsectors, and recalls locations in which the Huscarles operated during the fierce battles of the Third Frontier War. The cutlass thrusting across the crest signifies the unit was originally formed from Imperial Marine cadre and that a significant proportion of the its troop strength is still derived from marine veterans or temporary assignments. The Imperial sunburst at the upper right commemorates the unit's period of Imperial service during the opening days of the Fourth Frontier War. Finally, blazoned across the bottom of the crest is the unit motto: Strike From Space. The phrase was inspired by the jump troops' exploits on Menorb in the days immediately after the Civil War.


THE DUKE'S REGINA'S OWN HUSCARLES REGIMENTAL CREST

# FOXHOUND AIR SUPERIORITY FIGHTER

Introduced to the market at a time when it was fashionable to name military equipment after ancient Terran equivalents, the Foxhound is a successful design which is in service with many governments and mercenary forces. It was developed as an air superiority fighter with no air-to-ground role, intended to drive lower-tech and equivalent aircraft out of the battle zone.

A secondary atmospheric interceptor role was envisaged, in which the Foxhound would be able to engage spacecraft. Any conventional aircraft operating in this role can only be of marginal effectiveness, but the ability of the Foxhound to carry advanced aerospace defence missiles does allow mid-tech governments to pose some threat to misbehaving spacecraft.

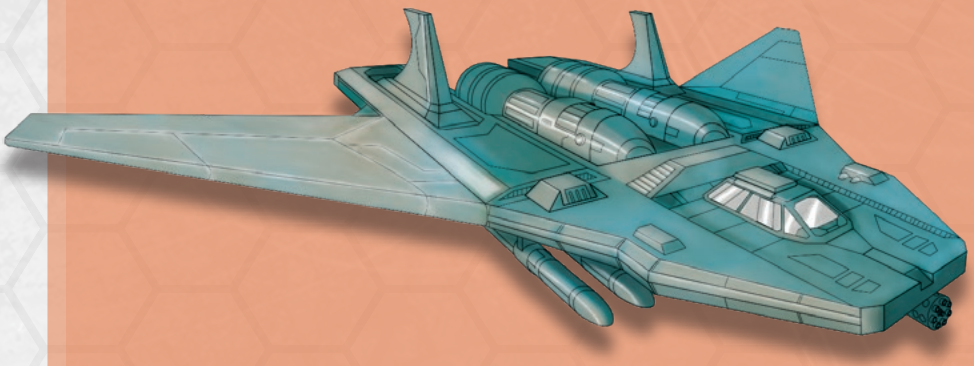
The Foxhound uses a swing-wing configuration, folding the wings back for maximum speed – usually in a steep climb whilst racing to intercept an intruder – and sweeping them forward to allow greater manoeuvrability in a dogfight or during landing. The power plant is a standard fuel-cell arrangement, and most systems are standardised to allow interoperability with whatever missiles or other accessories are available. The engines do not require oxygen, enabling the Foxhound to operate in any environment where a suitable gas mix is available for propulsion. Foxhounds have been effective in carbon-dioxide atmospheres and similar environments where an air-breathing engine could not function.

The crew of two are housed, along with the most critical electronic components, in a pressurised ejection cocoon. The aircraft is armed with a 20mm rotary cannon on a fixed forward mount, for the use of the pilot, whilst other weapon systems are operated by the second crewmember. The cannon has a dedicated fire control system, while the second fire control system is for the use of the weapons officer, and can be tailored to a specific weapon before flight. It is normally used to guide air-to-air missiles.

The Foxhound can carry anti-air missiles on low-drag conformal pylons, whose configuration can be rearranged whilst the aircraft is being configured. A standard air-to-air loadout is four anti-air missiles on underwing pylons with a single large long-range anti-air missile that can be carried on a centreline pylon.

The Foxhound also has a 6 Space internal bay for weapons, normally three additional missiles or two long-range ones, but it can be configured instead for a retractable light laser cannon mount. Alternatively, the whole bay can be dedicated to a single Gyrfalcon orbital defence missile. In this mode, the Foxhound enters a steep climb until the atmosphere becomes too thin to provide enough thrust, launching the missile at the peak of its altitude. These heavy missiles are capable of inflicting damage on a lightly protected starship or alternatively attacking an orbital installation, satellite, or similar target.

## FOXHOUND AIR SUPERIORITY FIGHTER



| Weapon | Range | Damage | Fire Control |
|---|---|---|---|
| Rotary Autocannon | 1 | 6D | +2 |

| Magazine | Magazine Cost | Traits |
|---|---|---|
| 500 | Cr1200 | Auto 5 |

## FOXHOUND AIR SUPERIORITY FIGHTER

| Armour | |
|---|---|
| Front | 8 |
| Sides | 8 |
| Rear | 8 |

| Traits |
|---|
| - |

| | |
|---|---|
| TL | 8 |
| Skill | Flyer (wing) |
| Agility | +2 |
| Speed (cruise) | Supersonic (Subsonic) |
| Range (cruise) | 2000 (3000) |

| | |
|---|---|
| Crew | 2 |
| Passengers | - |
| Cargo | - |
| Hull | 6 |
| Shipping | 14 tons |
| Cost | MCr 3.24 |

| | |
|---|---|
| Equipment | • Autopilot (improved),<br>• Communications System (improved),<br>• Computer/1,<br>• Control Systems (improved),<br>• Decoy Dispenser,<br>• ECM (improved),<br>• Ejection Cocoon (2 person),<br>• Fire Extinguishers,<br>• Life Support (short term),<br>• Navigation System (basic),<br>• Sensors (improved, hardened) |
| Weapons | • Fixed Mounts (2 Spaces, front) x 4<br>• Fixed Mount (3 Spaces, front)<br>• Bay (6 Spaces, front) |

| Equipment | |
|---|---|
| Autopilot (skill level) | 1 |
| Communications (range) | 500 km |
| Navigation (Navigation DM) | +1 |
| Sensors (Electronics (sensors) DM) | +1 |
| Camouflage (Recon DM) | - |
| Stealth (Electronics (sensors) DM) | - |

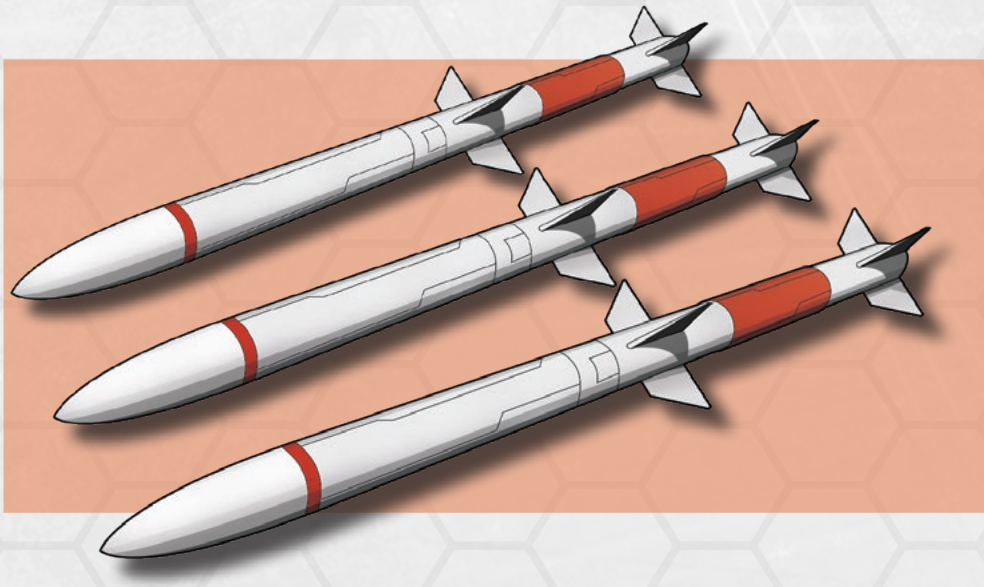
## Gyrfalcon Orbital Defence Missile

Constructed at TL10 for the general market, the Gyrfalcon missile uses 'black boxed' electronics and standardised interfaces to allow it to be launched from a variety of platforms. A standalone ground-launch system can be purchased for Cr100000, requiring 10-20 minutes to reload its launch rail. When fired from a ground launcher, the Gyrfalcon can hit atmospheric targets but cannot reach orbit; it is designed to be carried aloft by a high-performance aircraft or mounted on an orbital defence satellite.

Weapons like the Gyrfalcon missile are greatly outmatched by true starship-grade weaponry, but they enable a mid-tech government to provide at least some defence against orbital attack. The Gyrfalcon is a starship scale weapon, making it devastating against grav vehicles and aircraft. Range in air-to-air or ground-to-air mode is effectively unlimited.

| Weapon | TL | Range | Tons/Spaces | Power |
|---|---|---|---|---|
| Gyrfalcon | 10 | Short | 1/4 | 0 |

| Damage | Traits | Fire Control |
|---|---|---|
| 3D | One Use, Smart | +2 |



# ZHODANI PHILOSOPHIES

*This article was written by Brienshqloriashav, (press attaché for the Zhodani diplomatic mission to the Imperium) shortly before news of war reached Capital.*

The editor of this publication has requested that I compose a short article explaining the philosophies and motivations of my people. In the interests of improved understanding between us, especially in view of the tensions which have almost always existed between the Imperium and the Consulate, I have cheerfully undertaken this task.

The physical differences between our two peoples are well-known, and have been fully dealt with in many fine reference works. I will, therefore, pass over our physical appearance except to correct a few of the more blatant misrepresentations. Firstly, your literature has a disturbing tendency to depict us with heavy eyebrows, a thick beard and either a sinister leer or scowl, as if we were perpetually contemplating some heinous outrage. Let me assure you, the natural variation in the patterns and length of our facial hair is as great in the Consulate as it is in the Imperium. I admit there is a marked tendency of our nobles to sport beards, but not all of us do so. Among us, too, the class you call Intendants (and a great many of our Nobles as well) wear their head hair longer as a mark of distinction. Secondly, contrary to what many of your holographic film directors seem to think, we smile (and even laugh) as often as Imperials. The Consulate is not the gloomy, humourless place which your entertainments seem always to show.

Contrary to what most Imperials believe, we are not robots. Creativity, divergence of opinion, freedom of expression... we have all of these within the Consulate. Our government is not oppressive... rather it is wholly concerned with the well-being of our citizens, both as a whole and individually. In return, our citizens respect, obey, and freely criticise their rulers, as is their duty.

## PSIONICS

I shall turn now to the major difference between our peoples: psionics. It is the possession of psionic abilities which is the root cause of all tension between us. I have dwelt in the Imperium for years, and I believe I have an understanding of Imperials as great as any of my people, yet even I have only begun to understand the depths of the distrust Imperials feel for us. Most of your populace seems to fear psi powers, even though they

have brought our society nothing but benefits (and could yours, if you would but embrace them).

For example, psionics permit us to advance the science of behavioural psychology far beyond the Imperial efforts. Where your scientists must guess what occurs in a subject's mind, our observers can know. Our doctors can be certain of the precise effects of a particular course of treatment, instead of stumbling about in the dark, as yours do. Since such disorders as greed can be cured, there is no need for a Zhodani to steal. Since our citizens learn to be open and free in their opinions (and to respect and accept those of others), there is no need for a Zhodani to lie. Since most anti-social tendencies can be detected and corrected early, there is almost no violent crime within the Consulate.

The idea that we constantly monitor our citizens' thoughts is ludicrous. Privacy is not an unknown and alien concept to us. A citizen's privacy... his personal life, his dreams, his thoughts... are his own, and no one in the Consulate will violate a citizen's right to privacy without good and compelling reasons. In any case, not all of us have the ability to 'read minds' as you phrase it. However, many of us are trained in 'reading' subtleties of body language, speech and behaviour, but these are talents

anyone can learn, with or without psionic abilities (a great number of your own psychiatric and behavioural scientists study and use our techniques, so they can hardly be considered 'evil' by your intelligentsia.

Of course, a citizen's right to privacy does have certain limitations. Our Teverchedle patrols occasionally monitor the general state of certain minds (more or less at random), but this is no more a violation of their privacy than when Imperial police stop and question an Imperial citizen. It is done to detect the beginnings of mental illness, that such illness may be uncovered and treated as early as possible.

Which brings us, in a rather roundabout fashion, to another basic difference between our citizens and yours... their fundamental honesty. In conversations, I have noticed that many Imperials will signal that they are about to speak the truth with a phrase such as 'believe me' or 'to be perfectly frank.' There are no such phrases in our language. They are not needed. Indeed, while we have an intellectual understanding of the concept of 'lie', contact with the actual fact that people exist who willingly convey information they know to be untrue disgusts those of us without special training. Naturally, some of us are often misinformed, and thus convey falsehoods, but these are accidental, and we all strive to be as truthful as possible. Our people believe that the truthful expression of opinion cannot be harmful if it is sincerely and constructively expressed.

Just as the average Imperial citizen would be uncomfortable in the midst of the Consulate, the average Consulate citizen would be uncomfortable in the midst of the Imperium. They can trust no one. They believe themselves to be completely surrounded by liars and thieves. Even if they have no psi abilities, no Imperial will believe them, and they will be shunned as if they have some terrible disease. For these reasons, only those of us with the highest motivations towards peace and mutual understanding can remain long in the Imperium, and even we require special training and education.

It is, of course, understandable that Imperials should fear the exposure of their innermost thoughts. Because of the structure of your society, anti-social thoughts are allowed to form, and grow without hindrance. An Imperial often grows to adulthood without ever receiving the help they need to properly adjust themselves to society, and make the greatest possible contribution to the common good (and to themselves, by doing so). Criminal behaviours grow and fester in their mind... greed, acquisitiveness, violence, hatred, prejudice... and come to dominate their behaviour. Consider what could happen in your society if the energy, the inventiveness that is channelled into criminal pursuits were instead directed to the benefit of all. What a wonderful place the Imperium could be!

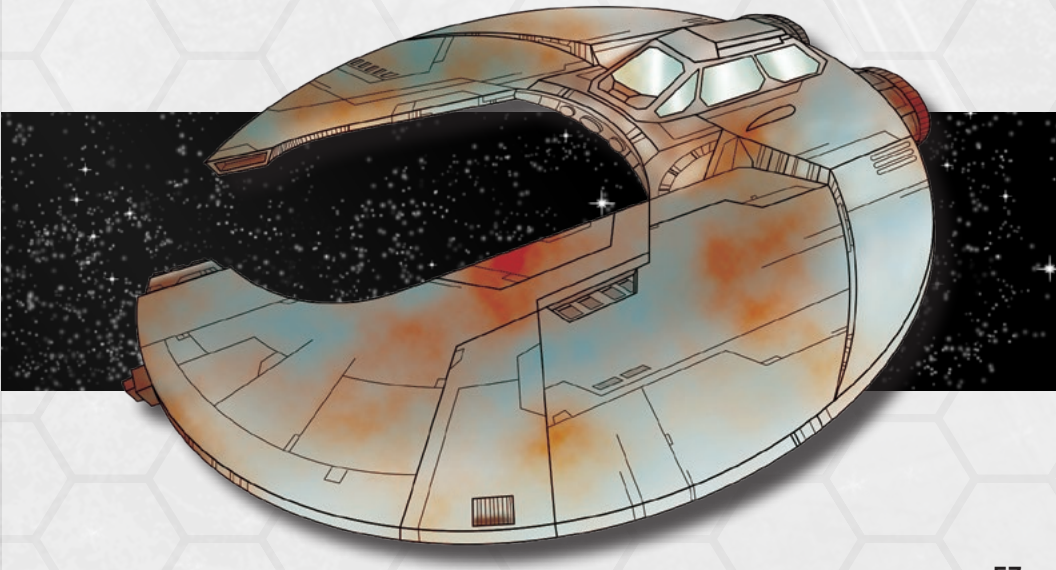
- Brienshqloriashav

# RAMPART ATMOSPHERE-CAPABLE FIGHTER

The Rampart fighter serves a variety of operators under many different designations. It has been called an orbital interceptor, an interface defence platform and various other names that attempt to define its capabilities. Some users consider the Rampart to be a planetside asset, others believe it should be part of the space forces. Some use it as a purely atmospheric combat craft and ignore its capability to operate in open space.

The Rampart is most definitely a spacecraft with aerodynamic features for operations in atmosphere rather than a space-capable vehicle. It is constructed at TL15 in a limited number of facilities, and is too expensive for many operators. This has not stopped the Rampart (and a variety of licensed and unlicensed copies produced at lower Tech Levels) from becoming a popular light fighter across much of Charted Space.

The two-seat Rampart is useful as both a trainer and command fighter, and allows crew to make best use of the craft's electronic warfare package. A single-seat version is also available, with identical performance. The one ton of space freed up by installing only a single cockpit has been used to create a range of variants, not all of which have been successful. Cheaper versions with a more basic computer and software package are also available, benefiting from the Rampart's first-class combat reputation – at least until they have to open fire.



# RAMPART ATMOSPHERE-CAPABLE FIGHTER

| TL15 | | TONS | COST (MCR) |
|---|---|---|---|
| **Hull** | 10 tons, Streamlined, Reinforced | - | 0.9 |
| | Aerofins | 0.5 | 0.05 |
| **Armour** | Bonded Superdense, Armour: 3 | 0.48 | 0.432 |
| **M-Drive** | Thrust 9 | 0.45 | 0.9 |
| **Power Plant** | Fusion (TL15), Power 20 | 1 | 2 |
| **Fuel Tanks** | 40 weeks of operation | 1 | - |
| **Bridge** | Dual Cockpit | 2.5 | 0.015 |
| | Holographic Controls | - | 0.00375 |
| **Computer** | Computer/25 | - | 10 |
| **Sensors** | Military Grade | 2 | 4.1 |
| **Weapons** | Fixed-Mount (pulse laser) | - | 1.1 |
| **Systems** | Countermeasures Suite | 2 | 4 |
| **Software** | Library | - | - |
| | Manoeuvre/0 | - | - |
| | Fire Control/2 | - | 4 |
| **Cargo** | | - | - |
| | | **Total** | 27.50075 |

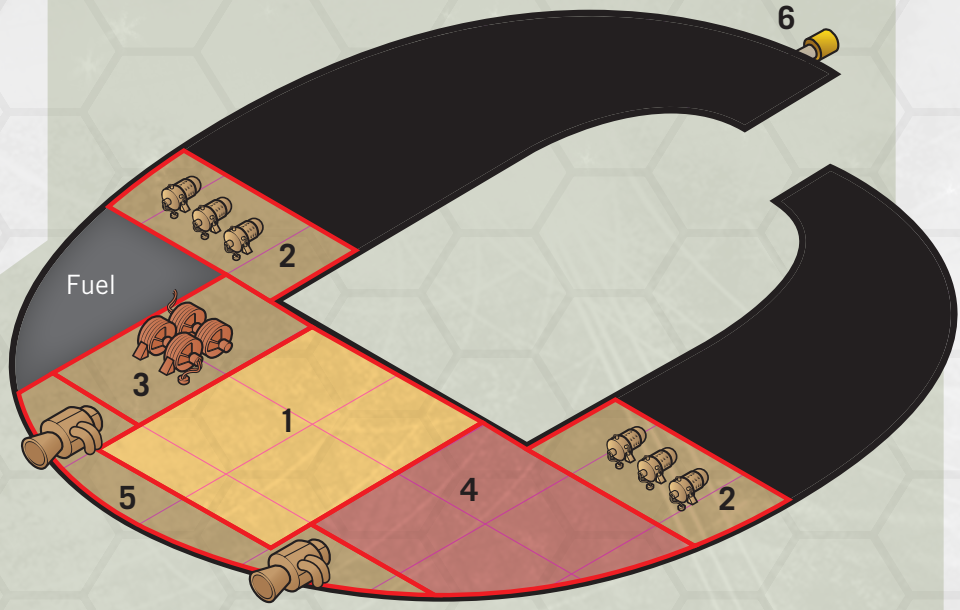
## CREW

Pilot, Sensors Operator

## RUNNING COSTS

**Maintenance Costs**: Cr2291/month
**Purchase Costs**: MCr27.50075

## HULL POINTS
5




1. Dual cockpit
2. Sensors
3. Power plant
4. Countermeasure suite
5. Manoeuvre drive
6. Fixed mount (pulse laser)

## POWER REQUIREMENTS

| | |
|---|---|
| Basic Ship Systems | 2 |
| Manoeuvre Drive | 9 |
| Sensors | 2 |
| Weapons | 3 |
| Systems | 1 |

# EXOTIC ATMOSPHERES

The standard definition of an exotic atmosphere is one that requires oxygen tanks but not a protective suit. This is enough for many Travellers, who simply want to know what equipment they need to operate in the local environment, but additional detail can add depth to a campaign – and Travellers might discover that sometimes conditions might not be what they expected.

Protective Suit

Just as breathable atmospheres vary in pressure, so do exotic ones. The same terms are used for both: thin, standard, dense and so on, but this does not imply the exotic gas mix can support human respiration. However, pressure can have significant effects and some exotic gas mixes may require more than just an oxygen supply. The Exotic Atmospheres table allows the referee to generate additional detail about the local atmosphere.

### Exotic Atmospheres

| 2D | Type |
|---|---|
| 2 | Very Thin, Irritant |
| 3 | Very Thin |
| 4 | Thin, Irritant |
| 5 | Thin |
| 6 | Standard |
| 7 | Standard, Irritant |
| 8 | Dense |
| 9 | Dense, Irritant |
| 10 | Very Dense |
| 11 | Very Dense, Irritant |
| 12 | Occasional Corrosive |

Irritant atmospheres are somewhere between exotic and corrosive. They are unlikely to damage equipment, at least in the short to medium term, but will harm exposed skin. An irritant atmosphere would cause damage to the respiratory system of anyone breathing it, but this is not usually an issue since a Traveller exposed to the irritant without breathing equipment would have more immediate problems. However, a leaky seal or inadequate contact protection can result in harm.

Occasional Corrosive atmospheres are normally just unbreathable, but depending on conditions can become far more dangerous. An example might be a nitrogen atmosphere which occasionally precipitates nitric acid. The atmosphere itself might be perfectly safe (with an oxygen supply), or only mildly irritant.

**Oxygen/Air Tanks**

## COMMON EXOTIC ATMOSPHERES

The term 'exotic' could be taken to mean that atmospheres of this type are rare, but this is not really the case. Breathable, oxygen-rich atmospheres are only likely to be found on worlds with the right temperature range to support life. Worlds lying outside the Continuously Habitable Zone of a star system are far more likely to have an unbreathable atmosphere, if they possess one at all. The commonest exotic atmospheres are discussed below.

### Carbon Dioxide ($CO_2$)

A non-irritant component of many exotic atmospheres, $CO_2$ is common throughout the universe, either by itself or in combinations. Earth once had an atmosphere which was mostly carbon dioxide, before certain organisms learned to use photosynthesis to break down $CO_2$ and release oxygen into the air. Planets with a carbon dioxide atmosphere may be in the very early stages of developing Earth-like life. If so, within a few hundreds of millions of years the atmosphere may change completely.

Alternatively, a $CO_2$ world may evolve life in a completely alien direction, with life forms which draw energy from sunlight (without using photosynthetic reactions) or from thermal, radiogenic, chemical, or even more unusual sources.

Carbon dioxide atmospheres trap heat by a process known as the greenhouse effect. This can result in a planet located outside the Continuously Habitable Zone having a tolerable temperature range, or one closer to its primary suffering a runaway greenhouse effect and becoming inimical to Travellers. This would be a far more extreme condition than indicated by the term 'exotic atmosphere', so most $CO_2$ atmosphere worlds will be farther from their primary and have less hostile conditions.

A $CO_2$ atmosphere world will probably have low pressure (very thin or thin). The hydrographic percentage of such a world would probably also be rather low, typically in the region of 30% or less. All these factors would allow heat to radiate back from the planet despite the heat-retentive properties of $CO_2$.

An exotic $CO_2$ atmosphere on a planet with more tropical conditions – warmer temperatures, greater hydrosphere, and so forth – would be poised right on the brink of a runaway greenhouse effect which would, within a few centuries at most, turn the world into a hostile inferno. This might be put to good use by a referee, who could set an adventure on such a world against the backdrop of scientific research into the greenhouse effect – which will surely interest planetologists as much in the 50th century as it would today.

## Nitrogen ($N_2$)

A (usually) non-irritant component of exotic atmospheres, nitrogen is the classic exotic type. Because nitrogen is relatively inert, atmospheres containing nitrogen in standard temperature and pressure ranges will normally only require breathing gear.

If nitrogen and oxygen are present in certain combinations, the atmosphere becomes somewhat more hostile. Nitric acid ($HNO_3$) can form under certain conditions, as can other compounds which can be irritants in low concentrations, or make the atmosphere corrosive in higher doses. An atmosphere containing nitrogen can occur on almost any type of world.

## Methane ($CH_4$)

A non-irritant component of exotic atmospheres, methane is found in terrestrial swamps as marsh gas, and is also known as natural gas. When methane is mixed with a normal oxygen-nitrogen atmosphere, the resultant combination can be dangerous. At a critical concentration of between 7% and 14% methane in the air, a spark can cause the methane to explode and burn fiercely. Though it is highly unlikely that free oxygen will be found in an atmosphere containing a high percentage of methane, there is a danger that Travellers visiting a methane world could themselves create conditions for an explosion. Airlocks which fail to cycle properly, or small leaks in ships, habitats, or space suits, could lead to a concentration of methane; electrical equipment or static electricity could cause a spark which will lead to a potentially devastating explosion and fire.

**Environment Suit & Mask**

Though popularly associated with foul smelling swamps, methane is normally an odourless, colourless gas which could easily pass unnoticed until it is too late. Methane generally occurs as an active part of an atmosphere on large, cold worlds. On smaller, warmer planets the hydrogen which makes up part of the gas is usually lost early in the planet's history. Thus, most worlds with methane in the atmosphere tend to be larger (Size 8+) and colder than what would generally be considered 'habitable' worlds. A dense or very dense exotic atmosphere is most likely to contain methane. There are, however, exceptions. In the Sol system, Titan (Size 4) has methane in its atmosphere. Titan is an example of a world with an exotic atmosphere which requires more than just oxygen tanks – in this case due to extreme cold.

## Ammonia ($NH_3$)

Ammonia is an irritant found in some forms of exotic atmosphere, requiring protection over and above the usual source of air. As an absolute minimum, ammonia in an atmosphere requires protection for a Traveller's eyes, nose, and mouth. A gas mask would provide adequate protection, as would a transparent 'goldfish bowl' type helmet, sealed at the neck and accompanied by an air supply.

Unlike methane, ammonia has a sharp and pungent odour, and leaks will be quickly noticed. An ammonia leak, even in a weakly concentrated ammonia atmosphere, will cause irritation of burning eyes or mucous membranes. One point of damage is inflicted for every minute a Traveller is exposed to a low concentration of ammonia. Atmospheres containing a great deal of ammonia would be corrosive rather than exotic, and would cause damage to exposed skin.

Worlds on which ammonia is found in the atmosphere will be much like those described for methane – large, cold and with atmospheres falling in the standard to very dense pressure range.

## Chlorine (Ch)

An irritant found in exotic atmospheres, chlorine is often postulated as a likely alternative to oxygen as a life-supporting gas. Chlorine is in many ways similar to oxygen, reacting readily in the same ways as oxygen in various chemical processes. This makes it a prime candidate as an atmosphere which would support life, though such life would be quite alien in nature.

Greenish-yellow in colour, chlorine is a deadly poison even in relatively small concentrations, though it can be detected by its odour long before it reaches a lethal level. It is also far more dangerous to exposed tissues than ammonia. Protection requires a fully sealed gas-proof suit, though this does not have to be a vacc suit – HAZMAT clothing or a suit designed to protect against chemical agents will suffice. Without such protection, a Traveller exposed to chlorine in any significant concentration will suffer one point of damage every thirty seconds.

**Emergency Hostile Environment Suit**

A planet with chlorine in its atmosphere would be a mysterious and eerie environment, with a shifting yellow-green haze causing the landscape to waver in a murky green half-light, hiding and distorting objects and shapes. Life forms evolving under such conditions would be quite alien in appearance, and might be expected to be more active and energetic than their terrestrial counterparts due to the superior reactive properties of chlorine.

## Sulphur Compounds

A variety of sulphur compounds can be found in various atmospheres, ranging from non-irritant to corrosive in nature. These compounds can be found in the atmospheres of otherwise Earth-like worlds, and indeed are one of the prime components of smog.

In an exotic atmosphere, sulphur compounds might represent the result of extreme atmospheric taint from prolonged heavy industrialisation. Other components of the atmosphere could include oxygen, nitrogen, and might be breathable but for the heavy taint. In other cases, sulphur compounds can be encountered as part of the natural atmosphere of a world, and go hand-in-hand with large-scale of volcanic activity. Sulphur compounds would be a good alternative to the usual carbon-based organic chemistry, giving rise to totally alien life forms.

# CORROSIVE ATMOSPHERES

Corrosive atmospheres require the use of protective suits or vacc suits to insulate the wearer from harm. Several exotic atmospheres classified as irritant are, in fact, mild forms of corrosive atmospheres. The chief difference between the two lies in the degree of danger posed by the atmosphere – irritants cause only minor damage, while true corrosive atmospheres kill unprotected humans in a short time.

The corrosive atmospheres table gives a general indication of temperature and pressure conditions. As with exotic atmospheres, designations such as 'standard' merely indicate a similar pressure range and do not mean the world has a breathable atmosphere.

### Corrosive Atmospheres

| 2D | Temperature and Pressure Range |
|---|---|
| 2 | Extreme Low Temperature |
| 3 | Very Thin Low Temperature |
| 4 | Very Thin Moderate Temperature |
| 5 | Very Thin High Temperature |
| 6 | Thin/Standard/Dense Low Temperature |
| 7 | Thin/Standard/Dense Moderate Temperature |
| 8 | Thin/Standard/Dense High Temperature |
| 9 | Very Dense Low Temperature |
| 10 | Very Dense Moderate Temperature |
| 11 | Very Dense High Temperature |
| 12 | Extreme High Temperature |

A low temperature is one which averages between -25° and -200° C. Moderate temperatures are those which allow life (as we know it) to survive. High temperatures exceed 50° C. All three are survivable with normal corrosive-atmosphere equipment. Extreme temperatures can be much higher or lower than this range, and require extra equipment to compensate for the difficulties encountered.

**Hostile Environment**
**Vacc Suit**

Some corrosive atmospheres are the result of concentrations of corrosive chemicals in the air. Several of these have already been covered in the exotic atmospheres section, but are considered corrosive when they occur in higher concentrations.

## Nitrogen ($N_2$)

A world in which free oxygen and nitrogen exist in the correct proportions will have a corrosive atmosphere. In this case, seas of nitric acid and the presence of nitrides (nitrogen-oxygen compounds) in the atmosphere make the world extremely dangerous for unprotected humans.

## Ammonia ($NH_3$)

Ammonia is an irritant at least, and atmospheres containing high concentrations of ammonia become corrosive. Ammonia atmospheres are usually accompanied by low or very low temperatures.

## Chlorine (Cl)

More active, more poisonous, and more irritating to exposed skin than ammonia, chlorine in the atmosphere will be corrosive in any but the mildest concentrations.

### Sulphur Compounds
The presence of sulphur compounds in sufficient concentrations will be corrosive, and can cause damage to unprotected individuals.

### Fluorine (F)
Similar in nature to chlorine and pale yellow, fluorine in an atmosphere is even more of an irritant, even in small quantities. Atmospheres containing fluorine are always corrosive; often extremely so. Fluorine shares many properties with chlorine, including the possibility of supporting completely alien forms of life. It is easily detected by smell and colour, but quickly lethal if a major leak occurs.

### Other Hazardous Conditions
Corrosive effects and similarly hazardous conditions requiring the use of a protective outfit can be the result of factors other than the mix of gases in an atmosphere, notably temperature. No matter what gases comprise the atmosphere, a very low or very high temperature will kill an unprotected human in a matter of minutes

The gas mixes found on worlds with hostile temperature ranges will vary. For worlds with high or extremely high temperatures, atmospheres can include our own familiar oxygen-nitrogen mix, carbon dioxide, nitrogen, chlorine, or fluorine, possibly with sulphur compounds mixed in. Low-temperature worlds tend to have combinations of methane and ammonia in their atmosphere. To combat problems of temperature, protective suits and vacc suits must be equipped with suitable heating or cooling equipment. Such equipment is normally built into vacc suits and available for installation with protective suits. It will counter the effects of temperatures designated as low or high. Extreme temperatures cause further problems, requiring specialist equipment beyond the range normally carried by Travellers, restricting them to suitable vehicles.

## INSIDIOUS ATMOSPHERES
An insidious atmosphere is defined as in being similar in nature to corrosive, but capable of defeating any personal protective measures in 2D hours. Most atmospheres discussed as being corrosive in nature can, in sufficient concentrations or under the right temperature or pressure conditions, be considered insidious. For example, a planet with high percentages of chlorine in its atmosphere at an Earth-like pressure and temperature could be expected to have large amounts of hydrogen chloride gas in the air and seas of liquid hydrochloric acid. Hydrogen chloride droplets would condense on exposed portions of a vacc suit, working their way into joints and crevices, and might eventually cause suit integrity to give way entirely in dozens of small but lethal leaks.

An atmosphere made up of simple hydrogen would be insidious and extremely dangerous. Hydrogen is composed of the smallest and lightest of all atoms, which are so small that they seep right through fabrics, plastics, and even solid metal in a process known as diffusion; an air-tight seal is not necessarily hydrogen-tight. Starship hulls and the walls of buildings can be sealed against hydrogen leakage, but vacc suits cannot be built with sufficient resistance to hydrogen diffusion; to do so would cause the suit to be far too bulky to allow the Traveller to move freely.

Hydrogen is not poisonous but hydrogen and oxygen can combine explosively. A spark can cause an explosion, followed by the precipitation of water – the product of the combination of these two elements. Hydrogen will make up a significant proportion of the atmosphere on large, cold worlds, and is often found in combination with methane and ammonia.

Temperature can also be the factor which makes an atmosphere insidious. For example, in the Sol system the planet Venus has an atmosphere composed largely of $CO^2$, a gas which not corrosive in nature. However, the temperature on Venus is in the neighbourhood of 480 °C, and the pressure 90 times that of Earth at sea level. Probes sent into this inferno rarely last more than a few hours.

Though highly efficient heating or cooling systems can compensate for high or low temperatures to a certain extent, it is difficult to equip a personal protective suit, or even a vehicle, with compensating systems that offset enormous temperature problems. A starship or large habitat can overcome the effects of extreme heat or cold; for lesser equipment, a temporary respite is the best that can be hoped for.

High levels of radiation or radioactive materials in the atmosphere can cause it to be considered insidious. It is difficult to shield individual suits against the effects of intense radiation such as might be encountered on a planet very close to a large hot star, within the radiation zone of a gas giant, or on a world suffering the after-effects of a recent nuclear war.

In this context, the time limit associated with a protective item does not represent gradual failure of the suit, but instead indicates the amount of exposure an individual can survive. Exposure is cumulative; on a planet where radiation is lethal after 6 hours, a Traveller may spend no more than 6 hours on the surface. If they spend 2 hours outside, and then returns to a ship, they can spend only four more hours on later trips. Exceeding this time will result in potentially fatal radiation poisoning.

## *REFEREE'S NOTES*

If the Travellers are engaged in activity where the details of the atmosphere are not relevant, it is entirely sufficient to know it is insidious, corrosive or exotic. Thus if the Travellers' ship is making a quick stop to pick up cargo from a mining outpost there may be no need to get into detail. However, if the Travellers are going to be operating for any length of time on an exotic atmosphere world it is worth developing some of the details. These add colour and might suggest additional difficulties or interesting features that will enrich the adventure.

Atmosphere types should be matched to known conditions, but there is room for variation. It would make sense for a large, cold world in the outsystem to have a methane atmosphere, but a complex gas mix is entirely possible. Detail for its own sake is rarely useful unless the Travellers are particularly interested in space sciences, so unusual conditions should be imposed only when relevant to the Travellers' activities or the nature of the world they are visiting.

When combining gases (and also temperature, pressure and radiation conditions), their effects are also combined. Whether a given gas is a factor in local conditions depends very much upon the proportions of the compounds present. An atmosphere composed of chlorine and nitrogen might be considered exotic if the chlorine concentration is relatively small, corrosive if it is somewhat higher, and insidious if chlorine is present in high concentrations. These would be important factors from the point of view of a Traveller operating in that environment.

# RULE OF MAN COMMEMORATIVE

***Location***: *Regina (A788899-C), Regina subsector, Spinward Marches*

Espionage and counter-espionage operations are a constant along the Imperium-Zhodani border. On the face of it, the Zhodani have a significant advantage as they field psionic agents who can read the minds of their contacts to ensure they are trustworthy, and obtain information from those who would never knowingly give it up.

However, psionic information interchange is just one of many routes, and all are subject to the same principles of espionage. Any means of conveying information can be used to tell convincing lies, and psionic agents may be vulnerable to the most convincing of all deceptions, because they can be certain the person they are scanning believes what is being said.

The Imperial intelligence community has embarked on a twofold operation. It hopes to either identify Zhodani intelligence operatives in the region or feed them false information – ideally both. A perfect outcome would be to have the local network pass on misleading information with assurances that it is true, and for a conduit of additional misinformation to be created. If and when the Imperial intelligence community chose to do so, the Zhodani network could be shut down.

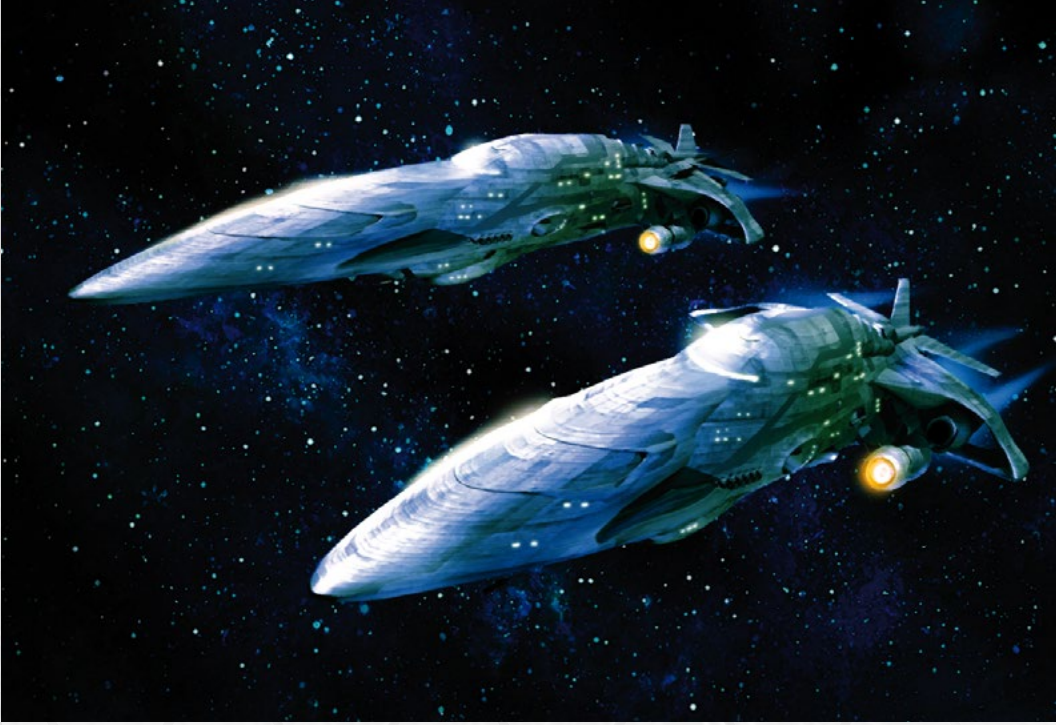
For this to work, the Imperials need to keep their own operatives out of the way. This is partly to avoid scanning by psionic agents – who are suspected but not proven to be present on worlds around Regina – but mainly to ensure the information carriers are sincere in their intentions. Duplicity might well be picked up by non-psionic operatives, and intelligence personnel tend to act in certain ways. A band of Travellers, with no connections to the intelligence community, can be relied upon to act in a way that throws off suspicion.

## BACKGROUND

The following information is for the use of the referee. Much of it can be obtained by the Travellers through various means. The referee should pass out information to the Travellers as they earn it, but also bear in mind that some sources are unreliable or contain distortions of the truth. This is especially true where a government or other organisation controls what information is made public.

### Border Tensions

The border between the Imperium and the Zhodani Consulate has always been prone to tension, but ever since the Fourth Frontier War there is a



feeling that renewed conflict is inevitable. Both the Imperium and the Consulate conduct information-gathering operations along the border and as deep into one another's territory as they can manage. Some of this is overt and accepted, such as observations of warship movements by diplomats and merchant starship crews. There are also extensive covert intelligence gathering operations in place.

## Regina

Regina is one of the main hubs of Imperial activity in the border region. Lying on the Spinward Main, it is a major trade centre as well as a defensive nexus in the event of Zhodani attack. Regina's heavy in-system defences are augmented by elements of the Imperial Navy, though these are shifted elsewhere from time to time to deal with local problems or carry out exercises. A detailed analysis of Regina's defences would be of immense value to the Zhodani Consulate, and the patterns of movement observed there can tell much about Imperial strategy and readiness. It is not just battleships that interest the naval community; even humble naval couriers can reveal what forces are located in which systems, and their state of readiness.

At the same time, Regina is a destination for innumerable small starships. Some cross the borders, and some ply the internal spaceways of the Imperium. Vessels headed out towards the Zhodani Consulate are obvious candidates for information smuggling. Whilst difficult to detect on a boarding or search, activity of this kind can be inferred from a ship's movements and contacts. The local Zhodani intelligence network knows

very well that trying to send data straight over the border towards the Cronor subsector will sooner or later lead Imperial intelligence agencies to break Zhodani intelligence rings. A more subtle approach, using a convoluted path through Imperial space, is far safer.

## Yori (C560757-A)

Yori is a desert world lying on a spur of the Spinward Main. Whilst not on the main trade routes, it receives large numbers of visitors due to finds of Ancients artefacts. Most suspected Ancients sites are off-limits to casual visitors but permits for legitimate research or scholarly visits can be obtained. There are also numerous museums displaying local finds and general information about the Ancients. In addition, Yori has become a centre for the antiquities trade, with dealers working in many fields having a presence there. Much of this activity has nothing to do with the Ancients but grew to take advantage of their presence.

A decent set of jump-2 links and significant population movements through its starport make Yori an excellent choice for a Zhodani intelligence hub. So many different people visit the Ancients museums that cover stories are easy to concoct, especially as many visitors are from fringe groups fond of conspiracy stories about the Ancients. The fact that a significant proportion of these people engage in activities that look a little suspicious makes the task of Imperial intelligence agencies even harder. They have managed to identify part of a Zhodani spy ring, but do not know how or by what route information is transferred out of the Imperium and eventually to Zhodani intelligence analysts.

## *LIBRARY DATA*

The following information is widely available through data terminals and standard encyclopaediae. It can be considered to be reasonably accurate as far as it goes, but simple common sense should suggest publicly available information is unlikely to be the whole story.

### Coin Collectors

Coin collecting is a sufficiently large hobby that companies produce packs of collectible coins, usually varying the contents on a pseudo-random basis to create artificial rarity. Both currency coins and commemorative issue items with no value as legal tender are collectible; there are museums dedicated to nothing other than coins of Charted Space since the rise of the First Imperium. However, for the serious private collector, the quest for rare special-issue coins can become an obsession. Antiquities dealers, specialist outlets, estate-clearance auctions where a noble house has gone bankrupt… the serious collector has contacts spread as widely as possible, with instructions on what to look for and how much to pay.

# THE SITUATION

Imperial Naval Intelligence has penetrated the local Zhodani spy network at Regina, and discovered that it feeds its findings to a communications team at Yori. How data is subsequently transferred to the Zhodani Consulate remains a mystery. Obviously, it must be sent via starship, and a direct cross-border transit to spinward is deemed highly unlikely. The Imperials hope to find out how the Zhodani are moving their information by inserting a trackable version of an information storage device they captured.

When the local intelligence ring was penetrated, the Imperial authorities found a data packet almost ready to go. It contained detailed information on the defences of Regina and movements of Imperial Navy warships. Slightly altering this data to make it less useful but still plausible, naval intelligence modified the carrier devices to contain a tracker that would activate only upon receiving a specific broadcast signal.

Naval intelligence knows the data packet was to be sent to Yori, concealed inside a shipment of rare coins. It is destined for a specific employee of Brnava Curiosities, a small-scale dealer at Yori's startown. Naval intelligence could pick this operative up, but prefers to track the packet and find out more about Zhodani activity in the region. Since data packets sent this way always use 'mules' – usually legitimate couriers – it has been hard to establish a connection. Now, with the help of some unwitting Travellers, the opportunity has arisen to interrupt or perhaps gain control of the flow of information through Yori.

# THE MISSION

Whilst passing through Regina starport, the Travellers are approached by a robotic messenger, who asks them if they would be willing to speak to its client. The client has an office nearby, and turns out to be a Vargr businesswoman named Hazel Kfonrreza. Like many local Vargr she has adopted a pronounceable Anglicised forename. She is a (very) minor information and trade broker making a decent living out of commerce coming through Regina's starport. She is also an operative of Imperial Naval Intelligence, but will not admit that.

Hazel tells the Travellers that, like many small business owners, she has a few distant clients who ask her to look out for items they are searching for. One of them works for Brnava Curiosities at Yori starport, two parsecs away. Brnava Curiosities presumably has a number of end clients, and uses people like Hazel to spread its network. She does not know who the end client is.

A few days ago she spotted something on her watch list – a case of rare and collectible coins – and was able to put in a successful bid to the current owner. All she has to do now is get the coins to her contact at Brnava Curiosities. She will receive her fee and reimbursement for the purchase price, and everyone will be happy.

This is where the Travellers come in. Hazel normally sends items through standard mail or courier services, but that means registering what is being transported. The end client has specifically requested that if certain coins are found they are to be delivered in secret. Hazel surmises this means someone is trying to outdo a competitor or complete a collection and then make a big splash about it. She does not care; she is getting a decent fee for work that is not hard to do, and if it makes someone happy into the bargain… well that is nice for them.

So, Hazel wants the Travellers to go to Yori and deliver a small case of collectible coins to Josef Marrac at Brnava Curiosities. They are not to be given to anyone else, and the Travellers are not to reveal they are carrying them. The coins could be taken aboard any starship quite legally as personal items and if an over-zealous customs search found them (Hazel thinks this very unlikely but has covered all eventualities) the Travellers will have receipts for their purchase (by Hazel, and entirely legitimate) and documentation showing (again, quite truthfully) that the Travellers are delivering the items to a client. There is nothing illegal about transporting small items this way, and Yori's laws do not prohibit it. There will be a transfer fee at the far end, but that will be paid by Brnava Curiosities.

Hazel can offer the group either a set of middle passages to Yori or a voucher for fuel and life support costs if they have a ship, plus Cr500 each for expenses. At the far end, they will receive a fee determined by the client's expected payment for the coins. This is a percentage of Hazel's fee, and she expects it to be quite significant.

## Referee's Notes:

Everything Hazel has said is based in truth. The 'coin collectors' in this case are intelligence agents and the 'bid' was a deal offering deportation and banishment from Imperial space rather than trial and incarceration as spies, but the situation is essentially as presented. Hazel is an experienced intelligence operative saying things that are close to the truth. It is highly unlikely that anyone would suspect her of lying based on body language or slip-ups.

The final reward has been left vague to allow the referee to tailor it to a group's finances. Starship owners might expect a lot more than penniless wanderers, even if their costs are covered, but whatever the Travellers make on freight or cargo on the way to Yori is pure profit. The Travellers might also be intrigued by the possibility of an antiquities dealer having access to Ancients artefacts or information on how to get them. Those with enough money and big plans might be more interested in opportunities than payment, and the referee can adjust the reward accordingly.

# THE COINS

The Travellers are to transport a small case containing two dozen coins of varying sizes and denominations. Some are quite unusual but only two are really valuable. The others would fetch anything from Cr25 to Cr100 each from a collector, perhaps more if they were grouped into a collection of, say, Early Imperial Navy Commemoratives or some such. This would require taking up coin collecting, however.

The two valuable coins are identical. Both are Cr25 examples from the Rule of Man Commemorative Issue, by no means the most valuable of coins in Charted Space but still worth tens of thousands of Credits to the right collector and more as part of a complete set. Value of any collectible coin is enormously reduced if it is not in mint condition, and for this reason all the coins are set into a covering of transparent polymer and mounted in cushioned holders within the case. The polymer is all but bulletproof, and very hard to remove without the right solvents. Using brute force methods like cutting risks damaging the coins.

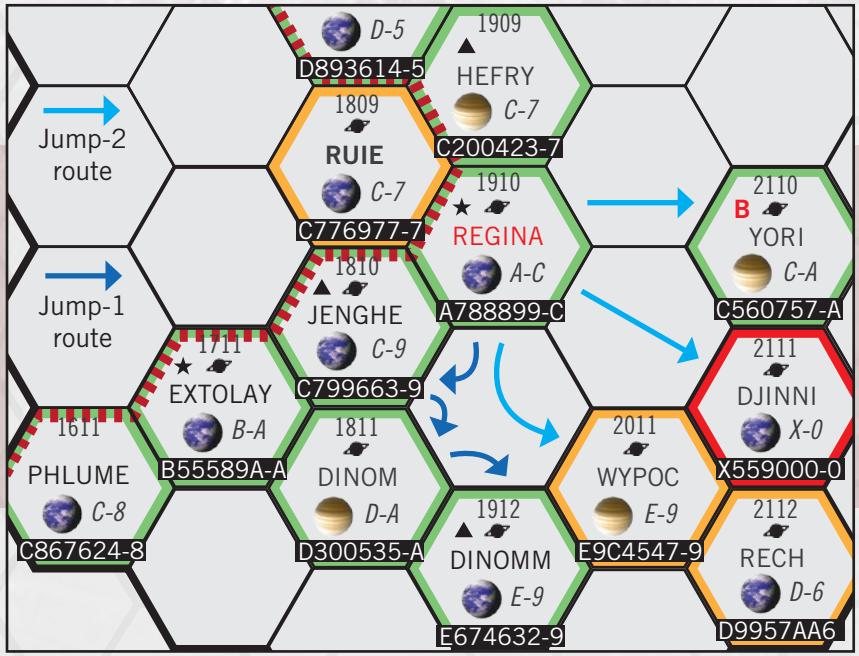
The two Rule of Man coins are fakes, but very good ones. They were created by Zhodani intelligence to contain tiny data recording devices, then later opened and modified to respond to an interrogative signal sent by Imperial Naval Intelligence. This tampering will be evident on very close inspection – the sort carried out by a collector wishing to ensure his purchase is the real thing – but will not be apparent to casual inspection. If the Travellers try to examine the coins without removing their protective layer, they may be able to discern some irregularities around the coins' circumference, but this would require highly diligent inspection by someone who knew what to look for.

# PASSAGE TO YORI

It is immaterial how the Travellers reach Yori starport, though they will need to do so in a reasonable time frame. The longer they take, the more likely it is that the Yori network will discover that their counterparts on Regina have been compromised. There are numerous jump-2 vessels plying directly there and back, so the Travellers can be en route within a couple of days at most.

If they prefer to take the jump-1 route, perhaps because their ship only has jump-1 capability, this will take longer but Hazel will still pay passage and fuel costs, albeit with a show of reluctance. She is not willing to pay for the Travellers to go off wandering on some adventure or scheme, and Naval Intelligence will be less than impressed if their scheme goes awry due to the unreliability of Travellers. This might cause problems for them down the road.

Whilst the Travellers are in transit, there is a chance that the Zhodani intelligence network on Yori will realise something has gone wrong at Regina. When the Travellers arrive at Yori, the referee should roll 2D and add the number of full weeks that have passed since Hazel approached the Travellers, referencing the Suspicion table.




Gas Giant
B-6 Starport Class & Tech Level
▲ Imperial Scout Base
★ Imperial Naval Base

Secure System
Amber Zone
Red Zone
Imperium Border

Planet (dry)
Planet (water present)
R Imperial Reserve
B Research Station

**Suspicion**

| 2D | Outcome |
|---|---|
| 2-4 | No undue suspicions, though intelligence personnel are always a bit paranoid |
| 5-7 | Vague sense that something is awry but no clear indications |
| 8-11 | Strong suspicions that the Regina network has been at least partially compromised |
| 12+ | The Yori network knows the Regina ring has been compromised and is expecting trouble |

The alert state of the local network will affect events once the Travellers attempt to make contact.

## BRAVNA CURIOSITIES

Bravna Curiosities is located in Yori's startown, which requires passing across the extrality line and through customs. Local Law Level is 7, so Travellers will not be permitted to take weaponry with them, but a case of rare coins destined for a dealer will not attract attention. It is common for new arrivals to find a hotel, get a meal not made of starship rations and maybe check out recreation facilities before conducting business, and the Travellers' patron would not object to them doing any of these things. It would also give them a chance to find their bearings, get used to the dry desert air of Yori, and spot anyone watching them.

There is no reason why the Travellers would be suspicious of being followed, but they will be under observation as soon as they arrive. Imperial Naval Intelligence knows what they are transporting and is trying to keep a discreet eye on them. This is mostly a matter of using remote surveillance cameras, but some human intelligence work is required. The Travellers might spot the same people in the background from time to time and become suspicious. The base chance for this is a Very Difficult (12+) Streetwise check, though the referee may reduce the difficulty if the Travellers are actively looking for observers or have intelligence agency experience. The observers will not interfere with the Travellers' activities even if they do something illegal – they have a deeper purpose than upholding Yori's laws.

Bravna Curiosities is not hard to find, but the owner is not the person the Travellers are looking for. Josef Marrac works with the shop on a semi-freelance basis, obtaining rare artefacts and brokering the odd deal through his own web of contacts. He makes only intermittent visits to the shop, and the rest of the time works from home. The arrangement has always been satisfactory and Josef has never done anything illegal, so there has been no reason to question a good thing. The shop staff do not know Josef is a Zhodani agent.

# FINDING JOSEF

The Travellers can get Josef's address without needing to explain – the shop owner believes this is just another deal, and the coins will arrive at the shop for validation and transfer to the end client in due course. They will not cut out the middle man; Josef must take delivery then pass the coins on.

Josef is not at his home address and has not been seen for a few days. If the Travellers ask around among neighbours they will find this is not unusual; Josef travels a lot for business. If they have not already thought of it, the Travellers could try leaving messages on Josef's comm but at first all they get is polite 'not available, will call back' replies.

This is part of the natural caution of intelligence operatives. Josef and his associates want to get a look at the couriers before contacting them, and they will be observed by one of his fellows as they search for their contact. The chance of spotting this is the same as noticing Imperial interest.

If the Travellers are oblivious of their role in the intelligence game, or act like it, then Josef will make contact via comm and invite the couriers to meet him for lunch or drinks as soon as he arrives back from his latest trip – which will be in a few hours. He gives them a location, a local bar or restaurant, and says he will meet the Travelers there. He does indeed intend to do so, but his degree of caution will be determined by the level of suspicion that has been aroused on Suspicion table.

**No Undue Suspicion**: Josef comes to the meeting alone and unarmed.
**Sense that something is awry**: Josef brings a concealed autopistol and has a single colleague – also with a handgun – nearby as backup.

**Strong Suspicions**: Josef is armed, and has at least as many colleagues nearby as there are Travellers. They mostly have handguns but there may be a submachinegun or two hidden away in case of dire need. In addition, Josef will try to determine if the Travellers are Imperial agents.
**Expecting Trouble**: Josef believes the Travellers are Imperial agents. His backup team includes a sniper on a nearby roof.

If the Zhodani spies are expecting trouble they will attempt to capture the Travellers, and will do so if they are suspicious and Josef concludes they are Imperial agents. There are no mind-readers available, so he will have to make a judgement based upon actions. Josef will assume the Travellers are part of Imperial intelligence and wants to quickly find out what they know before activating his exfiltration plan. If Josef is not suspicious he will take the coins, make payment and engage in friendly chit-chat for a while before everyone goes their separate ways. At least, that was the plan…

## INTERVENTION

Whether or not Josef and his people intend to capture the Travellers for interrogation, their meeting is disturbed by a robbery. Several men armed with knives and improvised clubs (the referee may give them firearms if the Travellers are armed) burst in, demanding money and jewellery. This is opportunism; their real target is the coins they have discovered the Travellers are carrying. These are just local criminals, but their arrival at this point will alarm Josef and his associates who may assume the authorities are onto them.

What happens next depends very much upon the Travellers. Josef will not allow the coins to be taken and will resist, calling in his backup team if he has to. He may mistakenly conclude that the intruders are actually an Imperial Intelligence snatch team and the Travellers are in on it, in which case he and his team will engage both. Alternatively, the Travellers might assist their brave new friend and foil the robbery, then hand over the coins as planned. If things go really badly awry, a real Imperial Intelligence team might swoop in to grab the Zhodani agents and add to the general chaos. And since none of this has been cleared with local law enforcement, they too may put in an appearance…

How the handover plays out depends very much on what the Travellers do in the first few seconds. The ideal outcome for Naval Intelligence is for the robbery to be foiled without the Zhodani thinking their covers are blown, in which case the doctored coins are sent offworld and elements of the local Zhodani intelligence network are identified. However, a range of other outcomes are possible, including the Travellers becoming proud new owners of some rare coins… which unbeknown to them both Imperial and Zhodani intelligence are seeking!

Subsequent events are, as always, at the discretion of the referee.

# GAS GIANTS, PLANETOIDS AND OTHER BODIES*

Star system data typically indicates the number of gas giants, planetoid belts and terrestrial (rocky) planets present in the system, in addition to the mainworld. The term 'asteroid belt' is only used where the mainworld of a system is in fact an asteroid belt; otherwise 'planetoid belt' is used to avoid confusion. There is no difference in composition or makeup of a belt; the choice of name is merely a convention.

In general, if Travellers are concerned only with trading at the starport or getting passage to another system, it is enough to know that there are planetoids and/or gas giants present in the system. However, belts and giants are often the site of intense economic or industrial activity and may be heavily populated even if not associated with the mainworld.

## GAS GIANTS

A gas giant, or Jovian, may or may not have a solid core, but will have a central region in a liquid state as a result of the immense pressures encountered there. Higher up in the atmosphere, which is composed mainly of hydrogen compounds, pressure eventually drops to the point where human-crewed space vessels can survive. Expeditions have occasionally been mounted into the depths of a gas giant's atmosphere but operating any deeper than the upper layers is extremely dangerous.

The vicinity of any gas giant is a dangerous place. Most are high-radiation environments as a result of their strong magnetic field and winds in the atmosphere can be extreme – over 2,000kph in some cases. Complex systems of moons, rings, and asteroidal debris can make navigation hazardous as well. At the same time, these conditions can also make a gas giant economically attractive. A variety of useful chemicals, ranging from hydrogen for starship fuel to complex petrochemicals, can be skimmed from the upper atmosphere of a gas giant, whilst the moons and rings are often rich in easily accessible minerals.

The majority of gas giants are defined as 'small' or large'; very general terms covering a wide range of masses. A large gas giant might be the equivalent of Jupiter or Saturn in the Sol system; a small Jovian is likely to be around the size of Neptune or Uranus. It is obviously not possible to build a permanent installation on a gas giant, as there is no useable surface. However, orbital installations are not uncommon. These are often refineries for chemicals skimmed out of the Jovian's atmosphere, which may then be transferred elsewhere in the system or shipped out directly.

If there is no habitable planet in a system, a gas giant is a good choice for an orbital starport. Fuel can be readily obtained by skimming, and one gravity well is as good as another for anchoring a station or port. However, radiation or cluttered local orbits make some Jovian's unsuitable for such an installation, with the result that a system's main starport might be in orbit around a small gas giant very far from the primary. This makes no real difference if there is no habitable mainworld, though careless crews who jump into the inner system might land themselves in trouble if they cannot reach the port to refuel.

Gas giant moons are also common sites for industrial and scientific outposts, and in some cases a moon may be the mainworld of a system. This is most common where a Jovian's moon system has easily accessible resources and there is no habitable world in the system – the economic benefits of using a moon system as the mainworld can be considerable.

It is common in this case to find installations throughout a gas giant's moon system, usually with sublight craft plying between them. A moon system of this sort can become a micro-economy in its own right, with prosperous installations growing into small states over the decades. Fresh food is always at a premium in such an environment as only so much can be done with hydroponics. There are cases of gas giant mainworlds where a marginally habitable planet in the system is used for food production, usually in carefully controlled areas kept separate from the local wilderness.

## SUBJOVIANS AND ANOMALY TERRESTRIALS

Some gas giants are extremely small (by the standards of giant planets, anyway) and fall somewhere between super-earth and gas giant in size and character. Very small gas giants are termed subjovians and similar in general nature, though they are likely to have a rocky core surrounded by a semi-liquid atmosphere. Smaller worlds might be termed 'anomaly terrestrials' in that they are more like rocky planets with a deep atmosphere than a true gas giant.

The anomaly terrestrial category also includes worlds that do not fit into any other category. Examples include true water worlds, with oceans many kilometres deep surrounded by a dense atmosphere, or large but very low density worlds with virtually no useful resources. Such anomalous planets cannot be generated under the Traveller rules; they are too rare to be included in a table. Such highly unusual worlds should be placed at the referee's discretion and are likely to be noted throughout the surrounding region of space if there has been any significant exploration. Subjovians are far more common but still rare compared to true gas giants.

** See Great Rift Box set, Book 4, for further reference on system generation*

## SUPERJOVIANS AND BROWN DWARFS

Some gas giants are much larger than the norm, and are termed superjovians. These huge gas giants are often relatively warm compared to their smaller cousins, and also usually have a strong magnetic field that produces spectacular lightning storms and a considerable amount of radiation. The vicinity of a turbulent superjovian can be quite unhealthy, and will confuse most standard sensors at close range. Thus a superjovian can serve as a useful navigational beacon – or a place to hide for suitably robust vessels.

Even larger – by an order of magnitude at least – are the smallest brown dwarfs. These are normally considered quasi-stellar objects rather than overgrown planets, but can be found within a system occupying a similar orbit to a more conventionally sized world. As with subjovians, the Traveller star system generation rules do not produce these objects as they are rare. They can be encountered as very distant companions of stars or in deep space between systems. In either case, brown dwarfs and rogue superjovians are not noted on the maps, and can be placed by the referee wherever the plot requires one.

## ECCENTRIC WORLDS

Most bodies in a system orbit the primary in the same direction, more or less in the same orbital plane (or ecliptic) or inclined to it only a little. This is a result of the rotation of the accretion disc when the system was forming. A body whose orbit is highly eccentric will either have been perturbed in some major way or else did not originate in the system. Eccentric worlds may be captured bodies, or in the process of being captured or ejected from the system.

Eccentric worlds may or may not be listed as part of the system's bodies on the standard maps. The referee may decide that a noted world has an extremely inclined or even retrograde orbit, or could declare that a system has an additional body not noted in the navigational databases due to its extremely eccentric orbit.

A planet with an unusual orbit is unlikely to be habitable, and may be subject to extremes of heat and cold as it passes close to its primary then spends long years looping far out beyond the rest of the system. Such bodies are likely to be of scientific interest for the most part, but may have useful resources. It may be that an eccentric body entering the inner system turns out to have ruins on it from its previous close pass tens of thousands of years ago… which would raise some interesting questions.

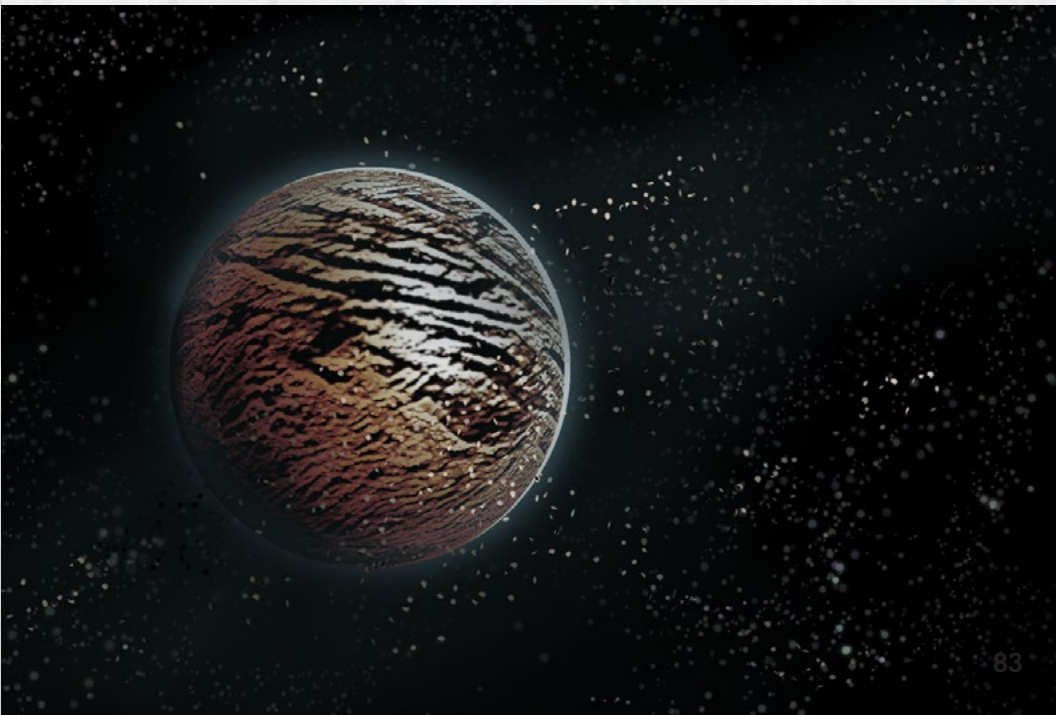
# ROGUE WORLDS

Planets and smaller bodies can be encountered travelling through interstellar space. They do not generate light or other forms of radiation so can be very hard to detect, but sufficiently good instruments targeted on the right area might pick up faint traces. Rogue bodies – comets, planetoids and planets – may have been adrift in the universe for millions or even billions of years. Any life they may have had will be long dead, but such worlds might have been visited from time to time by starfarers who left traces there. They may also be a useful spot to build a secret base or refuelling site, or a research outpost located well away from prying eyes.

Rogue worlds are tiny specks in a gigantic universe; no matter how many there may be, they are few and far between. A rogue body might pass close to a star system; close enough to pique the interest of those who live there or to be stripped of its resources before it passes on into the endless night. Given the speeds such bodies travel at and the distances they cross, any rogue body close enough to a star system to be associated with it will be within reach for thousands of years.

# PLANETOIDS AND DWARF PLANETS

Planetoids generally occur in belts, which are usually the result of a planet almost forming then breaking up – or very occasionally being destroyed in a collision with some other body. Planetoid belts contain bodies ranging



in size from dust particles to dwarf planets. Most planetoids are small – just a metre or two across at most – and tend to be widely spaced. Passing through a belt is not usually a navigational hazard, though the increased presence of dust and small particles can endanger fast-moving ships.

Some planetoid belts are virtually useless for exploitation, with few bodies larger than gravel, but most have at least some large (and thus potentially exploitable or habitable) bodies. Within a belt, clusters of more tightly grouped planetoids occur, attractive to prospectors and miners as well as those seeking to build a community in space.

Most planetoids consist primarily of rock and ice, with metals and other useful minerals (including carbon compounds) deposited among them. Belts can be unusually rich or poor in useable minerals; most have at least some useable deposits though they can be difficult to find or extract.

A very large planetoid is termed a dwarf planet. A belt might have one or more, in which case these bodies will be the best prospects for settlement and mining operations. A large planetoid belt might even contain several micro-states each centred on a large planetoid or dwarf planet, perhaps vying for control of the surrounding area.

## MOONS, COMETS AND OTHER BODIES

A rocky body that orbits another non-stellar body is termed a moon or satellite. By convention, Traveller uses the term 'moon' to avoid confusion with artificial satellites. The system generation rules do not determine the number and nature of moons a body has, so they can be assigned as the referee sees fit.

Most moons are desolate – rockballs or iceballs – but those that receive sufficient energy, either from the system's primary or heating from their orbit of a gas giant, can be more habitable. It is rare to find a moon with a breathable atmosphere, but some examples do exist. Most, however, have an exotic atmosphere from which useful gases can be processed.

A comet is a small body that orbits the system's star, often in a very eccentric and extremely long path. It consists of a small nucleus of rock, dust, ice and frozen gases. The distinctive 'tail' is only formed when a comet passes through the inner system, receiving sufficient energy that gases sublime off. At other times a comet is just a lump of cold rock and ice, and can be very hard to detect.

Comets can be a useful source of fuel where there are no other resources, though this requires very good sensors or advance knowledge of where the

body will be. Interstellar comets have been used as deep-space refuelling points, though the prospect of finding one by jumping into deep space and hoping for the best is infinitesimally small.

Some star systems are surrounded by a 'shell' of cometary bodies known as an Oort cloud. The volume of space occupied by an Oort cloud is enormous; objects within it are very far apart and difficult to detect even if deliberately sought. While an Oort cloud is normally spherical, there may also be a disc of debris – gas, dust, planetoids and comets – along the ecliptic. This region is known as a Kuiper Belt and is a little more dense than an Oort cloud. It is possible that a Kuiper Belt might include one or more dwarf planets, which would be so remote as to be virtually undetectable from the mainworld.

Very distant objects are unlikely to be inhabited, and cannot interact meaningfully with an inner-system society without access to jump drives. If jump drive technology is available, it takes just as long to get to the far outsystem as another system with more economic opportunities. Thus anyone building an installation so far out has to have a good reason, perhaps isolationism, a desire to conduce science very far from interruptions and interference, or a need for security. Energy signatures from a distant outsystem rock should tell Travellers that something unusual is afoot… and they might want to tread carefully.

# QUIET VIGILANCE
# OUTSYSTEM PATROL VESSEL

Patrolling the outer reaches of a star system is a necessary but difficult undertaking. Vessels based at the mainworld can sweep the inner system in a short time frame, but the long transits required to reach an outsystem gas giant or rockball world require either jump-capable craft or long-duration non-starships. The alternative is to build bases in the outsystem to support system defence boat (SDB) flotillas. This is, however, expensive and inflexible.

An important economic asset might be assigned a force of fighters or SDBs – along with the infrastructure to support it – but even if a world government can afford to do this for every major body in the system it still represents a dilution of forces. An enemy might simply bypass those assets and concentrate against the mainworld, or defeat the system defence force in detail by overwhelming bases one by one. Based SDBs and fighters have their uses but the most practical solution to outsystem security is to deploy mobile patrol assets.

Jump-capable warships are the most convenient choice for outsystem patrol, but are expensive and can be co-opted to deal with situations arising in other star systems. A government that purchases non-starships knows they will always be available but must deal with the problem of getting the patrol assets to and from their station. The Quiet Vigilance solves at least some of these problems by acting as a mobile base.

The Quiet Vigilance is built at TL12, enabling it to be constructed at most shipyards and maintained without expensive top-end components. As far as possible, COTS (commercial of-the-shelf) components are used throughout the ship, ensuring maintainability. The result is a reliable and robust vessel, but without much character or glamour.

The hull form of the Quiet Vigilance is blocky and unattractive, as befits a vessel that will spend most of its career far out in deep space. The main hull takes the form of a rectangular shape, terminating in three flared bulges at 120 degrees to one another. Each of these contains sufficient drive systems to propel the vessel at 1g acceleration, along with enough power plants to run the drive at full capacity with some energy left over, and a small fuel tank. The central engineering chamber lies between the bulges and contains the main ‘ship systems’ reactor.

The rationale behind this configuration is to reduce the chance that drive malfunction or a hit by enemy fire will disable the drives when the ship is far from home. Even with two drive pods shot away the Quiet Vigilance can still make an ungainly 1g and eventually return to port. The configuration is inefficient, requiring engineers to move between pods on a frequent basis, and the positioning of the pods has resulted in an unusual practice of turning off the artificial gravity when rapid movement is needed.

Some ships run with gravity generators permanently off in the drive room, but this can have long-term health effects on the crew. More commonly, a low-g environment (around 0.3g) is maintained in this area, with gravity turned off when the crew are likely to need rapid access to the dorsal-position pod.

Forward of the engineering spaces the vessel has a ventral bulge housing the small-craft workshop and hangar. This is not large enough to contain the ship's whole contingent of small craft, and lacks rapid-launch capability. A complement of eight 10-ton light fighters leaves room for another craft to berth or be maintained, but the mix of craft can vary considerably.

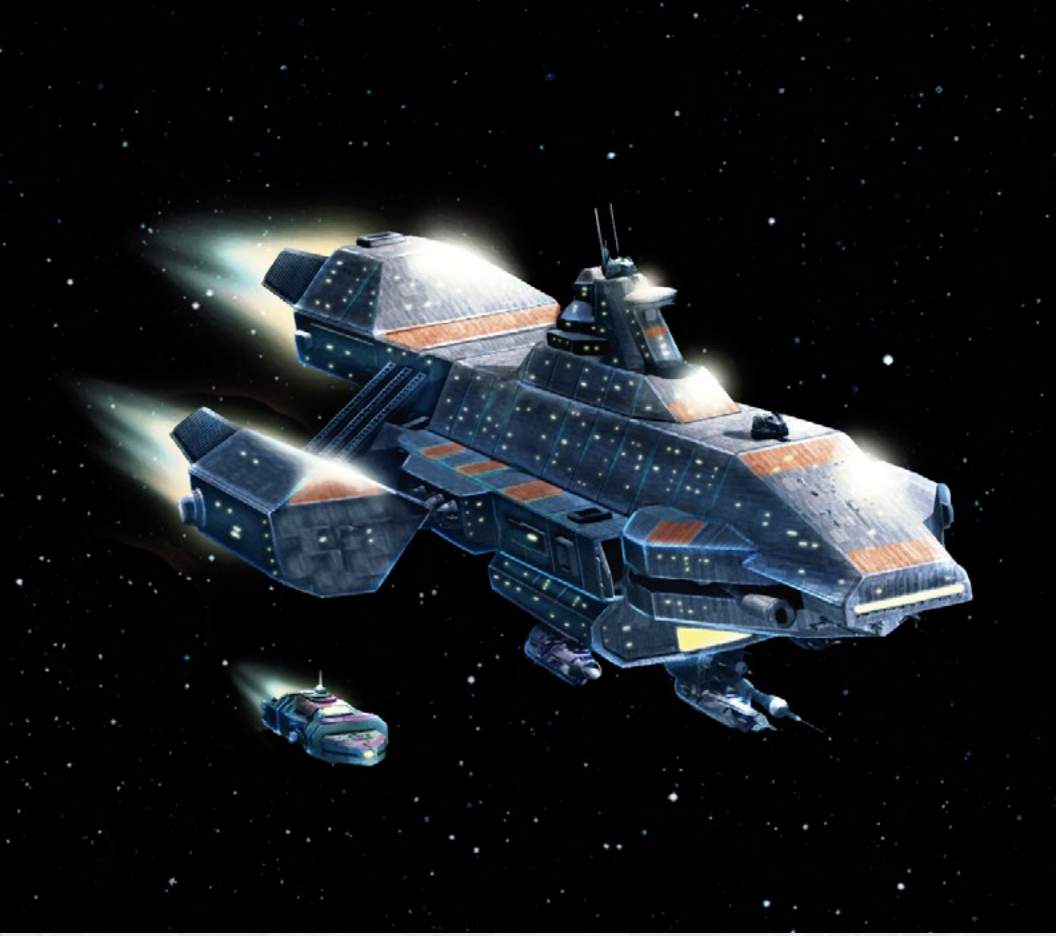
Four additional craft, of up to 30 tons each, are carried on external cradles accessed from the hangar area. The standard mix for a patrol ship is four utility vessels such as launches, gigs or ship's boats, but again the complement can vary. The acceleration and performance of the vessel as a whole is based upon a full load of small craft of the maximum displacement. Without them, the Quiet Vigilance can make 3.5g under full power.

Forward of the hangar area is the main accommodation area. Accommodation and common space is generous, since the crew will spend a great deal of time transiting through deep space. Many vessels have several empty cabins on deployment, as the accommodation can house a large contingent of pilots and small craft maintenance personnel who may or may not be present.

The ship's command area is forward of the accommodation zone, and constructed as a command complex surrounding a briefing/planning room. The vessel itself is commanded from the flight bridge whilst the operations bridge oversees small craft deployments, forward planning of flybys and patrol schedules, and other mission-related matters.

# QUIET VIGILANCE OUTSYSTEM PATROL VESSEL

| TL12 | | TONS | COST (MCR) |
|---|---|---|---|
| **Hull** | 1,500 tons, Close Structure | - | 6.75 |
| **Armour** | Crystalliron, Armour: 6 | 112.5 | 2.025 |
| **M-Drive** | Thrust 3 | 45 | 90 |
| **Power Plant** | Fusion (TL12), Power 900 | 60 | 60 |
| **Fuel Tanks** | 160 weeks of operation | 240 | - |
| **Bridge** | Standard Bridge x 2 | 80 | 15 |
| **Computer** | Computer/20 | - | 5 |
| **Sensors** | Military Grade | 2 | 4.1 |
| | Sensor Stations x4 | 4 | 2 |
| | Shallow Penetration Suite | 10 | 5 |
| **Weapons** | Small Missile Bay x4 | 200 | 48 |
| | Triple Turret (pulse lasers) x 6 | 6 | 24 |
| | Single Turret (beam laser) x5 | 6 | 4.2 |
| **Ammunition** | Missile Stowage (480 missiles) | 40 | - |
| **Systems** | Fuel Scoop | - | 1 |
| | Hangar (100 tons) | 200 | 40 |
| | Type I Docking Clamps x4 | 4 | 2 |
| | (4x 30-ton small craft) | (120) | - |
| | Brig | 4 | 0.25 |
| | Armoury | 2 | 0.5 |
| | Briefing Room | 4 | 0.5 |
| | Medical Bay | 8 | 4 |
| | Workshops x2 | 12 | 1.8 |
| | UNREP System x4 | 4 | 2 |
| **Software** | Library | - | - |
| | Manoeuvre/0 | - | - |
| | Launch Solution/1 | - | 10 |



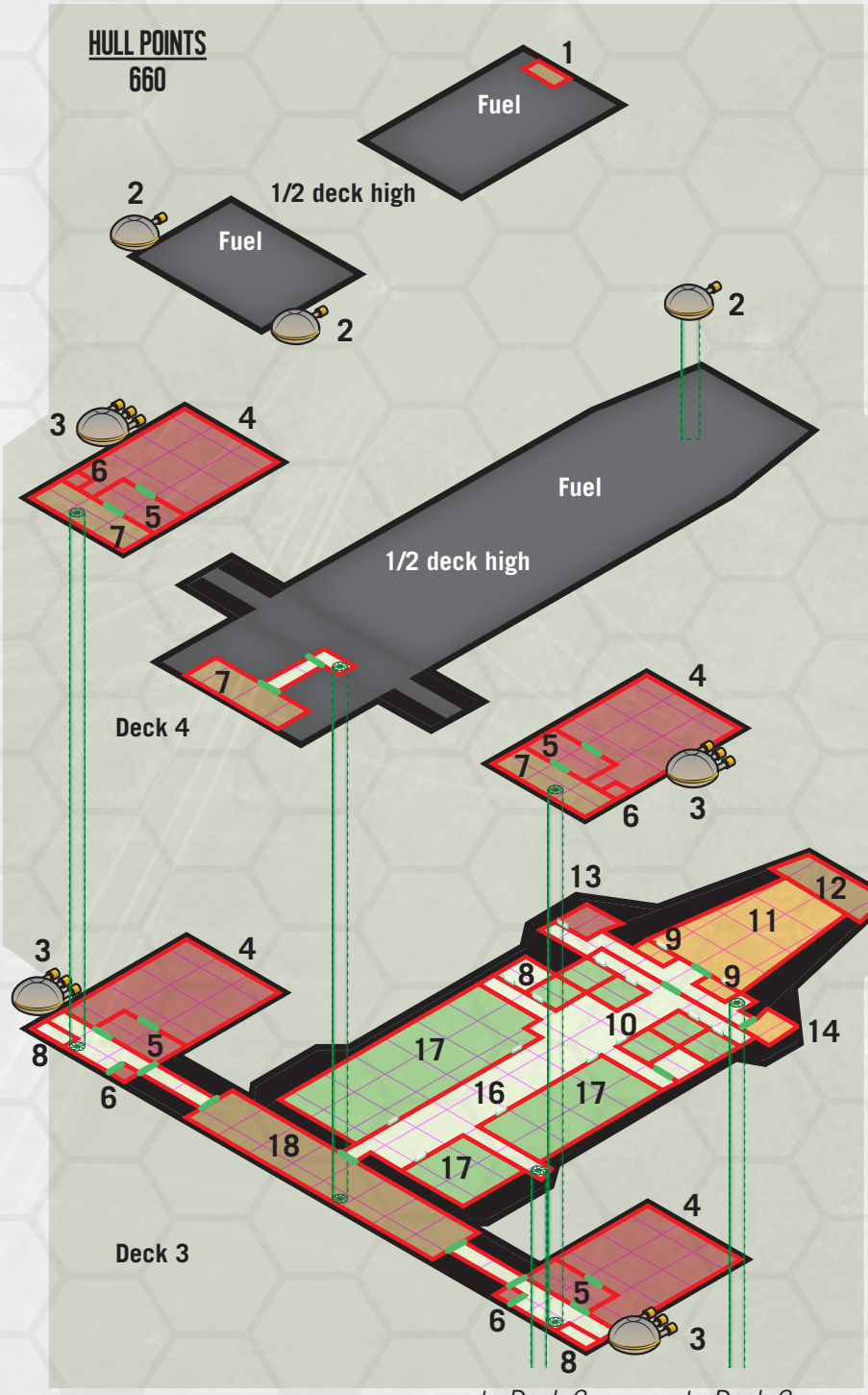
| TL12 | | TONS | COST (MCR) |
|---|---|---|---|
| **Staterooms** | Standard x 44 | 160 | 20 |
| | High x 6 | 36 | 4.8 |
| **Common Areas** | | 120 | 12 |
| **Cargo** | | 20.5 | - |
| | | **Total** | 362.945 |

## CREW

Captain, Pilots x3, Astrogator, Officers x5, Engineers x3, Maintenance, Medic, Gunners x11, Administrator, Small Craft Support x8, Small Craft Crew x16-24

## RUNNING COSTS

**Maintenance Costs**: Cr30245/month
**Purchase Costs**: MCr 362.945


HULL POINTS
660
1
Fuel
2
1/2 deck high
Fuel
2
2
3
4
6
5
7
Fuel
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7
Deck 4
4
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3
13
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11
9
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18
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Deck 3
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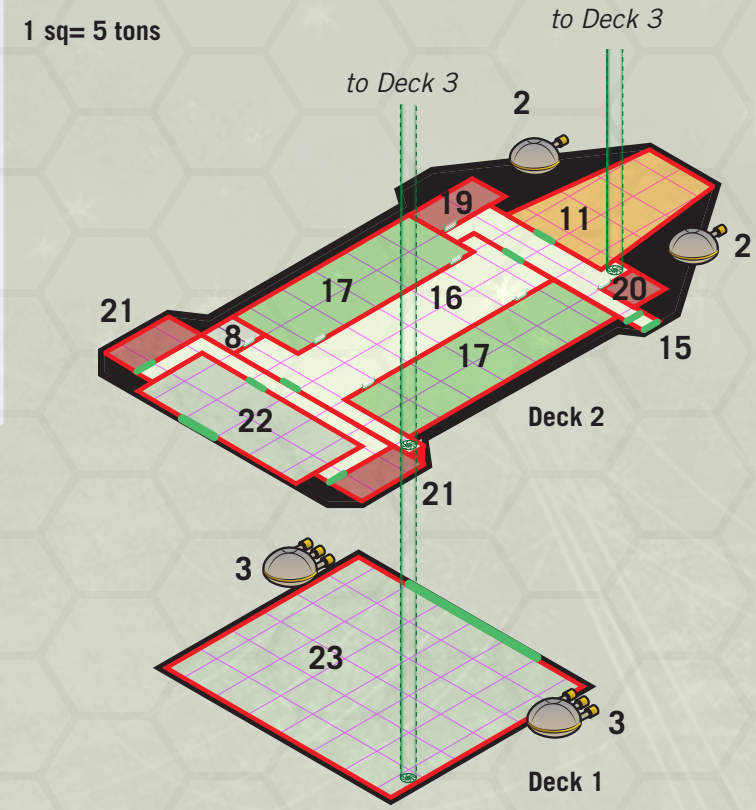
3
8
to Deck 2
to Deck 2




1. Sensors
2. Beam laser turret (single)
3. Beam laser turret (triple)
4. Missile bay
5. Missile storage
6. UNREP system
7. Manoeuvre drive
8. Freshers
9. Sensor station
10. Staterooms (high)
11. Bridge
12. Shallow penetration suite
13. Briefing room
14. Brig
15. Air lock
16. Common area
17. Staterooms
18. Power plant
19. Medical bay
20. Armoury
21. Workshop
22. Cargo hold
23. Hangar

## POWER REQUIREMENTS

| | |
|---|---|
| Basic Ship Systems | 300 |
| Manoeuvre Drive | 450 |
| Jump Drive | 0 |
| Sensors | 2 |
| Weapons | 123 |

## WEAPONRY

Armament is optimised for standoff attack either in support of small craft or using mid-course guidance provided by them. Ideally, the parent vessel will remain out of detection and engagement range, tracking targets by way of small craft which may avoid detection due to their small size. If an enemy vessel can be subjected to a 'missile ambush' it may be disabled without being able to fire back. Lesser threats and sensor blips can be checked out by flights of fighters and boarding parties sent aboard covered by the guns of the parent ship.

The missile bays are housed in a prominent dorsal hump, with each bay having its own magazine. Fore and aft of the missile hump are batteries of three triple pulse laser turrets, giving the Quiet Vigilance a reasonable punch in short-range combat. Five single beam laser turrets are also shipped, one on each of the aft engine pods, and one on each flank just aft of the command complex. These turrets are intended to provide point-defence against missiles and small craft.

## OPERATIONS

The Quiet Vigilance carries a considerable amount of supplies, and can remain on station – in theory at least – for three years without refuelling. This would be intolerable for the crew but patrols of several months' duration are not uncommon, with maintenance performed using the ship's own resources.

Patrol durations are sometimes extended by sending a resupply and recrewing vessel out to meet the patrol ship, carrying a complete change of crew. Jump capable ships are sometimes used for this purpose, or crews might make the transit in low berths. If this approach is used, a Quiet Vigilance patrol ship might remain on deployment for up to a decade, until a major refit is needed.

The vessel's in-system performance is adequate for making long transits between outsystem planets or threading a path through a complex gas giant moon system. It is quite capable of chasing down a suspect vessel such as a far trader refuelling in the outsystem during a smuggling run, and this interception envelope can be increased using small craft and missiles.

Smugglers and gunrunners will sometimes gamble that a patrol ship will not fire on them before they can jump out, since positive identification is difficult at long ranges. However, the relatively high thrust of the Quiet Vigilance allows it to position itself to cover most escape vectors whilst its small craft move to close off others. A suspect craft caught close to a gas giant during refuelling will have no choice but to submit to a search or make a very risky emergency jump.

# VARIANTS

The Quiet Vigilance is sometimes used as a tender to support system defence boats on distant stations. These craft are usually cramped and ill-suited to long deployments, and one solution to inevitable crew fatigue is to allow personnel to rotate aboard a tender for a while. By comparison to an SDB, the recreation spaces aboard the Quiet Vigilance are palatial. In some cases, the hangar is used as an additional accommodation and storage area, and a docking cradle for an SDB is added on its ventral surface.

Demilitarised versions of this ship are also popular as rescue and salvage vessels. Generally the missile bays are replaced with workshops and launch points for personnel or drones carrying out boarding and rescue work. The hangar is usually converted into a salvage reception and processing area, though some internal small craft capacity may be retained. With 3g performance and plenty of customisable space, the Quiet Vigilance has found a useful secondary niche, though precise modifications vary.

This class has also been encountered in other roles. Its long endurance makes it suitable for prospecting or scientific missions, carrying observatories and laboratories in place of its missile armament. A construction version is in limited use, putting together orbital and surface installations in remote parts of a star system.

However, by far the majority of Quiet Vigilance ships are retained in their original outsystem patrol configuration, silently coasting between outsystem planets to carry out another round of fruitless sensor sweeps and fighter flybys. Every now and then something is spotted, investigated and logged, and very occasionally an actual threat is detected. At that point the ship becomes more than a deterrent to smugglers; it is a distant bastion of authority or the tripwire that will alert system defence command to an enemy fleet refuelling in the outsystem. The patrol ship may be able to harass refuelling operations or have to make a rapid retreat depending on the size of the enemy force. Whatever happens, assistance will be far away.

# GLORINNA FIRELLA

Until recently, Glorinna was princess and sole heiress to the throne of a planetary government near the edge of the Imperium. The government was more or less along the lines of a constitutional monarchy with a representational parliament. However, a popular front uprising, possibly inspired by off-planet interests, deposed her father, the king, and erected a military junta in his stead. Glorinna managed to escape the rebels, but her father was taken and has not been heard of since. He is presumed either dead or imprisoned.

Now an exile, Glorinna is bending all her efforts towards engineering a return to her world and a counter-coup against the rebels. She is also driven to learn the fate of her father, and rescue him if he is still alive. The particular object of her bitter hatred is General Kang Ladro, once head of the Royal Companions regiment, who betrayed her father and brought the royalist army over to the rebels to gain power. Ladro is now part of the junta, and wants Glorinna dead or (preferably) married to him in order to secure his position. Ladro aspires to a re-establishment of the monarchy, with himself as king, and sees Glorinna's great popularity with the masses as his key to absolute power. The rest of the junta is divided, the majority desiring a popular dictatorship, a strong minority under Ladro's leadership looking towards the renewed monarchy. The populace itself is greatly dissatisfied with the junta, which has imposed repressive military control over all phases of daily life without doing anything to keep the promises of redistribution of wealth to the impoverished. They are strongly in favour of the return of the monarchy (though much too afraid of the junta to show it), and will support the return of Glorinna, who has always (unlike her father) been a popular and charismatic figure.

Glorinna is beautiful and regal, but talented in winning the loyalty and devotion of others and in no way snobbish. She is brave, and keeps a cool head in a crisis. Her strong ingrained sense of honour makes it certain that she will handsomely reward those who aid her. Her greatest weakness is a romantic, sentimental streak; there is a chance that she will fall in love with a Traveller or other individual whom she believes shares her devotion to the cause. This chance is especially improved if she meets the individual under dangerous or 'romantic' circumstances, such as being rescued from some hazardous situation in the course of her adventures. Her impulsive heart makes her easy prey for fortune-hunters.

## *Glorinna Firella*

| | |
|---|---|
| **Profession** | Noble |
| **Age** | 26 |
| **Terms** | 2 |
| **Money** | Cr 0 - ? |

**Skills** : Carouse 1, Leadership 1, Melee (blade) 1, Persuade 1

**STR**: 4
**DEX**: 10
**END**: 6
**INT**: 10
**EDU**: 10
**SOC**: 15

Should Glorinna fall in with a party of Travellers, she will be patient and willing to go out of her way if she feels some benefit would be won from the diversion. She will not, however, lose sight of her own goals, and if need be will part company as readily as she joined. Her ultimate goal is, of course, to raise funds and troops enough to oust the junta; she will tend to assume that others attach the same degree of importance to this goal as she does. Under no circumstances will she be turned from her course,

either by argument or knowledge of danger; she may postpone her plans for the sake of expediency, but will never abandon them, and will regard any who tries to persuade her against the enterprise as a coward or worse.

Glorinna is accompanied in her travels by Ek, a 2.2 metre mute utterly devoted to her. He is suspicious of outsiders, and will take orders from no one except the princess. Ek is particularly suspicious of anyone showing a romantic interest in her. Glorinna will not dismiss Ek; he is kept on as her personal servant and bodyguard, because 'he's been in the family for years.'

Glorinna Firella may come to the attention of the Travellers in one of many ways. They might, for example, actually be involved in the coup on her homeworld, and be approached for help in escaping the planet aboard their ship. There is a good chance she will approach Travellers later, recruiting them as bodyguards, or hiring Travellers with military experience as advisors or officers for the army she is putting together. She may also hire mercenary units to assist in raising her army. There is also an excellent chance that she would hire a band of Travellers to learn the whereabouts of her father, and then rescue him.

The Travellers might also be approached by Ladro's agents, who would offer an exhorbitant reward for them to kidnap or kill her. The Travellers would find, however, that Ladro is not entirely trustworthy when it comes to honouring agreements. Other adventures could well revolve around the divisions within the junta, with other factions seeking to hold the princess as a bargaining counter against Ladro, for example.

Finally, the referee might involve the Travellers in the situation by having Glorinna turn up as a fellow passenger aboard a starship, a chance acquaintance met at a hotel or bar on some planet, or as the victim of one or more assailants in the street. In this case, the Travellers might be caught in the middle and shoved into one or more adventures without real freedom of action.

Glorinna's finances are subject to considerable fluctuation; the referee should determine how much money she has available according to the nature of the situation. She may be able to pay well for services rendered or the Travellers might have to rely on the promise of money tied in with her own success in reaching her goal.

# THE GLORIOUS EMPIRE

The Aslan Hierate is comprised of thousands of clans with competing goals and ambitions. They maintain unity due to *fteir*, the complex code of honour and tradition to which they subscribe. It was simple enough to preserve a consistent definition of *fteir* when the Aslan were confined to their homeworld of Kusyu, but once they discovered the jump drive and began spreading out to other star systems, it became much more difficult.

As the Hierate grew, clans began to deviate from one another and *fteir* became more loosely defined. To remedy the situation a Grand Conclave was called on Kusyu to establish a clear and well-defined baseline of traditional Aslan values. The tenets of the Grand Conclave were adopted by the majority of the Tlaukhu who initiated an *Uwaralyekose* (Cultural Purge) to bring the clans back into line. Most deviant clans either corrected their ways or were destroyed, but some fled across the Great Rift. Among the first to make the crossing were the Tokouea'we clan, who eventually created the first and arguably mightiest of Aslan separatist states: The Glorious Empire.

# A SHORT HISTORY

The Tokouea'we originated in the Hlakhoi sector and were vassals of the Tralyeaeawi. Their territory included half a dozen star systems, mostly rich worlds with complex biospheres. Females from the clan operated immensely profitable livestock and agricultural businesses, making the Tokouea'we very wealthy. The Tokouea'we became known for their touchiness, aggression and a tendency to escalate conflicts. They were protective of their holdings and quick to counter any incursions.

The powerful Yerlyaruiwo clan, long-time enemies of the Tralyeaeawi, persecuted the Tokouea'we during the *Uwaralyekose*, accusing them of breaking *fteir* with exploitative labour practices. The Tokouea'we initially chose to stand and fight for their honour but when it became apparent they would be annihilated, they liquidated their assets and fled across the Great Rift. The crossing was long and perilous. They allied themselves with the technologically savvy Wahtoi clan, who enabled them to survive the ordeal. Once across the Rift, the Tokouea'we became a transient clan who served for centuries as a purveyor of mercenaries in dozens of inter-clan conflicts.

Having achieved great wealth from their military exploits, they moved on to conquer territory deep in the Trojan Reach. Settling on Syoakh, the Tokouea'we proceeded to conquer over a dozen star systems, enslaving the remnants of several ancient human colonies in the process. Over time they extended their reach to worlds held by other Aslan clans and a few Florian League systems.

At the height of their power, the Tokouea'we held 32 star systems and had arguably become the most powerful clan in the trans-Rift colonies. They began to pressure the Ya'soisthea, at that time a loose advisory body of sorts, to declare the colonies to be a full-fledged and wholly independent state. The idea began to take hold. The Hierate was too far away to effectively manage the new territories and it made sense for trans-Rift clans to manage their own affairs. Unfortunately for the Tokouea'we, many clans present were members and vassals of the Tlaukhu. These clans thwarted Tokouea'we efforts to sever ties with the Hierate.

The Tokouea'we finally broke from the Hierate in 650. They founded the Glorious Empire, a centralised and authoritarian Aslan separatist state built on slavery and military adventurism. The Hierate responded by declaring war on the Empire with the intention of destroying the heretical Tokouea'we once and for all. The war between Empire and Hierate has gone on for nearly five centuries. During that time, the Empire has lost more than half of its territory and become increasingly desperate as the Hierate closes in for the kill.

# SLAVERY

Human slaves comprise between 30–60% of the population of the Glorious Empire; it has been difficult to obtain an exact census given the xenophobic nature of their masters. The treatment of slaves varies from world to world, with some merely treated like third-class citizens and others as chattel. During the early era of the Empire, some humans were consumed as food but that practice has long since died out.

Slaves were sometimes taken from conquered Aslan clans as well. Most were eventually ransomed, repatriated or incorporated into the Tokouea'we, though very few Aslan remain slaves in the modern era. There is a smattering of Vargr, Yonts, Florians, Chirpers and other alien races who have been enslaved as well. However, the Empire considers human slaves to be ideal since they can be easily incorporated into the existing population.

Slaves enjoy a degree of protection due to their importance to society. Owners are allowed to treat their slaves as they wish to a large degree, but excessive harm or killing of slaves is a capital crime. Masters who brutally treat their slaves are severely punished and killing a slave typically warrants summary execution.

Life as a slave is not pleasant. Slaves in servant and labour roles can expect to work from childhood to old age. They serve in the most demanding and hazardous jobs: mining airless rockballs, constructing buildings, orbitals and spacecraft, clearing biospheres of dangerous flora and fauna, performing farm work in challenging environments, and most recently serving as cannon fodder in the Empire's armies.

The recent forays of the Glorious Empire into the wars of the Dustbelt have necessitated the use of human slaves as soldiers. The 'dog soldiers' as they are known, serve primarily as front-line infantry, and have a high mortality rate. Only the shrewd, hardy and lucky survive more than a few years of service. With the depletion of the Empire's male population in its devastating war against the Hierate, the Empire now places greater value on human service. Humans who serve for a minimum of two terms are granted freedom provided they remain loyal subjects of the Empire. Most who have been freed continue to serve in the armed forces after manumission.

The Glorious Empire has embarked upon several ambitious breeding and genetic engineering programs to produce specialised slaves. The results have been mixed with a few successful experiments and several dismal failures such as the Tryaoke and Fantasy strains. Whilst many experiments resulted in subtle changes to the human genome, others have created monstrosities.

There have been many slave revolts over the course of the Empire's 700-year history, most of which have been brutally put down. The Aslan tend to subjugate the human population with abandon but seem to lack the will to ensure obedience; Aslan by nature crave conflict and challenge, so subconsciously creating circumstances in which slaves can revolt makes sense on some level.

Billions of human slaves have been liberated on worlds the Hierate has captured from the Empire, most notably Hliyh and Tryaoke. Many had families on other worlds of the Empire and some have sought to free them. It has been impossible for the Empire to fully inoculate the slave population from the idea of emancipation now that so many have been liberated elsewhere. Some of the bravest among those freed have furtively returned to Empire space to foment rebellion among the slaves.

The future of the Glorious Empire's slave population is difficult to ascertain. Within the Empire's borders, many slaves now know that freedom is a possibility. This has created a heretofore unseen degree of unrest. In the liberated worlds, freed slaves pose a conundrum for their new Hierate masters. The Aslan crave territory more than anything else and it is not easy to claim land occupied by human squatters. Their options are to incorporate freed slaves into society, deport them or, in the worst of cases, exterminate them.

## CULTURE

The overwhelming sense one feels when visiting the Glorious Empire and interacting with its people is one of fatalism. They see their doom coming, but can do little about it. The nobility is arrogant and intransigent to the point of self-destruction; the Tokouea'we were infamous for being a touchy clan, and this infamy was well earned. Aslan engage in ritual warfare to prevent widespread destruction and loss of life, but the Tokouea'we have always tended to escalate conflicts higher than is warranted. If a War of Assassins were called for, the Tokouea'we would push for a Strictly Limited War. If a Limited War were expected, they would strive for a Minor War, and so on. The clan became masterful warriors but at the expense of good relations with their peers.

News is always good in the Glorious Empire, or at least it would seem so. Its fleet of couriers are always flitting about from system to system carrying tidings from the battlefront. If one were to believe the dispatches they carry, the Empire is always just one victory from turning the tide of the war. The 'heathen clans' of the Hierate are portrayed as a devil who would burn the Empire to the ground and slaughter its citizens. The propaganda is backed by a broad media campaign, ubiquitous military forces, and an invasive army of clan agents. The people are constantly reminded that there is only one clan, the Tokouea'we, and that if it should fall, everyone perishes.

However, beneath all the parades, banners and festivals honouring the Empire's past glories and bright future, there is a level of desperation and fear thick enough to be cut by a dewclaw.

Slaves in many ways emulate their Aslan masters. They pray to their ancestors, build simple shrines and carry out their lives with a version of *fteir* that suits their enslaved state. Whilst slaves in labour occupations lead harsh and brief lives, those in servant, technical and military positions enjoy a degree of status. Many an Aslan *ekho* sees their slaves as essential parts of their lives and would protect them as they might their own children.

Whether they are kind or cruel to their slaves is ultimately immaterial. Most Aslan believe it is morally repugnant to own slaves. As Yuleihehar, the famous epic poet of clan Hlyueawi, once said: *Slavery diminishes all involved. It strips the slave of his dignity and freedom, and deprives the master of his sophontarianism*.

## GOVERNMENT

The Glorious Empire is a totalitarian regime with one clan and one Emperor. Vassal clans do not exist here. The process by which vassals develop has been dismantled, and all potential offshoots of the clan are immediately reconstituted into Tokouea'we *ahriya*.

This monolithic clan structure has done a great deal of harm to the Empire's ability to innovate. For better or worse, the natural desire of the Aslan to obtain new lands is intrinsically tied to the concept of the *ihatei*. Thrust from the protective womb of the Hierate, *ihatei* must chase the frontier, using wits and creativity to handle challenges as they arise. By taking away the individuality and independence of the second son, the Empire has deprived itself of a key driver of innovation.

The Glorious Empire would very much like to return to their world-conquering ways, but the effects of lost territory and multiple generations of males lost to war has reduced its ability to project power. The Tokouea'we were seemingly unstoppable at one time, a highly motivated clan given the gift of high technology by their peer, the Wahtoi. In the uncharted territories of the Reach, they had no worthy rivals and easily rose to dominance. The trans-Rift colonies, if not the entire sector, were theirs for the taking but pride and arrogance consumed them.

The Glorious Empire is now a depleted polity. It is the embodiment of a wounded warrior who refuses to yield, knowing full well that doing so entails the dissolution of both Empire and the Tokouea'we. It is expected that the Empire will fall within a decade and, if not for recent successes in the Dustbelt, the government might have already been overthrown. Its victories in the war against Tyr have given the Empire false hope, even as Hierate barbarians clamour at its gates.

## TRAVELLING IN THE GLORIOUS EMPIRE

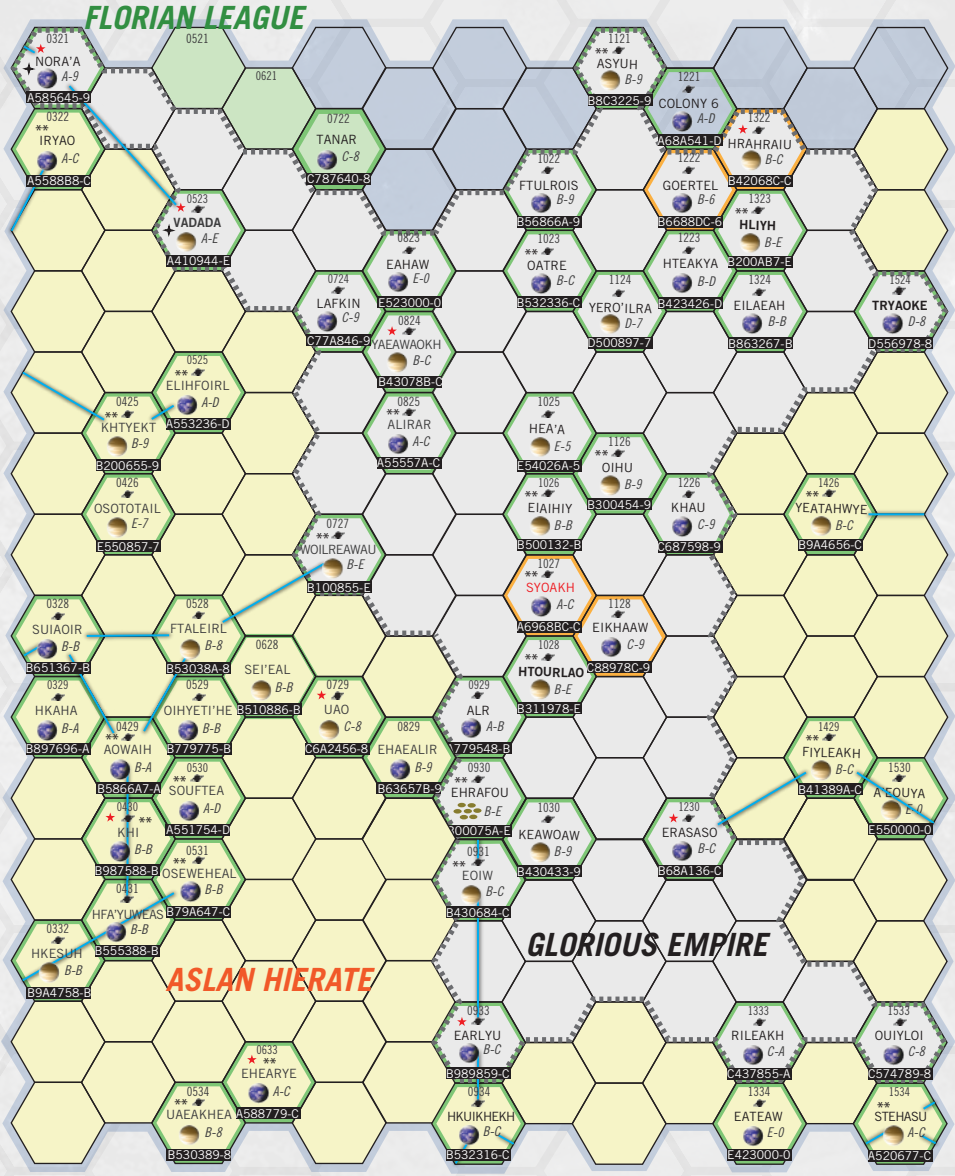
Entering Glorious Empire space is a risky idea at best. The Empire is extremely xenophobic and looks upon outsiders with suspicion and contempt.

Most Empire systems are heavily defended and have numerous system defence squadrons on hand. Determine Space Encounters using the *Traveller Core Rulebook* as normal, but any result of 7+ on the 10's dice results in an encounter with a military or system defence spacecraft. To determine the disposition of a Glorious Empire military spacecraft, roll 2D and consult the Disposition table with the following modifications:

| | |
|---|---|
| The Traveller spacecraft is an Aslan ship | DM+1 |
| The Traveller spacecraft is a human ship | DM-2 |
| The Law Level of the system is 7–9 | DM-1 |
| The Law Level of the system is 10+ | DM-2 |

# THE GLORIOUS EMPIRE

## CIRCA 730, IMPERIAL DATING




Gas Giant
*B-6* Starport Class & Tech Level
★ Imperial Naval Base
** Corsair/Clan/Embassy
✦ Military Base/Garrison

Secure System
Amber Zone
Trade Route
Planet (dry)
Planet (water present)
Asteroids

## Disposition

| 2D | Actions Taken by Glorious Empire Military Spacecraft |
|---|---|
| 5- | The ship fires upon the Travellers without attempting to communicate. Attempts to contact the craft and cease hostilities may or may not be accepted at the referee's discretion. Even if convinced to stand down, the Empire escorts the Travellers' ship to the nearest starport and impounds it. |
| 6–8 | The ship hails the Travellers and demands to board them. The Travellers must make a Difficult (10+) Persuade or Diplomat check (SOC or TER). DM+2 if the Travellers speak Trokh. Success results in a cursory boarding before the Travellers are allowed to proceed to a starport under escort. Failure results in an intrusive boarding followed by temporary impounding of the ship for 2D days. |
| 9–10 | The Travellers are instructed to proceed under escort to the nearest starport. |
| 11+ | The Travellers are left alone but watched closely. If they do anything other than perform wilderness refuelling and jump out of the system, they might very well be subjected to an inspection, as above. |

Any approach to a Glorious Empire world with a Class A or B starport and Law Level 7+ results in automatic boarding and inspection. The Travellers can expect to be contacted at the 100-diameter limit shortly after coming out of jump and approached for boarding and inspection before they reach the 10-diameter limit.

Visiting the worlds of the Glorious Empire is an inadvisable thing to do, especially for human Travellers. Other than heavily defended Syoakh and Htourlao, all worlds bear the scars of war. The wrecks of warships may be seen in decaying orbit around many Empire worlds, and evidence of orbital bombardment by the Hierate is present on most planets. Most major cities have suffered battle damage; some have been completely destroyed.

Despite the destruction, Travellers will find that the citizens of the Empire do their best to get on with their lives. Life in the Glorious Empire is much as it is in the Hierate. The key difference is the overwhelming presence of slaves. Some appear to be low-class citizens whilst others are attended by their Aslan masters and may be mistreated.

Whilst the Empire once enjoyed some of the highest technology levels in the Hierate, it is now in rapid decline. Fusion plants are dangerously maintained with low-tech materials and equipment. Gravitic systems on many orbitals are failing or in dire need of repair. The Empire's once-great cities, known for their grandiose design, are a shadow of their former selves.

The one enterprise that shines is the mercenary business. The Empire has invested the majority of its resources in the development and maintenance of mercenary forces, renowned in the Dustbelt for their exemplary efficiency, ferocity and success at winning battles. Mercenary forces are equipped to high standards and most new starships are military transports and mercenary cruisers.

There are opportunities for bold Travellers to make a tidy profit in the Glorious Empire. Its people are desperate for everything from common industrial goods to foodstuffs like fresh aua meat and dustspice. A lucrative black market for goods exists in the Empire underworld. Playing that market is a dangerous game but the potential profits are astronomical.

Human Travellers are always at risk in the Glorious Empire. Humans are viewed as being inferior and only worthy of enslavement. However, despite the fact that the Empire wantonly roams the Reach capturing and enslaving humans, there is no mechanism for capturing human visitors who have somehow been willingly admitted into the Empire. It may seem a fine distinction, but enslaving visitors is an uncommon occurrence nonetheless. Even so, humans in the Empire would be wise not to test their limits. There is a first time for everything.

## *WAHTOI*-CLASS COURIER

Named for and initially designed by the first clan to cross the Great Rift, *Wahtoi* couriers serve two primary purposes: survey and communications. As they fled the Hierate during the Cultural Purges, the Tokouea'we spent copious resources to purchase a fleet of these spacecraft but it turned out to be well spent. The *Wahtoi* enabled them to extend their reach far into the Trojan Reach to find a home far from the withering gaze of the Tlaukhu. Whilst the clan has lost its ability to rebuild the jump drives of these long-legged starships, the remaining fleet is meticulously maintained both for its utility and hallowed place in history. The *Wahtoi* are now used primarily to maintain tight communication among the Empire's remaining star systems.

# *WAHTOI*-CLASS COURIER

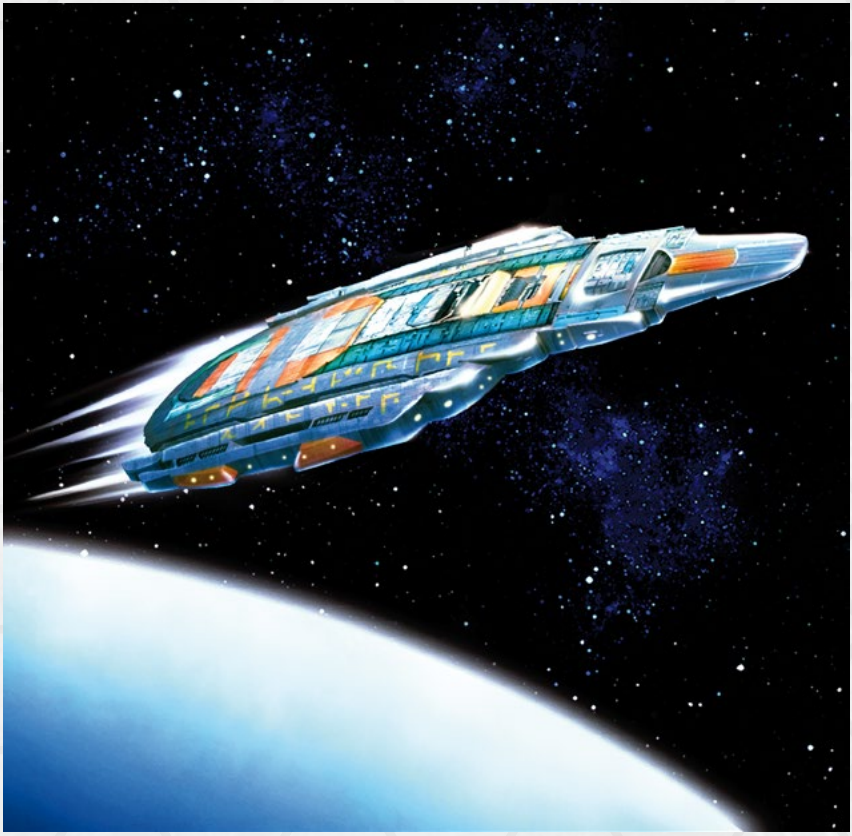
| TL13 | | TONS | COST (MCR) |
|---|---|---|---|
| **Hull** | 300 tons, Streamlined | - | 18 |
| | Emissions Absorption Grid | 6 | 12 |
| **Armour** | Crystaliron, Armour: 4 | 15 | 3.6 |
| **M-Drive** | Thrust 2 | 6 | 12 |
| **J-Drive** | Jump 4 | 35 | 52.5 |
| **Power Plant** | Fusion (TL12), Power 195 | 13 | 13 |
| **Fuel Tanks** | J-4, 8 weeks of operation | 124 | - |
| **Bridge** | | 20 | 1.5 |
| **Computer** | Computer/15 bis | - | 3 |
| **Sensors** | Improved, Extended Array | 9 | 12.9 |
| **Weapons** | Double Turret (pulse lasers) | 1 | 2.5 |
| | Double Turret (pulse laser/ sandcaster) | 1 | 1.75 |
| **Systems** | Fuel Processor (40 tons/day) | 2 | 0.1 |
| | Fuel Scoops | - | - |
| | Mail Distribution Array (TL13) | 20 | 10 |
| | Probe Drones x5 (TL12) | 1 | 0.8 |
| **Staterooms** | Standard x5 | 20 | 2.5 |
| | Low Berth x6 | 3 | 0.3 |
| | Slave Quarters x4 | 2 | 0.1 |
| **Software** | Jump Control/4 | - | 0.4 |
| | Library | - | - |
| | Manoeuvre/0 | - | - |
| | Virtual Crew/1 | - | 1 |
| **Common Areas** | | 6 | 0.6 |
| **Cargo** | | 16 | - |
| | | **Total** | 148.55 |

## CREW

Pilot, Astrogator,
Engineers x 2, Gunners x 2

## RUNNING COSTS

**Maintenance Costs**: Cr12,379/month
**Purchase Costs**: MCr148.55

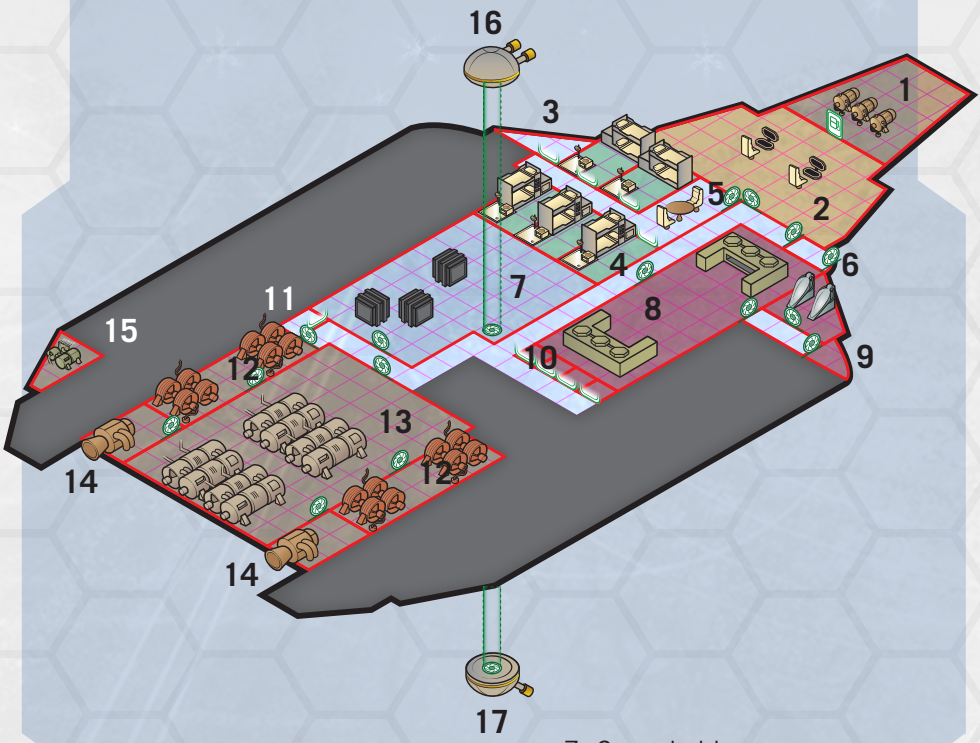


### Slave Quarters

Each slave quarters block contains a tight and thrifty living space for one slave. The space is essentially a rectangular cuboid with minimal room for possessions and toiletry, and a curtain or blind for privacy. Slave quarters are typically stacked two or three units high. An extensive number of weeks or months spent in slave quarters can be wearying for those not accustomed to minimalism or hardship. The enslaved humans of the Glorious Empire are used to the tight accommodations and suffer few ill effects. Slaves kept in slave quarters are typically those considered essential during jump such as personal servants, stewards and technicians. Non-essential slaves are stored in low berths. Each block consumes 0.5 tons and costs Cr25000.

## HULL POINTS
120

1. Sensors
2. Bridge
3. Fresher
4. Stateroom
5. Common area
6. Air lock




7. Cargo hold
8. Mail distribution array
9. Repair drones
10. Slave quarters
11. Ship locker
12. Power plant
13. Jump drive
14. Manoeuvre drive
15. Fuel processor
16. Dual turret (pulse laser)
17. Dual turret (pulse/sandcaster)

## POWER REQUIREMENTS

| | |
|---|---|
| Basic Ship Systems | 60 |
| Manoeuvre Drive | 60 |
| Jump Drive | 120 |
| Sensors | 12 |
| Weapons | 14 |
| Fuel Processor | 2 |

# AIRSTRIKE

Air power is a key facet of warfare on almost all worlds where flight is possible. Air attack is most likely in a war zone, but air power can be improvised almost anywhere. Rocks dropped from an air/raft are a significant threat to personnel on the ground, and civilian aircraft can be converted to provide at least a modicum of air support to rebels or insurgents. Even where there is no atmosphere, grav vehicles or spacecraft may be used to deliver strikes from above.

These rules provide a system for when Travellers encounter air power. Targets are assumed to be on the scale of a single vehicle, small structure, or handful of personnel.

## AIRBORNE AND AEROSPACE WEAPONS

The majority of airborne and aerospace weapons can be categorised as guns, bombs, or missiles, depending on their characteristics.

**Guns** in this context include all projectile and energy weapons that can be fired from an airborne platform, using pulses, beams or projectiles that are not powered after they leave the weapon. Guns range from pistols and small arms fired from a flying vehicle to machineguns, autocannon and laser weapons mounted on aircraft or space vehicles. A starship's lasers fired from orbit are considered guns as they have similar targeting considerations to smaller gun weapons.

**Bombs** are deadfall or glide weapons which are unpowered after launch. A rock thrown from an air/raft is a bomb, as is an asteroid dropped from orbit. More conventional bombs include unguided fragmentation or explosive bombs, and weapons using inertial, laser or other form of guidance. Most rely on a payload to cause damage, but simple impact is also damaging.

**Missiles** are powered after launch and usually deliver a payload. Unguided rockets are considered to be missiles, as are powered kinetic-energy weapons and more conventional explosive warhead munitions.

## SPOTTING

One of the main problems facing ground-attack pilots is finding and identifying a target whilst moving fast. Assistance is often provided by forward observers, pathfinders, airborne controllers, or troops on the ground. It is possible to spot a target first then come round for an attack

pass, but this increases the risk of being hit by ground fire and is by no means guaranteed. Even the best ground-attack pilot can be confused by terrain features flashing by below and fail to find the target again.

To detect a typical ground target whilst airborne requires a Very Difficult (12+) Recon check, with DM-1 at Medium speed, DM-2 at High Speed, DM-4 at Fast speed, DM-6 at Very Fast speed, and DM-8 at Subsonic speed. It is impossible to spot ground targets visually at faster Speed Bands. Positive DMs are available, depending upon circumstances:

**On-Board Sensors**: The sensor package of an aircraft or space vessel grants DM+2 to spot targets for every 3 Tech Levels of the aircraft. A TL8 jet fighter therefore gains DM+4 to spot targets using its own sensors. This can be countered with camouflage or stealth. Sensor DMs are cumulative with a targeting feed or marked target.

**Targeting Feed**: If an observer has the target in sight and can communicate its location, the attacking pilot gains DM+6. This includes sensors near the target can transmitting targeting information as well as pilots being verbally guided to the target by a controller.

**Target Marked**: If the general area of the target is marked, with smoke for example, DM+3 applies. This DM is not cumulative with a targeting feed.

If the target is not spotted, it cannot be effectively attacked even if the pilot knows it is there somewhere. The exception is a situation where weapons are so destructive that even a wide miss will destroy the target; an asteroid from orbit does not need to be precisely targeted to take out a band of Travellers.

If a target is spotted during an attack run, roll 1D. On a 4+, the pilot will be in a position to attack. If not, they will have to come around again and make another attempt to spot the target. DM+4 applies to attempts to re-attack in this manner, until contact is lost at which point the target must be re-acquired. However, if the pilot knew, even in general terms, where the target was before setting up the attack run (for example, because they could see smoke from a target-marking grenade) then so long as the target is spotted, the pilot will be in position to attack.

## ATTACKING

The base chance to hit a ground target from an airborne vehicle is Difficult (10+), with DM-1 at Medium speed, DM-2 at High Speed, DM-4 at Fast speed, DM-6 at Very Fast speed, and DM-8 at Subsonic speed. This assumes a single shot or a few rounds fired. More intense fire increases the chance of a hit.

**Strafing**: Weapons suitable for strafing have the Auto trait, including autocannon and machineguns. A strafing attack grants DM+1 to attack rolls.

**Intense Strafing**: Intense strafing weapons have an Auto trait of 4+. include multiple-mount machineguns and autocannon, Gatling lasers and Vulcan autocannon. An intense strafing attack grants DM+2 to attack rolls.

**Area**: Explosive and similar 'area effect' weapons grant DM+1 to attack rolls from a small warhead such as a high-explosive bomb, DM+2 from a medium bomb and DM+4 from a heavy bomb.

**Guided Weapons**: Guided weapons with the Smart trait apply their normal DM to hit. Weapons guided by external means, such as a laser designator, will automatically hit the target with a successful attack roll from the designator. This normally requires personnel on the ground or in a slow-moving spotting craft to keep the laser on-target.

## SCATTER

Ordnance that comes down from the sky has to go somewhere. If the target is missed, the ordnance will land 1Dx5% of the distance between attacker and target, in a direction (random or otherwise) determined by the referee.

# >> AIRBORNE WEAPONS <<

Many weapons suitable for mounting on aircraft and grav vehicles are found in the Central Supply Catalogue and Vehicle Handbook.

### Bomblet Rack

A rack of small bomblets dropped in rapid sequence from a small rack on the underside of a wing or fuselage. Warheads are usually a mix of high explosive/fragmentation and incendiary. This weapon is suitable for small-scale attack on infantry and light structures, but is ineffective against armoured vehicles.

Bomblets are unguided and fall freely under gravity. A bomblet attack is treated as a heavy bomb area weapon, as the bomblets drop across a wide area.

| Weapon | TL | Range | Damage | Tons | Spaces | Cost |
|---|---|---|---|---|---|---|
| Bomblet Rack | 4 | - | 2D | 0.1 | 1 | Cr1000 |

| Magazine | Magazine Cost | Traits |
|---|---|---|
| 1 | Cr900 | Auto 4, Blast 5 |

Bomblet Rack

Cluster Bombs

Machinegun Pod

## Machinegun Pod

A machinegun pod is a self-contained unit holding a pair of heavy machineguns and ammunition feed devices. The pod is designed to be carried on a pylon under a combat aircraft's wing, or fitted to a civilian aircraft as a basic strafing weapon. The unit is quickly detachable so long as fittings are present, or can be permanently welded into place.

| Weapon | TL | Range | Damage | Tons | Spaces | Cost |
|---|---|---|---|---|---|---|
| Machinegun Pod | 6 | 1 | 4D+4 | 0.3 | 2 | Cr9500 |

| Magazine | Magazine Cost | Traits |
|---|---|---|
| 150 | Cr600 | Auto 4 |

## Cluster Bombs

Cluster bombs are a favoured antipersonnel weapon, releasing multiple bomblets which then detonate in mid-air, resulting in a rain of small fragments. Cluster bombs are considered to be area weapons, but gain double the normal DM when attacking to hit a personnel target.

| Weapon | TL | Range | Damage | Tons | Spaces | Cost |
|---|---|---|---|---|---|---|
| Small Cluster Bomb | 5 | - | 5D | 0.1 | 1 | Cr3000 |
| Medium Cluster Bomb | 5 | - | 5D | 0.5 | 2 | Cr6000 |
| Large Cluster Bomb | 5 | - | 6D | 1 | 4 | Cr10000 |

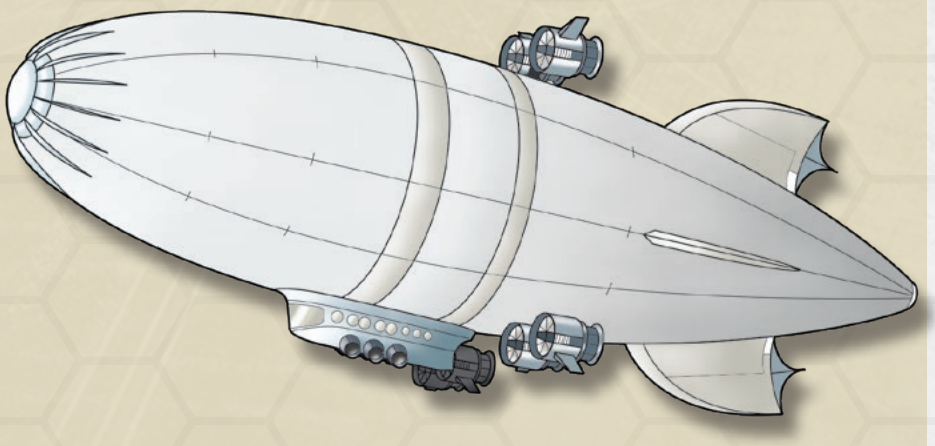
| Magazine | Magazine Cost | Traits |
|---|---|---|
| 1 | - | Blast 40, One Use |
| 1 | - | Blast 50, One Use |
| 1 | - | Blast 60, One Use |

# GROUND ATTACK AIRCRAFT

Almost any platform can be converted to a ground attack role, with varying degrees of effectiveness. These craft are marketed either at the ground-attack niche or with a mind to their conversion, and in general have a paramilitary look about them even when serving in a civilian role.

## SKY WHALE CLASS AIRSHIP BOMBER

Airship bombers are occasionally encountered on low-tech worlds. They are extremely slow but surprisingly hard to shoot down with weapons of their own Tech Level. The Sky Whale is about as basic as a ground-attack platform can be. Up to small bombs can be carried on hardpoints under the control gondola, and there is a large field gun for self-defence that can engage ground targets as well as hostile aircraft at the same level as the airship or below.



| Weapon | Range | Damage | Traits | Fire Control |
|---|---|---|---|---|
| Field Gun | 1 | 8D | - | - |

| Magazine | Magazine Cost |
|---|---|
| 1 | Cr75 |

## SKY WHALE CLASS AIRSHIP BOMBER

| Armour | |
|---|---|
| Front | 1 |
| Sides | 1 |
| Rear | 1 |

| Traits |
|---|
| - |

| | |
|---|---|
| TL | 5 |
| Skill | Flyer (airship) |
| Agility | -3 |
| Speed (cruise) | Slow (Idle) |
| Range (cruise) | 4000 (6000) |
| Crew | 4 |

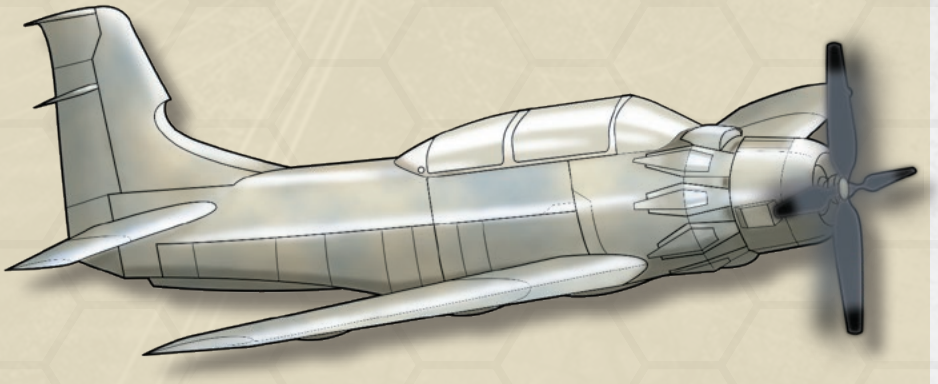
| | |
|---|---|
| Passengers | - |
| Cargo | - |
| Hull | 40 |
| Shipping | 20 tons |
| Cost | Cr82 000 |

| | |
|---|---|
| Equipment | • Control System (basic) |
| Weapons | • Fixed Mount (field gun)<br>• Hardpoint (1 space) x10 |

| Equipment | |
|---|---|
| Autopilot (skill level) | 0 |
| Communications (range) | - |
| Navigation (Navigation DM) | - |
| Sensors (Electronics (sensors) DM) | - |
| Camouflage (Recon DM) | - |
| Stealth (Electronics (sensors) DM) | - |

## PALOMINO LIGHT STRIKE AIRCRAFT

The Palomino is a very simple mid-tech aircraft suitable for light strike and counterinsurgency work. It also has many civilian applications including surveying and monitoring agriculture and, as a two-seater, makes an excellent trainer. Palominos are well liked for their easy and forgiving flight characteristics. No weapons are fitted but the Palomino can mount gun pods, bombs or rockets on six wing and fuselage pylons. Electronics are insufficient to use guided weapons without extensive modification, but some fire-and-forget missiles are available as a package allowing the aircraft to act as a 'dumb' airborne launch platform in conjunction with a designator-equipped observer.



| Equipment | |
|---|---|
| **Autopilot (skill level)** | 0 |
| **Communications (range)** | 50km |
| **Navigation (Navigation DM)** | +1 |
| **Sensors (Electronics (sensors) DM)** | +0 |
| **Camouflage (Recon DM)** | - |
| **Stealth (Electronics (sensors) DM)** | - |

## PALOMINO LIGHT STRIKE AIRCRAFT

| Armour | |
|---|---|
| **Front** | 1 |
| **Sides** | 1 |
| **Rear** | 1 |

**Traits**

-

| | |
|---|---|
| **TL** | 5 |
| **Skill** | Flyer (wing) |
| **Agility** | +1 |
| **Speed (cruise)** | High (Medium) |
| **Range (cruise)** | 600 (900) |
| **Crew** | 2 |

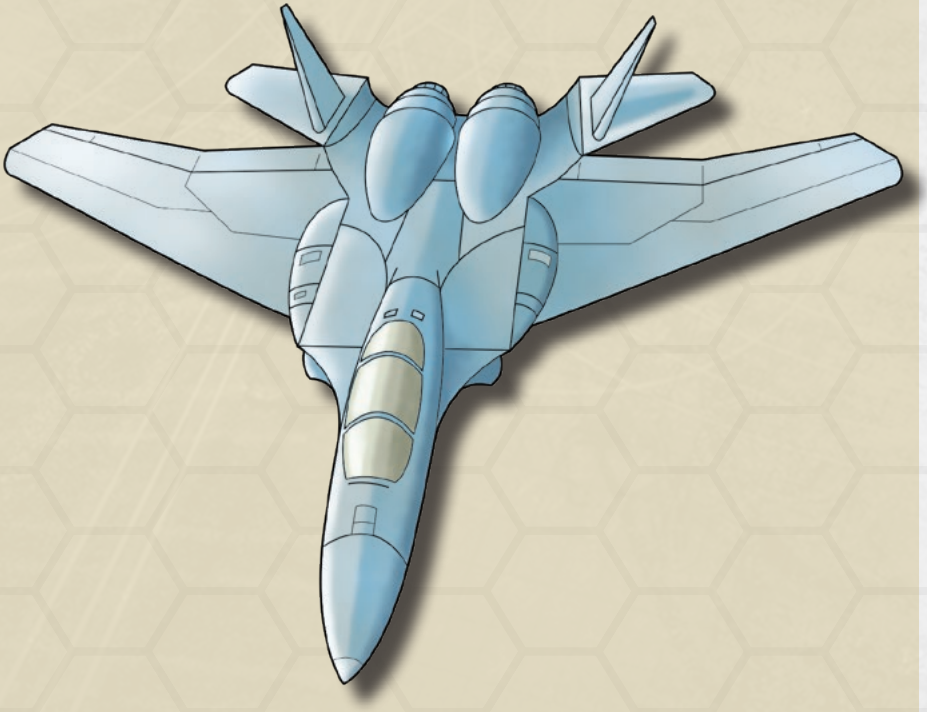
| | |
|---|---|
| **Passengers** | - |
| **Cargo** | - |
| **Hull** | 4 |
| **Shipping** | 4 tons |
| **Cost** | Cr197 000 |

| | |
|---|---|
| **Equipment** | • Autopilot (basic),<br>• Communications System (basic),<br>• Control System (basic),<br>• Navigation System (basic),<br>• Sensors (basic),<br>• STOL |
| **Weapons** | • Modular Hardpoint (2 spaces) x6 |

## LIGHTNING GROUND-ATTACK AIRCRAFT

The Lightning is a mid-tech single-seat strike platform designed to use guns, missiles or bombs to engage a variety of targets. Unlike its predecessors, it is a dedicated combat aircraft and carries military electronics as standard. Lightnings are compatible with a variety of weapon systems including missiles above the Tech Level of the aircraft itself.

The only permanent armament aboard a Lightning is its rotary autocannon. Additional weapons can be fitted on the four external pylons along wings and in the internal weapons bay.



| Weapon | Range | Damage | Traits | Fire Control |
|---|---|---|---|---|
| Rotary Autocannon | 1 | 6D | Auto 5 | +1 |

| Magazine | Magazine Cost |
|---|---|
| 500 | Cr1200 |

## LIGHTNING GROUND-ATTACK AIRCRAFT

| Armour | |
|---|---|
| **Front** | 12 |
| **Sides** | 12 |
| **Rear** | 12 |
| **Top/Bottom** | 12 |

**Traits**

-

| | |
|---|---|
| **TL** | 7 |
| **Skill** | Flyer (wing) |
| **Agility** | +2 |
| **Speed (cruise)** | Fast (High) |
| **Range (cruise)** | 2000 (3000) |
| **Crew** | 1 |
| **Passengers** | - |
| **Cargo** | - |
| **Hull** | 6 |
| **Shipping** | 20 tons |
| **Cost** | MCr 1.9 |

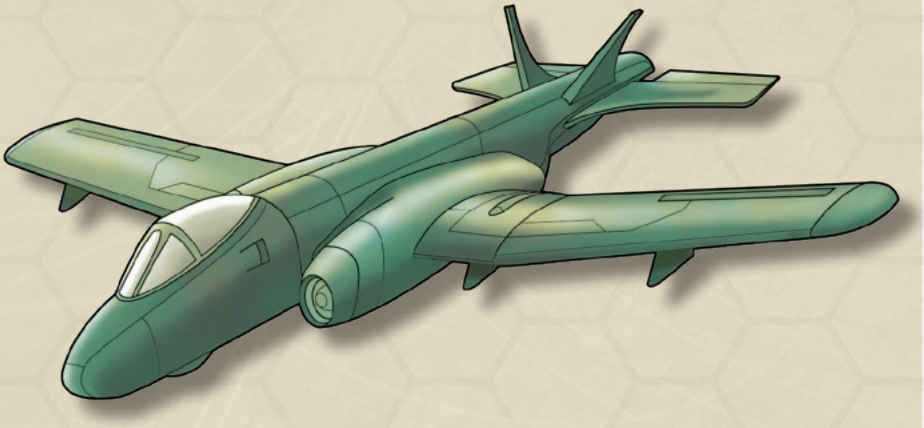
| | |
|---|---|
| **Equipment** | • Autopilot (improved),<br>• Communications System (Basic),<br>• Control System (improved),<br>• Decoy Dispenser,<br>• Ejection Seat,<br>• ECM (basic),<br>• Navigation System (basic),<br>• Sensors (improved),<br>• Fire control (basic) x2,<br>• STOL |
| **Weapons** | • Modular Hardpoint (2 spaces, basic fire control) x4<br>• Bay (10 spaces, basic fire control) |

| Equipment | |
|---|---|
| **Autopilot (skill level)** | 1 |
| **Communications (range)** | 50km |
| **Navigation (Navigation DM)** | +1 |
| **Sensors (Electronics (sensors) DM)** | +1 |
| **Camouflage (Recon DM)** | - |
| **Stealth (Electronics (sensors) DM)** | - |

## RAVEN HEAVY STRIKE JET

The Raven falls somewhere between tactical strike platform and bomber. Although its payload is small for a true bomber, it has a very long range in terms of fuel and crew endurance. A full complement of four personnel can be accommodated, allowing two to rest whilst two fly the to the target area.

The Raven relies mostly on not being intercepted, but does have reasonable self-defence capabilities. Even if its stealth does not prevent detection, electronic countermeasures, decoys and two anti-missile systems give a good chance to shoot down incoming missiles.



| Weapon | Range | Damage | Traits | Fire Control |
|---|---|---|---|---|
| Anti-Missile System (minigun) | 0.5 | 2D | Auto 6 | - |

| Magazine | Magazine Cost |
|---|---|
| 600 | Cr1000 |

| Equipment | |
|---|---|
| **Autopilot (skill level)** | 1 |
| **Communications (range)** | 500km |
| **Navigation (Navigation DM)** | +1 |
| **Sensors (Electronics (sensors) DM)** | +1 |
| **Camouflage (Recon DM)** | -2 |
| **Stealth (Electronics (sensors) DM)** | -1 |

## RAVEN HEAVY STRIKE JET

| Traits |
|---|
| - |

| Armour | |
|---|---|
| **Front** | 7 |
| **Sides** | 7 |
| **Rear** | 7 |
| **Top/Bottom** | 7 |

| | |
|---|---|
| **TL** | 8 |
| **Skill** | Flyer (wing) |
| **Agility** | -1 |
| **Speed (cruise)** | Fast (High) |
| **Range (cruise)** | 9000 (9000) |
| **Crew** | 4 |

| | |
|---|---|
| **Passengers** | - |
| **Cargo** | - |
| **Hull** | 20 |
| **Shipping** | 80 tons |
| **Cost** | MCr 5.6 |

| | |
|---|---|
| **Equipment** | • Anti-Missile System (minigun) x2,<br>• Autopilot (improved),<br>• Bunk,<br>• Camouflage (improved),<br>• Communications System (improved, encrypted),<br>• Control System (improved),<br>• Decoy Dispenser,<br>• ECM (improved),<br>• Ejection Seats x4,<br>• Fresher,<br>• Mini-Galley,<br>• Navigation System (basic),<br>• Sensors (improved, hardened),<br>• Stealth (basic) |
| **Weapons** | • Modular Hardpoint (2 spaces, improved fire control) x8<br>• Bay (10 spaces, improved fire control) |

# JUMP SPACE

The central secret of interstellar travel is the concept of jump space. Without this method of travelling around intervening space, Travellers would be restricted by the universal speed limit of 300,000 kilometres per second; the stars would be beyond the reach of most intelligent species, and even the limited travel that did take place would be slow, and unprofitable.

Jump space changes all of that. It allows travel at a velocity of up to six parsecs per week, making interstellar journeys of no more inconvenience than historical Terran sea cruises.

## JUMP THEORY

There are several differing theories of jump space, and although jump technology has been used for star drives for thousands of years, a precise understanding of it is not necessarily a prerequisite; high quality data on jump space is difficult to obtain.

The basic concept of jump space is that of an alternate space. Theoretically, jump spaces are alternate universes, each only dimly understood from the standpoint of our own universe. Within jump space, different physical laws apply, making energy costs for reactions and activity different and imposing a different scale on size and distance.

## THE PHYSICS OF JUMP SPACE

A jump is defined as the movement of matter from one point in space (called normal space) to another point in normal space by travelling through an alternate space (called jump space). The benefit is that the time required to execute a jump is relatively invariant – about one week. If the distance travelled is greater than can be covered in one week in normal space, a gain has been made.

Entering jump space is possible anywhere, but the perturbing effects of gravity make it impractical to begin a jump within a gravity of more than certain specific limits based upon size, density and distance. The general rule of thumb is a distance of at least 100 diameters out from a world or star (including a safety margin), and ships generally move away from worlds and stars before beginning a jump. The perturbing effects of gravity preclude a ship from exiting jump space within the same distance. When ships are directed to exit jump space within a gravity field, they are precipitated out of jump space at the edge of the field instead.

Jumping takes 168 hours (± 10 %) to complete. This time is related to the nature of the alternate space being travelled in, and the energy applied. Where time is a variable for travel in normal space, energy consumption is a variable in alternate space; time is a constant. Consequently, distance depends on energy applied.

## JUMP EFFECTS

The major (and most desirable effect) of the jump drive is that users exceed the speed of light. Achievement of instantaneous movement would be too much to ask; even the existence of a form of instantaneous movement would produce grave theoretical difficulties which would ultimately be reflected in the realities of the real world. Instead, jump drives allow velocities ranging from 169 to 1,000 times lightspeed.

One of the benefits of the jump drive is its controllability: jumping is predictable. When known levels of energy are expended, and when certain other parameters are known with precision, jumping is accurate to less than one part per ten billion. Over a jump distance of one parsec, the arrival point of a ship can be predicted to within perhaps 3,000 kilometres (on larger jumps, the potential error is proportionally larger). Error in arrival location is also affected by the quality of drive tuning, and the accuracy of the computer controlling the jump; these factors can increase jump error by a factor of ten.

The laws of conservation of mass and energy continue to operate on ships which have jumped; when a ship exits jump space it retains the velocity and direction it had when it made the jump. Commercial ships, for safety reasons, generally reduce their velocity to zero before jumping. Such a procedure eliminates some of the danger of a high velocity collision immediately after leaving jump. Military ships and high velocity couriers often enter jump at their highest possible velocity, and aim for an end-jump point which directs their vector toward their destination in the new system. Such a manoeuvre allows constant acceleration in the originating system, followed by constant deceleration in the destination system.

An additional complication is imposed on ships when the two star systems involved have a high proper motion with respect to each other. In that case, a ship must take into account relative velocity between the two when computing speeds and directions.

Gravity has extraordinary effects on the function of the jump drive. Jump drive transitions to the alternate universes of jump space are severely scrambled within the stresses of a gravity well; the transition cannot usually take place here. When it does, the turbulence created by the gravity well makes the result unpredictable. In some situations, the ship is destroyed; in others, it merely misjumps.

On the other hand, there is a built-in safety feature for ships trying to leave jump space within 100 diameters of a world. Ships naturally precipitate out of jump as they near the 100 diameter limit.

The biological effects of jumping on Travellers are negligible. Some individuals report experiencing nausea; there are increased reports of physical illness when a ship has misjumped; this increased nausea is considered a symptom of misjump.

Nearly everyone reports a momentary wrenching sensation at the instant of transition into and out of jump space.

# REQUIRED ITEMS

An operating jump drive requires several basic components which, when operating together, make jumping possible.

## Power Source

Jumping uses large amounts of energy to rip open the barriers between normal space and jump space. Normally, only a fusion power plant can supply this energy. Some alternate systems make use of solar power generators (which operate far more slowly) or anti-matter power systems (rare and very high-tech).

## Energy Storage Nodes

Once power is generated, it must be stored until the instant of jump. Capacitors or large fast discharge batteries fit this requirement.

## Strong Hull

The hull of a starship must not only be constructed to withstand normal space; it also must withstand the rigors of jump space. Starship hulls contain as an integral part of their structure a network of wiring which maintains the jump field around the ship. Without this field, the natural physics of jump space would intrude into the ship's interior and the alien physical principles would make life impossible, operation of equipment unpredictable, and even the passage of time would be altered. Breaks in the protective network within a starship's hull are a primary cause of the loss of ships when jumping.

The need for this network in a ship's hull also indicates what happens to matter (personnel, small craft, missiles, etc) ejected from a ship while jumping, becoming subject to the physics of jump space. People die; equipment malfunctions; small craft disappear. Some attempts have been made to launch a starship into jump space from other starships; problems in properly matching drive fields, or even turning them on near other ships, has shown that the technique is impractical at best, and probably impossible.

## Computer

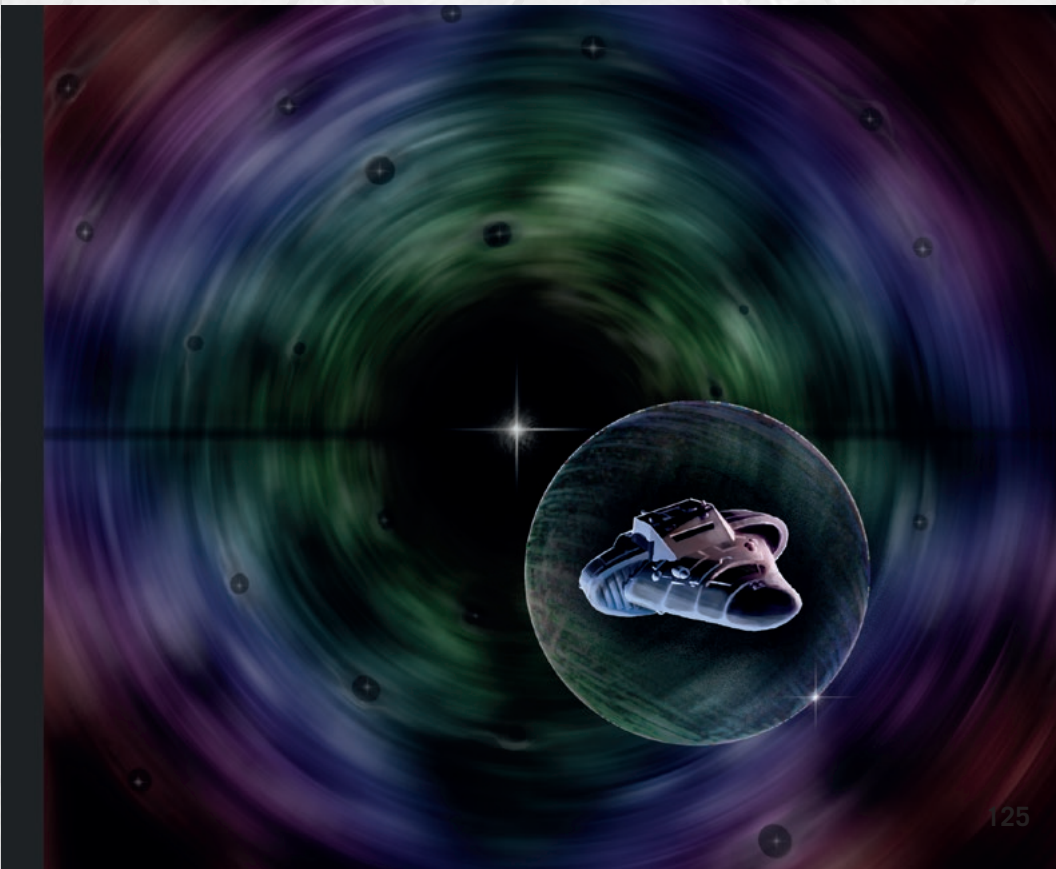
Jump drives have precise power requirements which can only be met if the power is fed under computer control. In addition, the calculations needed for a jump require a high level of accuracy.

## Jump Coils

The jump coils that channel a ship's energy within the jump drive are constructed of lanthanum, a rare earth which has exactly the correct properties for the purpose. Lanthanum coils are used to control the drive energies during a jump. Other materials have been used or substituted, but none function with enough reliability or efficiency to make them practical.

# THE TYPICAL JUMP

The typical jump begins on a world surface when a ship prepares to leave. Completely fuelled and crewed, the ship leaves the world and proceeds to a point more than 100 diameters out. Trips are planned so that the ship reaches the jump point with zero velocity.



Along the way, the astrogator has been preparing for jump using the ship's computer. A jump destination has been selected, but the astrogator must then select the most appropriate point in the destination system to emerge. A flight plan is prepared and filed with local authorities. The computer is fed the coordinates and controlling data. Final checks are made to assure that the ship is ready.

The captain on the bridge makes the final decision to proceed with the jump. A short countdown and final check precede activation of the jump drive.

When the jump drive is activated, a large store of fuel is fed through the ship's power plant to create the energy necessary for the jump drive. In the interests of rapid energy generation, the power plant does not work at full efficiency, and some of the fuel is lost in carrying off fusion by-products, and in cooling the system. At the end of a very brief period (less than a few minutes), the jump drive capacitors have been charged to capacity. Under computer control, the energy is then fed into appropriate sections of the jump drive and jump begins.

The drive's first function is to tear a hole in the fabric of space. The hole is precisely created and the ship naturally falls into the breach on a carefully directed vector. The drive then directs some of its energy to sewing up that hole again. The act of closing the hole severs the ship's ties with normal space and allows it to begin its jump.

The duration of a jump is fixed at the instant the jump begins, and depends on the specific jump space entered, the energy input into the system, and other factors. In most cases, jump will last a week.

During the week in jump, the responsibilities of the crew are directed toward maintaining life support within the ship, repair and maintenance of ship systems, and care of the passengers.

At the end of the week in jump, the ship naturally precipitates out of jump space and into normal space. The exact time of emergence is usually predicted by the ship's computer and the bridge is well-manned for the event. Dangers of piracy, space debris, or equipment failure make it important for the ship to be ready for all eventualities. Once back in normal space, the ship proceeds with its business. Some may head for the local gas giant for refuelling, while others proceed directly to the local starport on the main world.

## SPECIAL TYPES OF JUMPS

Much of what is known about jumping has been learned from an analysis of two special types of jumps: misjumps and microjumps.

## Misjumps

When something goes wrong in a jump, it is called a misjump. Some are simply equipment failures that, if properly understood, can produce better safeguards or higher efficiencies. Others, by the nature of their results, can shed some light on what jump space itself is.

When a jump drive fails, it does not send the proper energies to the components of the drive. The usual result is catastrophic – the ship is lost. Sometimes, however, enough energy is directed to the internal systems to allow entry into jump space, although not the one intended. Ordinary jump-1 ships have been known to achieve jump-36 in rare instances with this type of misjump.

It is this type of misjump that is used as evidence for a multiple jump space theory. Some believe that a proper understanding of the phenomena can produce jump drives capable of greater jumps than currently available.

Contaminated Fuel: A contaminated fuel failure results in a ship's power plant producing less energy than predicted (in some cases, contaminated fuel may produce more energy than predicted). A ship committed to making a jump, but with insufficient energy for the planned route, may find itself inserted into an unintended jump space.

Gravity Well Effects: Activating a jump drive within a gravity well usually destroys a ship. In rare instances, the ship survives, only to misjump.

A gravity well appears to distort the fabric of space and make normal predictions used in plotting jumps useless. The distortions in space make the jump space entered random or unpredictable. In some cases, the jump space entered is one that collapsed in the brief microseconds after the Big Bang – entering a jump space that is effectively a singularity destroys the ship immediately. The luckier ships enter a jump space that allows them to leave and return to normal space.

One effect of misjumps is a change in the amount of time spent in jump space. The many variables involved may make time spent in jump space shorter or longer than normal. Ship crews can identify a jump as a misjump if it ends before the normal week is up, or if it continues longer than the week they expect.

## Microjumps

Any jump of less than one parsec is considered to be a microjump. Sometimes, it can be advantageous to jump within a system rather than use manoeuvre drives. If normal acceleration and deceleration would take more than a week, a microjump is more efficient. At 1G, any distance greater than one billion kilometres would be more efficient using a microjump.

Microjumps can also confuse an observer or enemy. Because a ship's jump destination cannot be predicted, a microjump within a system still leaves an impression that the ship has left; a week later, it emerges from jump in the same system, to the observer's confusion.

## JUMP RESEARCH

In order for any culture to discover jump drive, it must have already met a few basic requirements, just as a culture cannot progress to an internal combustion engine without mastering metalwork.

The requirements for development of a jump drive include:

**A Technological Civilisation**: Culture itself is not enough; a culture must have a mechanical civilisation capable of machine tools and heavy industry.

**Access Beyond the 100 Diameter Limit**: Because a jump drive cannot function effectively within 100 diameters of a world, the culture must have achieved space travel and be able to conduct research beyond the 100 diameter limit.

**Power Generation Capability**: Fusion power generation systems (or an equally capable alternative) must be available or sufficient power for jump drives will not be possible.

**Computer Technology**: The control of jump drives is dependent on a high accuracy data processing system. Normal human processing is not sufficient to control the task, although some other races may have the capacity. So far, every discovery of jump drive has made use of high accuracy, fast processing computers for controls.

**A Motivated Genius**: The theory and achievement of jump drive is not obvious. Consequently, discovery of jump drives seems to depend as much on a single motivated genius as on the other technological prerequisites.