

# FRONTIER EXPLORER



**ISSUE 33**  
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### SECTION

### FEATURES

**2** FROM THE EDITOR

**SOLAR SAILS IN STAR FRONTIER**

**3**

**6** FIRST CONTACT TEAM  
RPG & SCI-FI FACIL-  
ITY GENERATOR

**VRUSK NAME GENERATOR**

**5**

**GENETICALLY ENGINEERED CAT**

**8**

*Review*

**RADIATION HAZARDS IN THE  
FRONTIER – PART 2**

**9**

**BC** GRYMZ GUIDE

*4<sup>TH</sup> Wall Break*

**THE PSYCHIC PSA**

**15**

**SOLAR MINOR SYSTEM BRIEF**

**23**

**MYSTERIES OF THE FRONTIER**

**28**

**THE BATTLESUIT**

**32**

**DYING FOR A DRINK**

**34**

**THE DAWN CLASS  
EXPLORATION/TRANSPORT**

**35**

**ESCAPING THE SS SERNEA DAWN**

**37**

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Do you have material you'd like to see published in the Frontier Explorer? We accept submissions of any fan material for Star Frontiers, FrontierSpace, or any other sci-fi role-playing game whether it is new races, equipment, vehicles, setting material, play reports, or anything else.

If you have something you'd like to share, head on over to the [Frontier Explorer website](#) and hit the gold "Submit New Content" button. We'll help you get the material ready for publication and into a future issue of the magazine.

## GETTING THE RULES & BACK ISSUES

The published rules and modules for Star Frontiers and FrontierSpace, as well as all back issues for the Frontier Explorer and the Star Frontiersman (including print-on-demand physical copies of the Frontier Explorer) are available for purchase or download on DriveThruRPG.

All the old issues of the fan magazines, as well as print-on-demand versions of the Frontier Explorer can be found at [the Frontier Explorer page](#). These products are offered as pay-what-you-want. You can grab them for free, but this provides a way for you to make a donation to help support the magazines if you so desire.

Wizards of the Coast offers the Star Frontiers rules and modules on their [Star Frontiers page](#).

FrontierSpace products can be found on the [DWD Studios page](#).

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# LETTER FROM THE EDITOR

Hello Explorers!

Welcome to issue 33 of the Frontier Explorer. Typically, I'd start out this letter by describing the authors and articles in the issue, but I think I'm going to stop doing that except for pointing out articles by new authors, which we don't have any this time. We do have prospects for at least one new author in the near future, so stay tuned. As always, we'd love submissions so if you have something to share, jump on over to [the magazine's website](#) and hit the "Submit New Content" button.

I want to talk about what, at the time of this writing, is the 800-pound gorilla in the room concerning Star Frontiers, namely the claim by a new company using the TSR name that they are working on a Star Frontiers reboot. I thought I would let the community know what I know about the situation. So here goes.

First, after a poorly handled rollout announcing the company, some restructuring and changing of what they are doing, the company TSR Hobbies seems to have settled down. This is the same group that runs the Dungeon Hobby Shop Museum in Gary Gyax's old house in Lake Geneva.

Second, they have applied for the trademark on the name Star Frontiers, just like Evil Hat did in 2017. As of late June, the "Notice of Allowance" has been issued and TSR Hobbies has six months to file a "Statement of Use" (SOU) or request an extension. The SOU requires, among other things, proof that the mark is being used in commerce. In other words, they have to have a product out using the name. This is as far as the Evil Hat trademark application went. We'll see what happens with TSR Hobbies application.

Having the trademark is not a right to the intellectual property (IP) of the existing game, just a right to use the name on a product. So, if all they have is the name, they can make a game called Star Frontiers, but it cannot have any of the races, star systems, etc. from the original game as Wizards owns the copyright and intellectual property rights on that which they acquired when they bought the original TSR back in the 90's. For the new Star Frontiers to have the old content, TSR Games would need a license from Wizards. Which brings me to the next point.

Third, talking with Wizards of the Coast about this and trying to find out if TSR

Games did have a license for the IP, all they were able to tell me was that they couldn't or wouldn't say anything one way or the other. An unsurprising dead end there.

Fourth, I have interacted a bit with the TSR Games company on-line. When they first rolled out, I was contacted by the person who set up TSR Games' first Discord server to see if I wanted to make my Star Frontiers Discord server the "official" server for the game at their company and there were talks of some connection with the magazine as well. Given my experienced with the Evil Hat trademark application I was a little leery and said that I'd be happy to if they showed me proof of a license from Wizards for the game's IP. That person was removed from control of the Discord and then they created a completely new server. That's some of the rough rollout I was talking about earlier.

I was then contacted by the person running the new Discord about possibly playtesting or finding people to help playtest the new version of the game that they were working on. Again, I told them I'd be happy to as soon as I saw a license from Wizards. And I offered to sign a non-disclosure agreement to see said license. I told them that if I had proof of a license, I'd be 100% all in and help them out as I'd love to see a new version of the game. I've not heard anything back.

From all the above my conclusions are: One, TSR Hobbies is pursuing the trademark. Wizards can contest it if they want as they are already using the mark in commerce (publishing the old rule on DriveThruRPG). Two, TSR Hobbies is working on a sci-fi game they are currently calling Star Frontiers and it is approaching the playtesting stage. Third, a license may or may not exist between TSR Hobbies and Wizards for the original Star Frontiers IP. I'm leaning in the "doesn't exist" direction.

At this point that's all we know. We'll just have to wait and see what comes out of this in the next few months. Hopefully by next issue we'll know more.

That's enough from me on that topic. Sit back, settle in, and enjoy this issue of the Frontier Explorer. And as always, keep exploring.

- Tom Stephens  
Senior Editor

# SOLAR SAILS IN STAR FRONTIERS

BY ANDREW CAMPBELL

**Editor's Note:** This material was recovered in an internet archive from the defunct Star Frontiers fan site Ephemeris.

Solar sails fall into the category of "niche technologies" on the Frontier. That is, they are extremely useful but limited in their applications.

The advantages of sails are that they are cheap and require no fuel; they are also fairly easy to maintain, and are the only drives potentially capable of more than 1 ADF that can be built at Class III Construction Centers.

Their disadvantages, however, are equally great: they are only useful in the inner regions of solar systems, and they are easily detectable by radar.

Thus, solar sails are common but only in a narrow range of applications - civilian freighters, passenger liners and research system ships. They will never be found as military, courier or pirate craft.

## ACCELERATION

The table below gives sample orbital distances and the acceleration available at that distance.

Sample orbits greater than 1 AU are rounded to the nearest AU for simplicity's sake; orbits less than 1 AU are rounded to the nearest 0.1 AU. 1 AU (Astronomical

DISTANCE ( AU )	EXAMPLAR SYSTEM ORBIT	ADF SPEED
0.4	Mercury	7
0.5	Snowball	4
0.7-0.8	Venus, Inner Reach, Gollywog (Clarion), Liberty system's asteroid belt	2
1	Earth, Outer Reach / Dramune	1
1.5	Mars	1/3 turns or 2/hour
2.2	Lost Reach / Dramune, White Light system's asteroid belt	1/5 turns or 1/50 minutes
5	Jupiter	1/25 turns or 1/4 hours 10 minutes
10	Saturn	1/100 or 1/16 hours 40 minutes
20	Uranus	1/400 or 1/66 hours 40 minutes
30	Neptune	1/909 or 1/151 hrs 30 minutes
40	Pluto	1 / 1600 turns or 1 / 267 hours

Unit) equals roughly 149.7 million km. ADF ratings are rounded to the next lowest number (ie. 2.5 ADF = 2)

No matter what the size of the ship, the size of the sail or the distance to the nearest star, a solar sail-propelled ship will always have a MR of 1; the MR is produced by altering the size and angle of the sail combined with high-efficiency chemical attitude jets.

## POWER

Solar sails are too thin to generate power for the ship, which must carry an independent power supply, usually a small nuclear plant or a solar array. Since their power plants generate minimal energy emissions, solar sail equipped ships are invisible to energy sensors. Editor's note: use a Class A atomic drive as a nuclear reactor for any size ship.

## DETECTION

Due to the huge area of the sails when they are deployed, a sail-driven ship can be detected by radar at twice the normal distance (600,000 km); if the sails are reeled in and stowed, the ship will be detected by radar at the normal range (300,000 km). Deploying and reeling in a sail requires 1 turn per 10,000 square meters of sail area.

## SIZE AND COST OF SOLAR SAILS

The sizes and costs of solar sail drives are as follows:

HULL SIZE	ENGINE CLASS	SAIL SIZE
1-4	Class A	1000 square meters / HS point
5-14	Class B	10,000 square meters / HS point
15-20	Class C	100,000 square meters / HS point

NOTE: If a ship is equipped with a sail of the next higher engine class (ie. a HS 3 ship is equipped with a 30,000 square meter sail), the sail's ADF performance will increase by a factor of two; this is rarely done, especially on larger ships, due to the prohibitively large sails required.

HULL SIZE	ENGINE CLASS	CLASS I SCC	CLASS II SCC	CLASS III SCC
1-4	Class A	10 Cr / square meter	12 Cr / square meter	15 Cr / square meter
5-14	Class B	5 Cr / square meter	6 Cr / square meter	8 Cr / square meter
15-20	Class C	1 Cr / square meter	1.2 Cr / square meter	2 Cr / square meter



## SAIL CONSTRUCTION, MOUNTING AND STOWAGE

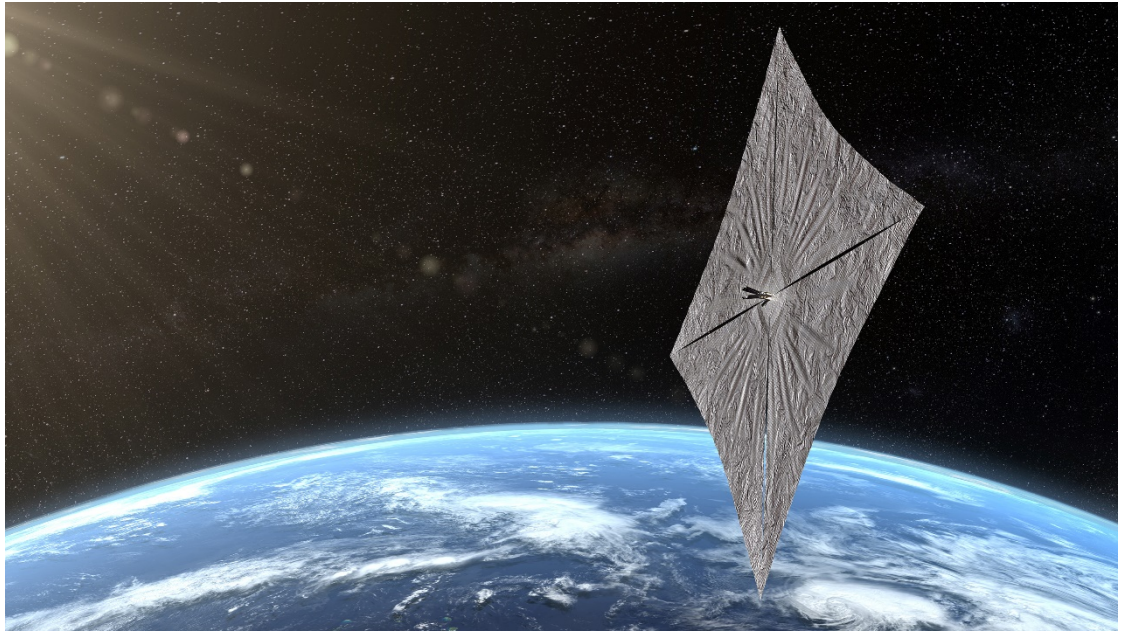
Solar sails are made possible by advanced materials technology, allowing for extremely thin and reflective films and super strong support cables. Primitive sails were built using ultrathin thin mylar for the sails and high-strength copper alloys for the support cables. Modern sails are composed of heat-resistant boron only a few hundred atoms thick, manufactured under vacuum conditions on orbital stations; the thin support cables are filaments of industrial diamond extruded in orbital factories.

Solar sails are the only drive that can be mounted in addition to traditional engines. Where traditional engines are mounted at the back of a ship's hull, sails are

mounted at the front end, towing the ship along behind. It is not uncommon for a ship to mount a sail as a back-up to its regular engines for emergencies; this option is especially popular on deep space research vessels and on passenger liners.

Solar sails are composed of molecules-thick (in advanced sails, even atoms-thick) reflective materials and thus add

comparatively little mass to a ship. This allows them to be stowed in compartments mounted on the outer hull of a ship or in internal cargo bays. If sails are stowed internally, they occupy 2 HS points per Size Class of the sail; external stowage uses only 1 HS point per Size Class of the Sail.



Concept art of The Planetary Society's LightSail 2 spacecraft – CC-BY-3.0



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We love making the magazine and will continue to do so regardless of the outcome of this endeavor. However, the production and maintenance of the magazine and website have costs and that's where you can help.

In addition to just our deep-felt thanks, there are perks to patronage. Depending on the level of support you get access to supporter only forum on the website, e-mailed a copy of the magazine in advance of its public release, early access to the articles for upcoming issues, and at the highest level, a print copy of each issue you support. In addition, supporters will be listed on the magazine's website and at some levels here in the magazine itself.

The patrons that helped support this issue of the magazine are:

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I want to say thanks to our patrons for their contributions.

The money raised will be used to improve both the Frontier Explorer and Star Frontiersman magazines in various ways including improved web hosting, improved software and hardware for production, website upgrades and improvements with the magazine itself.

We'd love to have your support to help make the magazines the best that they can be. Jump on over to the Patreon site (<https://www.patreon.com/FrontierExplorer>), read all the details, and consider becoming a patron.

# VRUSK NAME GENERATOR

BY OSCAR RIOS

Vrusk, the playable insect race of the Star Frontiers game universe, have a unique language of clicks and buzzes. Personally, in my game, the pitch and volume of these sounds, along with the positioning of the speaker's antenna also changes the meaning of words and phrases. But, just what sounds can Vrusk produce? What do their names sound like? I always wished that TSR, Dragon, or Polyhedron magazines would have produced a simple Vrusk name generator. For many years I wondered what that would look like, until one morning the industrious insect in me decided to get off my bloated abdomen and make one myself (I am a game designer, after all).

I began by scouring published rule books and adventure modules for a wide selection of Vrusk words. These I broke into sections. To keep things simple, I went with three sections: Start, Middle, and End. For example, two Vrusk name located in SFAD6 – Dark Side of the Moon, were Ssi'Aq'Kkr and Gst'Gar'St. So Ssi and Gst went into the Start section, Aq and Gar went into the Middle section, and Kkr and St went into the end section.

This got me very far. I added a few more to round them out based on Vrusk names I'd found and the established sounds they could produce. But not every Vrusk seemed to have three name parts. Some had only two, and a few had only a single word name. So, I came up with a table to randomly assign how many name sections a Vrusk would have, and from which columns those names come from. This became four sections: a Star/Middle/End group, a Start/Middle group, a Start/End group, and a Middle/End group.

After making these rolls Players and Referees can insert apostrophes and en-dashes between the name segments, or combine two segments, as this seemed to be the established Vrusk language conventions. This allows multiple variations to each roll. With all of these random variations and customizable choices this list should be able to create 50,000 different

names for their Vrusk player and non-playable characters.

## CREATING NAMES

### STEP ONE - DETERMINE NAME STRUCTURE

Roll 1d10 and consult the following table for the structure of the name.

ROLL (D10)	STRUCTURE
1-4	Start, Middle, and End
5-6	Start and Middle
7-8	Start and End
9-10	Middle and End

### STEP TWO – CREATE EACH NAME SECTION

Roll 3d10 and consult the following table for each name section needed based on the name structure created in the previous step.

*Editor's Note: Rolling 3D10 statistically chooses names in the middle of the list more often (there is only a 0.1% chance to get a 3 or 30, but a 7.5% chance to get a 16 or 17). If you want a more even distribution, roll a d100, divide by 3 (rounding up) and reroll any number that doesn't land on the table. This will give you an even distribution of probability across the table.*

### STEP THREE – CUSTOMIZE

Add Apostrophes (') and En-dashes (-) as you choose between names. You can also run two of the names together, as you see fit.

## VARIATIONS ON FOUR RANDOMLY GENERATED VRUSK NAMES

#### A START, MIDDLE, AND END NAME

The roll was 29, 21, and 14 resulting in Zit Ta Kipur. Some possible name variations are Zitta'Kipur, Zit'ta-Kapur, or Zit-Ta'kapur.

ROLL (3D10)	START NAMES	MIDDLE NAMES	END NAMES
3	Adq	Ag	Aqat
4	Akiz	Aken	Bizz
5	Aqiz	Gar	Den
6	Clic	Gik	Dil
7	Daqqr	Gits	Hatt
8	Gil	It	Hest
9	Giz	Kdi	Itl
10	Gst	Kik	Ka
11	lki	Kix	Kar
12	ltk	Klar	Kass
13	K	Lik	Ki
14	Kawd	Lk	Kipur
15	Ken	Nvik	Kit
16	Kir	Pss	Kizz
17	Kizk	Qat	Kkr
18	Klik	Qua	Kktl
19	Pstri	Rik	Ksta
20	Ral	Shr	Kut
21	Sa	Ta	Lat
22	Sik	Tark	Rek
23	Ssi	Tk	Rezz
24	Tawd	Tri	Sitt
25	Tic	Tyz	St
26	Vist	Viz	Ti
27	Z	Ysa	Tik
28	Zik	Yzss	Tikit
29	Zit	Zah	Tl
30	Zzik	Zar	Zen

#### A START AND MIDDLE NAME

The roll was 10 and 17, resulting in Gst qat. Some possible name variations are Gst-Qat or Gst'qat.

#### A START AND END NAME

The roll was a 21 and a 13, resulting in Sa Ki. Some possible name variations are Saki, Sa-Ki, or Sa'ki.

#### A MIDDLE AND END NAME

The roll was a 26 and a 28, resulting in Vist Tikit. Some possible name variations are Vist'tikit or Vist-Tikit.

# FIRST CONTACT TEAM RPG & SCI-FI FACILITY GENERATOR

## REVIEWS

BY TOM VERREULT

### FIRST CONTACT TEAM

*An RPG about First Contact with Alien Intelligence*

First Contact Team by Brian St.Claire-King is an RPG and LARP for playing out a first contact with an alien intelligence or actual aliens. It caught my interest because when I clicked on the preview on DrivethruRPG the introduction began with, "Going Beyond Forehead Aliens." I had been musing about writing a first contact scenario for the Star Frontiers game but was unsure where to start, being afraid of producing something that was "ho-hum". The game is \$4.95 for a watermarked downloadable PDF.

The production values are great. It has a full color cover and appropriate illustrations during the three presented scenarios but no where else in the 190 pages. It's geared to present three series of scientific mysteries around the theme of first contact and give advice on crafting your own scenarios.

As an RPG unto itself, it does not have great depth as your character is only used for the scenario at hand. It has a rudimentary character creation system that is a point-buy system reminiscent of Dungeons and Dragons. The combat and action resolution systems are performed with a coin flip or a six-sided die. There is no advancement system. Equipment is interesting in that a player might opt for an addiction or a psychological deficiency to gain more points for spending on skills and thus equipment points must be spent for the character to bring enough of their chosen drug along on the expedition whether it is tobacco, cocaine, heroin, etc.

When I bought the document, my goal was strictly to borrow ideas for Star Frontiers. This makes the 190 pages easier to get through as you can use the table of contents and skip the RPG rules. There is an



extensive chapter on crafting an alien intelligence that is truly alien and that is what I was looking for.

In 24 pages it tackles questions of what is the alien like, dead aliens, speed differentials (primarily in communication), artificial intelligence as alien, first contact via information, extra-dimensional beings (details about how beings that exist in 4 dimensions might interact with us in 3 dimensions), first contact with artifacts, what their tech is like, brain-computer interfaces, terraforming, zero-point energy, Dyson spheres, nanotech, element construction, mind engineering, technology-biology convergence, and simulated worlds. Reading these two chapters had me musing over possibilities for investigating the Tetrach pyramids on Laco in the Star Frontiers setting. I felt this section was thorough but not so in depth that I was reading a college textbook.

In the next chapters the author deals with their spaceships, motivations,

communication, and complications. The issue of motivation is significant because the author addressed issues of morality i.e. do the aliens value other intelligent life? How will they view human beings? Will they see no issue with taking a human and doing with it what they want?

Three scenarios are presented. Each is quite different, but I like all three and feel they each have value for converting to Traveller, Star Frontiers, FrontierSpace, etc. In two, the players are dealing with alien probes. One probe was sent strictly to learn about other life. One is sent to potentially terraform Earth for the aliens with severe consequences for Earth's biosphere. Note: the terraforming scenario takes place in the waters surrounding a barren isle in North Korean waters and has a real "Top Secret" /espionage vibe. The final scenario involves a truly alien intelligence whose ship sustains a catastrophic emergency (holed by a meteor after entering our system) and forced to crash land in

the isolated Argentine mountains. This is a radically different intelligence and the players reaction to its actions could have grave consequences if they fail to realize what the intelligence is and establish communication.

One interesting feature of this RPG is that the players play the role of the committee that chooses the team or the player characters to take part. They discuss candidates for the team and more or less at the same time choose their character to play. Within the rules of this RPG it feels right but may not work in a long-running Traveller, Star Frontiers, or other RPG campaign. That said I actually liked that feature and it would work for a one-off adventure in your favorite sci fi RPG.

With a product that you can't fully use everything in it I would at best give it 3 thumbs up but I'm not recommending this product for its RPG rules. However, because it tackles alien intelligence creation so well and the scenarios are interesting, fresh and original I feel forced to go against my rule and give this product four dralasite thumbs up out of the potential five.

## SCI-FI FACILITIES GENERATOR BY DICEGEEKS.COM

### INTRODUCTION

I picked up this product on DriveThruRPG during their Christmas in July sale which means I only paid \$0.97 for a \$1.25 product. The frugal Mainer in me is gratified but either price is nominal.

The product is a PDF with no explanatory text and 7 pages of d100 tables. The tables cover everything from location details, to type and purpose, administering entity, age, current status, and random room generation. The most impressive table is the Facility Malfunction Table which actually has 100 malfunctions that can be generated from it.

The production values are not that impressive but not so bad that its bothersome to use the product. There is a dark border (star field) on every page which can

waste ink when printing at home. There is no artwork and I could critique some of the layout but having spent a dollar for it I'm happy enough with the product that I will be using it in the future.

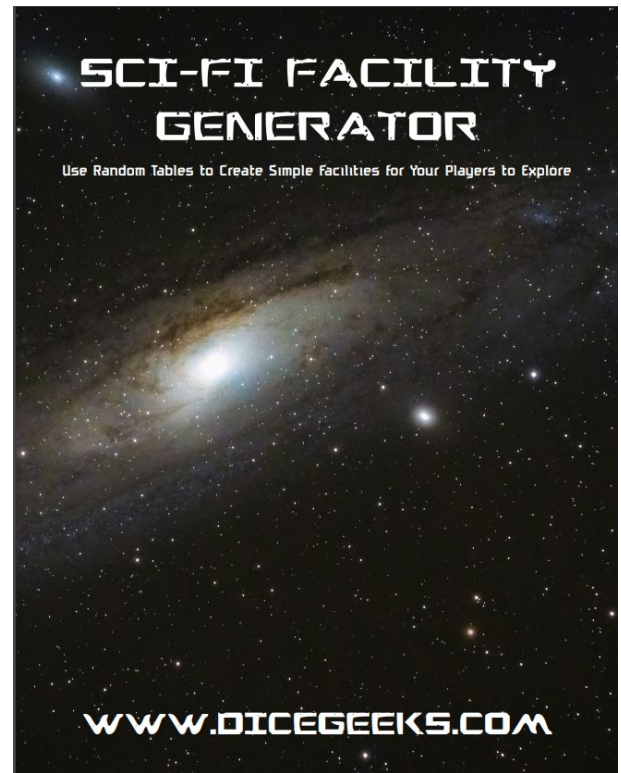
### EXAMPLE OF FACILITY CREATION

Asteroid with underground structure used for data storage. It's run by a secret governmental medical organization. The facility is decades old and still in operation. So far so good but the next table generated a result of its present status is abandoned, so it was crewed and operating up until just recently.

For random room layout I generated a command center, experiment containment room, power center, and cafeteria. I could have generated more rooms but the list is not so robust with only 10 entries so I think that I won't be generating random rooms in the future but rather using the table for inspiration and go with what I think is logical.

I rolled for three encounters and got crazed facility personnel, angry facility personnel, and unconscious man which I changed to cat which was the next item on the table just because I liked the idea of a cat wandering the station. I suppose I should address the seeming contradictions of a facility still in operation but abandoned where you can encounter both angry and crazed personnel. Perhaps the government entity has suddenly abandoned it and left the worker bees behind? I will have to invest some thought into how the cat lives on the station since it is an asteroid and in my preferred setting there is no artificial gravity, perhaps he's been outfitted with Velcro booties.

For facility malfunction I rolled three and the first was "storage facility infested with rats" which is really interesting in light of the cat. The other two rolls were "fire in staff quarters" and "staff quarters shorted out" which again is interesting as it bespeaks to a single incident/problem.



### OTHER THOUGHTS

There are some contradictory results that the random tables can produce but obviously you are not required to keep them. The cat wandering an asteroid facility has me thinking about creating a genetically engineered cat mixed with gecko genes so that its paws can grip to walls and ceilings on a molecular level the same as a gecko and a prehensile tail to grab items and handrails - making him the ideal "space cat" for facilities and ships lacking artificial gravity. If the players decide to feed him perhaps, he will follow them and become their pet. My favored rules have general stats for a small carnivore and I'll add in the special stealth ability for stalking. I probably will make it highly likely that the creatures infesting the storage facility will transfer to the players ship as well so it will pay for them to befriend the cat.

In less than 5 minutes I have a solid kernel of an adventure generated that is going in directions I find interesting. Not bad when you consider that it only cost me a dollar and I'm very likely to use this product repeatedly, especially the 100-entry malfunction table. I give it two dralasite thumbs up, it's usable and handy despite its detractors and the price is hard to beat.



# GENETICALLY ENGINEERED CAT, GECKO CAT, 0 G OR SPACE CAT

The GECKo cat is a new breed of Terran animal where a few gecko genes have been introduced into the Terran feline species. These cats have the foot pads of the gecko allowing them to climb walls and ceilings like the gecko and grip the wall on the molecular level same as the gecko. They also have prehensile tails that all them use to grip objects and ladder rungs. In the same way the Terran feline has a propensity for knocking things off a table the GECKo cat has the ability to grab and throw things. They are remarkably friendly as genes regulating attitude were manipulated to make them better pets in the sense that they were less likely to claw their owner.

They are very popular with spacers or anyone that lives or works in space. Their prey instinct is very strong making them ideal for pest control of rats and other

vermin that can infest spaceships and stations.

Their special attack is stealth and it is tested at 70 RS. A successful ability check means the cat is in stealth mode and any “first” attack has a bonus of +20. The 9 lives special defense is that any attack that would kill the cat outright automatically triggers a RS save at 70% to completely avoid the attack.

A unique maneuver that this creature has learned is using its prehensile tail in 0 g to fling itself off a secure object or ladder rung across a compartment.

GECKO CAT	
Type:	small carnivore
# Appearing:	1 or more
Move:	90 or 45 (stealth or climbing)
IM/RS:	7 / 70
STA:	10 to 15
Attack:	65
Damage:	Bite and Claws: 1d5 ea.
Special Attack:	Stealth: +20 to first attack
Special Defense:	9 Lives
Native World:	genetically engineered

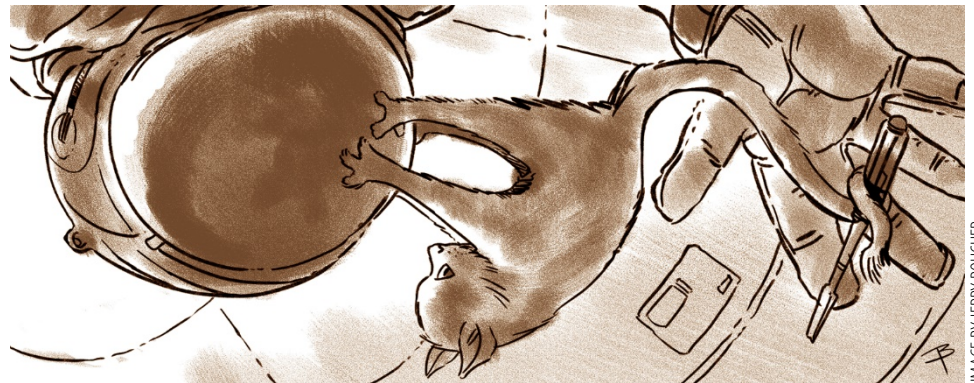


IMAGE BY JERRY BOUCHER



## CITIZENS OF STAR FRONTIERS

An Updated  
Old School  
*STAR FRONTIERS*  
Actual Play Campaign

Tune in to *Citizens of Star Frontiers* on Youtube:  
<https://www.youtube.com/channel/UCN07DjX9cwaEdNkgYegSCnA>

Join us at our Patreon, for original maps, art, alien creatures, NPC's, encounter notes, and full game scripts. Patrons even get to help shape the campaign with creative input.

**Citizens of the Frontier (Star Frontiers) Patreon:**  
[https://www.patreon.com/user?u=17228105&fan\\_landing=true](https://www.patreon.com/user?u=17228105&fan_landing=true)

# RADIATION HAZARDS IN THE FRONTIER – PART 2

BY JOSEPH CABADAS

In the last issue (Frontier Explorer #32), the article “Radiation Hazards of the Frontier” offered a mechanic to handle radiation exposure, radiation sickness, and treatment options. This article builds heavily off of that one so if you haven’t read it yet, I recommend doing so.

The inssuit was presented as practically the only option for a character to be shielded from radiation exposure. It was described in in the module “Bugs in the System” and Knight Hawks as a protective garment typically worn by ship engineers, fighter pilots, or others who work in radioactive environments to protect them from radiation.

If the garment fits in an engineer’s tool kit, it can’t be very bulky and probably can’t protect against all levels of radiation. This article will look into that along with some other sources of radiation hazards.

## RADIATION PROTECTION

Characters can be protected from the hazards of radiation in a number of ways. First, most Frontier nuclear power plants, nuclear batteries, and atomic and ion drives are shielded to prevent radiation leakage to the environment.

The next line of defense against radiation exposure are anti-rad implants, environmental suits, shipsuits, inssuits, space-suits (a.k.a. vacc suits), E/P/N screens, many types of powered armor, and radiologically shielded vehicles, including the common Explorer.

## ANTI-RAD IMPLANT

Placed in the back of the neck, the anti-rad implant allows a being to ignore the first 10 rads from any radiation source. It also reduces the intensity of radiation sickness by 10 points (intensity is the number after the “S”) and the duration by 10 days (the duration is the number after the “R”).

If the duration number is followed by an asterisk (“\*”), which means the character

would need to make a current Stamina check to avoid death, the anti-rad implant provides a +15 percent modifier. If the duration number is followed by an exclamation point (“!”), which means the character faces death, the person with the implant can make a current Stamina check instead.

The benefits of the implant are additive to the effects of Neutrad and other treatments and anti-radiation shielding. For example, if a character had taken an Anarad-20 injection, he would be able to ignore the first 30 rads from any radiation source.

The implant is powered by the body’s own central nervous system’s electrical system and will last for a year or so before requiring adjustment. Servicing an anti-rad implant can only be performed by a hospital with qualified medical technicians and costs half as much as the original implant.

**Cost:** 5,000 Credits

**Mass:** N/A.<sup>1</sup>

## ENVIRONMENTAL SUIT

Designed to protect its wearer from the weather and other conditions on habitable planets, the environmental suit covers a character’s entire body. It is made of lightweight, quilted cloth and comes with a built-in gas mask, goggles, and a small heating and cooling system. It will keep the suit cooled to a comfortable temperature on hot planets and warm on cold planets.

The suit protects the wearer from tainted atmospheres (including gas grenades), airborne irritants, and dust- and sandstorms. It also protects a character from up to 5 rads per hour.

It may be worn under defensive suits and is compatible with all defensive screens, but it offers no other protection from attacks. It uses 1 SEU per day if the heating/cooling system is used.<sup>2</sup>

Wearing the breathing apparatus over a long time causes discomfort to those who

have not received extensive training in its use. Effects: a 1 point penalty to the character’s Initiative Modifier (-1 IM), and -5 percent penalty to Dexterity and Reaction Speed checks.

**Cost:** 400 Credits

**Mass:** 2 kilogram plus power source.

## INSSUIT TEN

Older versions of the engineer’s inssuit (prior to 25 FY) will shield a character from up to 10 rad/hour. Called the Inssuit Ten, it comes with a soft head covering, clear face shield, and filter for breathing.

It does not have a separate air supply, though the suit can be equipped with a specialized breathing mask. This inssuit can still be found on many older ships and space stations.

**Cost:** 500 Credits

**Mass:** 2 kilograms

## INSSUIT 20

This is the standard inssuit found in the Engineer’s Tool Kit and will protect a character up to 20 rad/hour. The Inssuit 20 comes with a soft head covering, clear face shield and filter for breathing.

It does not have a separate air supply, though the suit can be equipped with a specialized breathing mask.

**Cost:** 1,000 Credits (if bought separately from the tool kit).

**Mass:** 2 kilograms.

## INSSUIT 50

A bulkier outfit, the Inssuit 50 protects a character from radiation up to 50 rad/hour. This unit comes with a breather mask, filter, and a supplemental four hour air supply. It can be used in near vacuum.

A character wearing this suit suffers a -10 percent modifier to Reaction Speed checks and a -1 to his Initiative Modifier (IM).

**Cost:** 2,000 Credits

**Mass:** 5 kilograms.

<sup>1</sup> Modified from “Gamma Dawn,” p. 6.

<sup>2</sup> Cook, David “Zeb.” “For a Fistful of Credits,” Dragon Magazine, issue 112, p. 88. The description

has been modified; the original cost for this outfit was 100 Credits.

## SHIPSUIT

Used by spacers, a shipsuit consists of a layer of shock-absorbent gel between two layers of skeinweave integrated into a lightweight exoskeleton. Both the gel layer and the exoskeleton compensate for the effects of high-g acceleration, allowing for normal manual dexterity and movement under thrust while helping to negate the adverse effects of acceleration.

The layers of skeinweave protect as a military skeinsuit absorbing one-half of any inertia damage, while the character takes the other half. It absorbs up to 50 points of damage. The shipsuit's built-in exoskeleton provides no additional benefit other than allowing normal movement under thrust.

In the event of decompression, an inflatable hood of clear skeinweave can be pulled up from the back of the suit collar, over the head and back down to the front and sides of the collar, where it can be zipped securely into place. A tank of compressed air at the rear of the suit provides up to ten hours of breathable oxygen. The suit also has a 50 SEU backpack and uses 1 SEU/turn of operation.<sup>3</sup>

It also offers minimal radiation protection – up to five rads per hour.

**Cost:** 1,500 Credits.

**Mass:** 3.5 kilograms (the weight does not count against the character's carrying capacity when worn).

## STANDARD SPACESUIT

The standard Knight Hawks spacesuit. It shields a character from radiation up to 25 rad/hour.

**Cost:** 1,000 Credits (1,500 Credits for a Vrusk).

**Mass:** 40 kilograms.

## SHIELDED SPACESUIT

A spacesuit for hazardous environments, it will shield a character from radiation up to 100 rad/hour. It is bulkier than a normal spacesuit with the wearer suffering from a -10 percent modifier to Reaction Speed checks and a -1 IM. Otherwise,

its statistics are the same as a standard spacesuit.

**Cost:** 4,000 Credits (4,500 Credits for a Vrusk).

**Mass:** 60 kilograms.

## FIGHTER SUIT

Space fighter pilots face extreme hazards of very high G acceleration along with radiation. These suits are extremely flexible and combine the features of a shipsuit and inssuit into one package. It consists of a layer of shock-absorbent gel between two layers of skeinweave integrated into a lightweight exoskeleton. Both the gel layer and the exoskeleton compensate for the effects of high G acceleration, allowing for normal manual dexterity and movement under thrust while helping to negate the adverse effects of acceleration.

The layers of skeinweave protect as a military skeinsuit absorbing one-half of any inertia damage, while the character takes the other half. It absorbs up to 50 points of damage. The suit's built-in exoskeleton provides no additional benefit other than allowing normal movement under thrust.

The fighter suit protects a character from bursts of radiation up to 500 rad while having all the normal functions of a Frontier spacesuit. It also has a miniature rocket pack with 5 bursts of fuel that will allow a pilot who escapes from a fighter. Each fuel burst permits travel at 50 meters per turn, or make a minor course correction or to decelerate.

**Cost:** 15,000 credits (no extra charge for Vrusk).

**Weight:** 200 kilograms.

## ELECTRON/PROTON/NEUTRON (E/P/N) SCREEN

This is a specialized defense screen that can shield a character from radiation.

The shield emitter cycles between electron, proton and neutron protection almost similar to a starship shield, but it is designed for and individual. It is very power hungry and loses effectiveness as the radiation intensity climbs. Characters

## E/P/N SCREEN POWER USE

RAD/ HOUR	SEU/MINUTE	SHIELDING
50	0.5	100%
75	1	100%
100	1.5	98%
200	2	90%
300	3	75%
400	4	75%
600	5	50%
800	5	50%
900	5	25%
1,000+	5	20%

would normally use an E/P/N Screen in conjunction with an inssuit.

It will absorb damage like an albedo, gauss, and simp screen, but at double the normal power costs.

For example, it will use 2 SEU for every 5 points of laser damage absorbed; 4 SEU every time it is hit with an electrical attack; and 1 SEU for every 3 points of rafflur fire absorbed. It will protect against maser and bolt weapons fire at a power cost of 4 SEU per hit.

**Cost:** 5,000 Credits

**Mass:** 5 kilograms

## EXPLORERS

In addition to its other capabilities, the common explorer vehicle is shielded where it will protect its occupants from radiation levels of up to 20 rad per hour.

## RADIATION FALLOUT AND CONTAMINATION ZONES

As you get farther away from the source of radioactive contamination, the radiation level will fall. Conversely, the closer you get to the source, the rad level will increase.<sup>4</sup>

The referee could create a map for anything ranging from a large scale calamity – such as a nuclear plant meltdown or atomic weapon strike – to smaller scale disaster such as a radiation

<sup>3</sup> Signs, William. "It'll Ride Up With Wear: Additional Suits for Star Frontiers™," Star Frontiersman, issue 9, p. 23.

<sup>4</sup> Editor. "Fukushima Radiation Spikes to Record Levels: It's Really Time to Shut Down All Nuclear Power Plants," The Event Chronicle, 13 Feb. 2017,

<http://www.theeventchronicle.com/news/asia/fukushima-radiation-spikes-record-levels-really-time-shut-nuclear-power-plants/#>

leakage from an atomic engine or nuclear battery.

Keep in mind that radiation fallout isn't always in a neat ring from the center of a disaster or nuclear weapon's strike. Wind direction and geographic features may cause radiation contamination to be more concentrated in some areas than others. Also, a character may move in and out of areas of more and less intense radiation during an encounter, receiving different doses. These all add up over time.

## NUCLEAR WEAPON STRIKES

The use of atomics in the Frontier – at least on ground-based targets – has been rare. This has been true from the early conflicts between members of the Core Four races, before the founding of the United Planetary Federation, through the Truane's Star civil war, Laco's War and other megacorporation conflicts, pirate raids, and even through the Sathar Wars.

Due to destructive power of these weapons, most governments and corporations have refrained from using them simply because it wrecks one of the rarest commodities in the galaxy – habitable land.

Where they have been used, the most severe radiation hazards will have decreased after two years. The apparent craters of any tactical or strategic weapons – those ranging from 100 to 750 kilotons – will be 100 to 400 meters in diameter and 20 to 70 meters deep. The craters caused by strategic weapons – in the 1 to 10 megaton range, will be 200 to 800 meters in diameter and some 0 to 150 meters deep.

*The term "apparent" is used deliberately; it refers to the diameter of the apparent (visible) crater. An area of about twice the visible diameter has been completely shifted and disrupted and is as radioactively dangerous as the visible crater itself.*<sup>5</sup>

Assume that the initial radiation level where a nuclear warhead has detonated was 6,000 rad, which is an immediate fatal dose, though the heat from the blast usually incinerates targets. Most of the radioactive contamination rapidly falls off over

time, but the main danger around an impact crater is from heavily irradiated metal in the area. Assume any character within an impact crater suffers 1d10 rads per minute.

Reduce the rad exposure by half to characters riding in an open vehicle; reduce the rad exposure by a factor of ten for those riding in an enclosed vehicle. A radiologically shielded vehicle may totally eliminate any danger of radiation exposure.<sup>6</sup>

## RADIATION IN SPACE

One of the most common hazards to adventuring player characters is when they travel into space and are more directly exposed to cosmic rays and radiation from solar flares or coronal mass ejections. Another hazard, especially for spacer engineers, is if they need to work on a starship's engines, whether this is performing a routine engine overhaul on an atomic drive or needing to make emergency repairs on a running atomic or ion drive.

## SUNSPOTS

Sunspots are areas of very strong magnetic fields on the surface of a star. Occasionally some sunspots become unstable and explode, releasing huge amounts of energy into space. Called a solar flare, this energy is "the equivalent of millions of 100-megaton hydrogen bombs exploding at the same time."

## SOLAR STORMS

A solar storm occurs when a star emits a huge burst of energy in the form of solar flares and coronal mass ejections (CMEs) – streams of super-heated plasma – while producing tremendous amounts of radiation.

Solar storms are measured on a scale of G1 to G5, with G5 being the most extreme and most rare storm category. G1 storms will produce little effect on a planet or most modern Frontier ships, while a G5 storm can be very disruptive to communications, space

navigation and unshielded electronics, causing malfunctions.

Also called a geomagnetic storm, solar storms can temporarily disturb a planet's magnetic field. Those planets with an atmosphere may experience an aurora. Some animals may be sensitive to the disruptions of a planet's magnetic field and could become disoriented during such a storm.<sup>7</sup>

## SOLAR FLARES

Containing different forms of energy including heat, magnetic energy and ionizing radiation, solar flares release x-rays and gamma rays. The radiation from these bursts can damage satellites along with disrupting planetary radio communications. Although solar flares are massive explosions, anyone on a surface of a planet would usually need some kind of specialized equipment to see them on a star's surface.

## CORONAL MASS EJECTIONS (CMES)

Many stars produce these very powerful solar flares. They are huge bursts of x-rays and electrified hot gas. Called a coronal mass ejection, these explosions form proton storms of ionized radiation that travel at nearly the speed of light.

Proton storms can interfere with radio communication and damage satellites and spacecraft by causing short circuits in electrical systems and shutting down computers. Characters operating outside of a ship in a spacesuit or workpod are in danger of being exposed to dangerous levels of ionizing radiation. Planets that have an atmosphere usually can shield people on the surface from the proton storm.

The charged particles from a proton storm interact with the atmosphere and cause spectacular changes to the atmosphere known as an aurora.<sup>8</sup>

## SOLAR ACTIVITY & CHARACTERS

When in orbit around planets, characters, spacecraft, and satellites are

<sup>5</sup> Based on the Twilight 2000, first edition rules.

<sup>6</sup> Based on the Twilight 2000, first edition rules.

<sup>7</sup> Rogers, Jon. "Storming In: What is a solar storm, has there been one in 2018 and what causes

the geomagnetic weather event?" The Sun, March 18, 2018, <https://www.thesun.co.uk/tech/5799324/solar-storm-2018-geomagnetic-storm-earth-northern-lights/>.

<sup>8</sup> "Radiation from Solar Activity," United States Environmental Protection Agency, <https://www3.epa.gov/radtown/solar-activity.html>

vulnerable from many high radiation dangers from solar flares and coronal mass ejections. Assume characters in an unshielded ship or spacesuit might be exposed to 1d10 to 5d10 rads per hour in such instances. Out away from a planet, CME radiation can approach 100 rads or more per hour. Note: the ship would need to be in a more or less direct path of the outburst for radiation to hit this level.

## KNIGHT HAWKS ACTIVITIES

Changing a drive canister on an atomic drive produces 2d10 rads per hour. If a character needs to work on an operating atomic drive, assume it is producing 50 + 4d10 rads per hour where work would need to be done. An ion engine does not produce radiation while shutdown, but would produce 30 + 2d10 rads per hour while in operation. Chemical drives do not create radiation.

If a space-suited character – or one in a workpod – was on the exterior of a ship and are near the nozzle of an operating atomic or ion drive, they will be subjected to 100 rads per hour. Any craft that is *directly* behind the exhaust vents of an atomic or ion drive – within 5 kilometers – would be subjected to 100 rads within a Knight Hawks combat turn (10 minutes).

The nuclear-tipped torpedo would generate a burst of more than 2,000 rad.

Most Frontier ships would be rated to shield passengers up to 500 rads with emergency areas for up to 2,000 rad. An emergency shelter could be simply a large compartment – say the dining room – which would have blast doors to cover up any windows or portholes.<sup>9</sup>

## ROBOTS, EQUIPMENT AND RADIATION

Robots and equipment can be disabled by high levels of radiation, even those as advanced as on the Frontier. Many robots are capable of operating in a range of conditions including freezing cold and very

hot temperatures, the vacuum of space, rain, fog, dust storms, etc., but they still need maintenance work.

Constant exposure to radiation will degrade a robot's performance and radiation may interfere with a number of devices including chronocoms, radiophones, bodycomps, beam weapons, vehicle electronics, etc. Assume that most robots – even the lowly level 1 maintenance robot – can absorb up to 299 rads without breaking down. Once the radiation level increases beyond that level, the robot's chances of suffering a malfunction increase.

Some mitigating factors, which would decrease the chance of malfunctions, would include the robot's level, type and if it has been equipped with weatherization equipment that allows it to function in hazardous situations.

*Note: weatherization equipment for robots was covered in the story "Robots Rules of Order Revised," in Frontier Explorer magazine.*<sup>10</sup>

### WEATHERIZATION SEALERS

For robots, weatherization equipment is available in three levels – bronze, silver, and gold – that offer increasing protection against hazardous conditions. This protection includes:

- **Bronze Level.** Allows for the complete immersion in water, up to a depth of 5 meters for 20 minutes GST without failure. The robot is protected against extreme heat and cold, 10-15 turns in a fire, acidic atmospheres, dust, low-level radiation, extended periods in the vacuum of space, etc. The cost is based on the robot's body type and adds 10 percent to its cost; any weight increase is negligible.
- **Silver Level.** Allows for the complete immersion in water, up to a depth of 15 meters for 1 hour GST or up to 30 minutes in a raging fire without failure plus additional protection against extreme temperatures, dust and lunar dust, heavy radiation, etc. The cost is 25 percent of the robot's body type; any weight increase is negligible.
- **Gold Level.** The robot can operate on the bottom of most ocean floors at the

deepest depths for hours without failure. It can function for a period of time in many other hostile environments including temperatures that will eventually melt its outer skin or in liquid nitrogen. The cost is ten times the robot's normal body type; body weight is increased by 20 percent.

Vehicles, powered armor, exoskeletons, and electronic equipment – including beam weapons – also can be hardened against the hazardous effects of radiation and many other hazardous conditions, similar to that of a robot. This reduces the chances of a malfunction over time.

The types of weatherization include: the bronze level, which adds 10 percent to the cost of an item; the silver level, a 25 percent increase in cost; and the gold level, which jumps the item's cost by 10 times while its mass increases by 20 percent.

## RADIATION EXPOSURE MALFUNCTION CHART

The Radiation Exposure Malfunction Chart is similar to the chart for whether characters may develop radiation sickness. To determine the chances that a malfunction may occur with a robot, vehicle, powered armor, or piece of equipment due to excessive radiation exposure, the referee uses the rad level on the chart that is closest to – but not exceeding – the robot's or item's accumulated rad level.

For example, a combat robot with a rad level of 588 would use the 400 Rads line while a radiophone that has accumulated 302 rads would use the 300 Rads line. The dash (–) on the chart means that the effect does not apply at that rad level. A multiplier of zero (0) means that the item being checked would develop a malfunction.

*Note:* it is recommended that referees use this particular rule as a plot device and keep track of only critical equipment – especially robots and vehicles – to a particular adventure. It would be extremely cumbersome to record the rads accumulated of every piece of equipment. Though, you could decide that some random gear may suddenly fail, such as the chronocoms the

<sup>9</sup> 2008 forum discussion on Radiation, [www.starfrontiers.us/node/3093](http://www.starfrontiers.us/node/3093).

<sup>10</sup> Cabadas, Joseph. "Robots Rules of Order Revised," *Frontier Explorer*, issue 17, Summer 2016.

## RADIATION EXPOSURE MALFUNCTION CHART

RADS	STANDARD	BRONZE	SILVER	GOLD
0-299	--	--	--	--
300	0.9/90%	--	--	--
400	0.8/80%	--	--	--
600	0.75/75%	0.9/90%	--	--
800	0.5/50%	0.8/80%	0.9/90%	--
900	0.25/25%	0.75/75%	0.8/80%	0.9/90%
1,000	0.1/10%	0.5/50%	0.75/75%	0.8/80%
1,500	0	0.25/25%	0.5/50%	0.75/75%
2,000	0	0.1/10%	0.25/25%	0.5/50%
2,500	0	0	0.1/10%	0.25/25%
3,000	0	0	0	0.1/10%
6,000	0	0	0	0

adventurers are communicating with each other across a radioactive ruin.

Along with the Rads column, there are four other columns – Standard, Bronze, Silver and Gold – that refer to what, if any, weatherization equipment is installed on a particular robot, vehicle, or device.

For example, if a robot does not have any weatherization gear to harden its circuitry against radiation, you would use the Standard column to check for the chances of a malfunction.

Each column has a multiplier figure, the first number before the slash, or a percentage number, which is the number after the slash.

To use this chart, multiply the robot's, vehicle's or powered armor's current Stamina score by the multiplier (the first number before the slash) to determine its percentage chance of avoiding a malfunction. If the referee is checking to see if the radiation will cause a malfunction with an item, such as a handheld computer, magnigoggles, a laser pistol, albedo screen, etc., use the percentage number.

Roll a d100; if the number is equal to or less than the percentage chance, the robot/vehicle/device avoids a malfunction. Otherwise, something goes awry. Feel free to use the existing robot malfunction or vehicle damage charts to determine any effects. For vehicles, if a result is something like the steering being jammed in a particular direction, assume that the radiation has damaged the steering system's

electronics rather than it being a mechanical breakdown.

For equipment, the referee could decide that the radiation causes anything from a degradation of its performance to it ceasing to work.

Larger robots, such as those with a heavy-duty body, would be more resilient to the initial effects of radiation. For the “Robots Rules of Order” story, additional robot body styles were listed including microbots, which have only a few structure points; light duty robots, which can have upward of 50 STA points; the standard reinforced robot, with 150 STA as given in the “Dark Side of the Moon” module; and then house-ruled versions including the heavy-duty reinforced and super duty body robots with even more STA points.

Smaller robots may be less resistant to radiation induced malfunctions – though a referee could rule that a special-made micro robot or light-duty model may have more resistance and less of a chance of breaking down (though this exception should be easily covered by adopting the weatherization rules).

The referee may offer even larger robots in his game that might be able to better withstand 6,000 rads or more of radiation exposure.

### MODIFIERS FOR THE MALFUNCTION CHART

By their very nature, combat, warbot, and heavy-duty robots are designed to be more robust than standard models – with

MALFUNCTION MODIFIERS	%
Heavy-Duty Robot	+20
Combat Robot	+25
Warbot	+50
Cybot	-20
Explorer	+20
Security Grade Vehicle	+15
Military Grade Vehicle	+50
Security Grade Equipment	+15
Military Grade Equipment	+50

or without added weatherization sealers. Cybots are more vulnerable. Explorers and other robust vehicles – those designed for security or military work – likewise are more resilient to the negative effects of radiation, same with equipment that has been designed for security or military use. The Malfunction Modifiers chart gives die roll modifiers to reflect these variations.

## IRRADIATED ITEMS

Along with the possibilities of a robot (or vehicle, armor, equipment, etc.) developing a malfunction, as it accumulates rads, it becomes radioactive itself and a potential hazard to characters and other creatures around it. Often such equipment will need to be scrapped.

On more civilized worlds, such as Gran Quivera (Prenglar), there would be a hefty discard fee to cover transport of the item to a “safe” disposal location, which might be a specialized radiation disposal “crypt” on the world or to transport it to an airless moon or lifeless planet.

Spacers might just jettison radioactive material – usually away from the orbit of an inhabited planet – which then just becomes part of the stellar flotsam. On out-post or barely explored worlds, radioactive sites and equipment may have just been abandoned in place with little regard to the environment or future colonists who come into the area. Adventurers may need to enter such forsaken areas in search of valuables or lost information.

## RADIATION EFFECTS ON LARGE CREATURES, PLANTS

Large creatures and plants may seem to be more resistant to the effects of radiation poisoning but unless it has some kind of special defense or ability, they too would eventually succumb to radiation sickness and any latent effects, including cancers, tumors, sterility, birth defects, reduced lifespans, etc.

## HANDLING INTENSE, HIGH LEVELS OF RADIATION

The rules so far cover radiation exposure that happens over a period of time rather than an intense burst or is at an extremely high level – more than 2,000 rads per hour. According to publically available information on the Internet, “the fastest time of death is around a day for a whole body dose of radiation greater than 30Gy.”<sup>11</sup>

For game purposes, if radiation levels exceed 2 rads per turn (which is 20 rads per minute or 1,200 rads per hour), assume that characters will feel a headache and nausea after the first turn of exposure. Every turn after that, the radiation will cause 1 point of damage per turn per rad. So, if a character was exposed to 5 rads per turn of radiation – 3,000 rads per hour – he would take 5 points of damage per turn after the first two turns.

The TSR modules “Bugs in the System” and “Mission to Alcazzar” feature radiation that immediately causes symptoms and damage to characters. This may indicate a very high burst of radiation exposure to any characters, which may prove to be very distracting from the main storyline.

A referee could simply go with the effects of radiation exposure as given in these adventures or try to convert them to these suggested rules.

<sup>11</sup> “How does severe nuclear radiation kill a human in minutes? What exactly happens in the human body?” <https://www.quora.com/How-does-severe-nuclear-radiation-kill-a-human-in-minutes-What-exactly-happens-in-the-human-body>

## HEAT AND RADIATION

Modern nuclear power plants produce great amounts of thermal heat which is used to make steam that turns steam turbines for generators.

“For a reactor to operate in a steady state, all of the heat released in the system must be removed as fast as it is produced. This is accomplished by passing a liquid or gaseous coolant through the core and through other regions where heat is generated. The heat transfer must be equal to or greater than the heat generation rate or overheating and possible damage to the fuel may occur. The nature and operation of this coolant system is one of the most important considerations in the design of a nuclear reactor,” according to the non-profit project called Nuclear-Power.net.

Temperatures can reach more than 1,000 degrees Celsius.<sup>12</sup>

For game purposes, assume that inssuits also provide a degree of protection against heat, but it probably would not exceed 150 degrees Celsius before a character starts taking damage.

During a nuclear meltdown type of event, with modern reactors, there are several phases, but temperatures can exceed 2,150 degrees Kelvin (1,880 degrees Celsius) where the fuel will melt through any fuel rod cladding and can burn through a containment vessel. This section will not try to deal with that scenario, but referees can look up more specifics if they need to for their campaigns.

Spent radioactive fuel – such as atomic drive fuel pellets in Knight Hawks – would still produce what is called decay heat. Such spent fuel would need to be cooled; otherwise it would eventually overheat, damaging any containment vessel and spill radioactive gases and vapors into the surrounding area.

<sup>12</sup> “Heat Generation in Nuclear Reactors,” <https://www.nuclear-power.net/nuclear-engineering/heat-transfer/heat-generation/>

## NEW MEDICAL GEAR

### RADIATION TREATMENT KIT, STANDARD

This is a common kit found on shuttles, starships, at nuclear power stations, military bases, star ports, and other sites where nuclear batteries or radiation disposal sites are found. It is often a supplement to a Medkit. It contains: 1 Toxyrad Gauge, 1 filter mask and face shield, 1 Hypo Spray, 10 doses Neutrad, and 10 doses of Neutrad Supplement. The case can be attached to a medkit, carried on a shoulder strap or attached to a belt. If fully sealed, it offers its contents some protection against water, extreme heat, extreme cold and near-vacuum conditions; it will also protect its contents up to 5 rads per hour.

**Cost:** 150 Credits.

**Mass:** 0.5 kilograms.

### RADIATION TREATMENT KIT, DELUXE

This is a specialized kit that is may be found on starships (even those with a chemical drive), nuclear power stations, star ports, military bases, or other sites where nuclear batteries or radiation disposal sites are found. It is a supplement to a Field Medical Kit. It contains: 1 Toxyrad Gauge, 4 Hypo Sprays, 10 doses of Anarad-5, 4 doses of Ana-rad-10, 2 doses of Anarad-20, 20 doses of Neutrad, 50 doses of Neutrad Supplement, 5 doses of Neu-TreX, 1 dose of Rad-TreX, and 1 Inssuit Ten with head covering, face shield and breathing filter. This kit can be carried backpack style.

If fully sealed, it offers its contents some protection against water, extreme heat, extreme cold and near-vacuum conditions; it will also protect its contents up to 20 rads per hour. Note, due to its cost, this kit is often found in a highly secured locker.

Purchase is restricted to fully licensed doctors.

**Cost:** 21,500 Credits.

**Mass:** 12 kilograms.

# THE PSYCHIC PSA

## FOR THE STAR FRONTIERS RPG

BY TOM VERREULT

### DESIGN NOTES

The mentalism rules in Zebulon's Guide were part of an unfinished, completely new edition of the game that TSR abandoned in favor of the Buck Rogers RPG. As with many things in Zeb's guide, the Mentalism rules were awkward and don't mesh well with the Alpha Dawn edition of the game. When Bill Logan produced the Digitally Remastered Zeb's Guide, he revised the mentalism rules to make them more playable. However, the Digitally Remastered fan edition of the game has not been available on the web since 2018.

What follows is my meager attempt to craft psionic rules for the Alpha Dawn edition of the game. It's an effort to make available a rule set for psionic/mentalist characters within the fan community. It's an adaption of the Mentalism rules in Zeb's guide with standardized mechanics for ability saves, ranges, durations and area of effects. I've merged some psionic abilities and deleted others that I felt didn't fit or seemed redundant.

Psychic ability in Star Frontiers has always tested off of the LOG score. In Zeb's

Guide an "80" LOG score was required for existing characters to become enlightened mentalist. If a player desired to play this sort of character, he was going to need to roll a 96-100 (or 91-00 if a yazirian character due to the species ability score modification) while generating the LOG/INT ability pair so that his character would start with a 70 that he could modify by moving 10 points from INT to LOG. Getting the right roll while generating your LOG/INT was going to be tough. A dedicated mentalist is allowed to modify their LOG to between 75 and 90 at character creation but it was not clear how this is done.

I feel that if we're going to allow psychic rules, players should be able to opt to use them without hoping for the exact right dice rolls. This will mean allowing for psionic characters that start the game with less than 80-90 LOG scores. After all, we have military, technician, and scientist characters that start the game with modest to average ability scores that the players hope to improve over time. Why not a psychic character that the player is hopeful to develop into a powerful character over the course of a campaign?

Star Frontiers has always been a game of resource management: tool kits with detailed contents, limited number of ammunition clips and etc. and soldiers, technicians and scientists must conserve and manage their resources. Likewise, a psychic character will need to do the same with this optional rule set. The psychic character will have the same experience as any other character. They will have a pool of mental points that they use to perform their psychic abilities. This will force choices on the player who must decide between solving a problem with a flashy mental skill or by a mundane means, much like

a military character choosing not to engage in combat to conserve ammo and power for potentially worse threats later in the game.

### TAKING THE PSYCHIC PSA

Some characters are born with psychic ability. This is the character where the player chooses the Psychic PSA at character creation. These characters will be referred to as "Psychics." There is no restriction on how low their starting LOG ability score can be; however, the smart player will not choose this option with a low LOG score.

Other characters have it emerge during the game. This would be the character that has a different PSA but opts to learn a psychic skill. These characters will be referred to as "Psy-sensitive". Their LOG must be 50 or higher and they must have an awakening event. Awakening events happen in game and can be any number of things like a near death experience, a mind meld with an alien, mentoring by a "crazy old wizard", successfully resisting hypnosis by a sathar or contact with an ancient alien artifact of some sort. Note: a referee can wave the awakening event if trying to work this in to his game will create too many complications or unduly slow the game down. This rule is intended to make the introduction of psychic abilities to an established character fun and should not detract from enjoying the game.

### USING PSYCHIC SKILLS

All psychic abilities are treated as skills and their operation is done using the same mechanic as skill checks. The basic mechanic is  $\frac{1}{2}$  of the ability score (LOG) + 10% per level of skill. Every use of a psychic skill costs one Mental Point to use it whether the attempt succeeds or not.

Mental points are calculated for Psychics based off of their LOG divided by 10 rounded up and the sum of all of their skill



IMAGE BY AARON O'BRIAN



levels in all of their psychic skills. Example: a psychic with a LOG of 70 and the psychic skills of Telepathy-Animals 2 and Clairvoyance 1 would have at total Mental Points of 10. For a psy-sensitive character, their Mental Points are simply their total number of psychic skill levels plus one. Mental Points refresh daily after a rest period.

The exp costs for psychic skills are calculated using the Bio-social PSA column of the Skill Cost Table (Alpha Dawn Expanded Rules page 11). Thus, a Psychic will pay 10 exp to advance a 1<sup>st</sup> level psychic skill to level two while a psy-sensitive character will pay 20 to do the same.

Attempting to use psychic skills on an alien intelligence carries the standard -20 penalty similar to attempting to use alien equipment, at least until the character becomes familiar with it. Sathar count as an alien intelligence. Thus, trying to telepathically communicate with a sathar carries -20 penalty until you become familiar with the sathar (and don't forget that there is also the hazard of the sathar attempting to hypnotize and turn the telepath).

## DIVIDE BY 2 AND ROUND UP MULTIPLIER

In many of the skill descriptions there is a "divide by two and round up mechanic" used to determine an effect based upon the skill level. This is an attempt at standardization. An effect will have a multiplier determined by the level of skill divided by 2 and rounded up. Example a character with a level 3 skill will have a multiplier of 2:  $3 \div 2 = 1.5$  rounded up to 2. This works out this way: levels 1-2 the multiplier is 1, at levels 3-4 the multiplier is 2, at levels 5-6 the multiplier is 3. Once the multiplier is known it is used to multiply times the basic area of effect.

## RANGE OF PSYCHIC SKILLS

Psychic abilities are either a range of "Self," "Touch," or "Distance". See individual skill descriptions to determine which. Self is straight forward; the psychic skill only works on the psychic.

When a psychic skill has a range of "Touch" the character must be handling an object or touching the individual to be affected. If the character is wearing a glove he cannot take off, like that of a space suit when he is in vacuum, then there is a -5%

penalty for a psychic skill with a range of "Touch"

When the ability is performed at a distance the range is the character's level divided by 2 and rounded up and then multiplied by 20 m. Example: a character at level 3 a psychic skill will be able to perform it at a distance of 40 meters away ( $3 \div 2 = 1.5$  which rounds up to 2 x 20 m = 40 m). The distance mechanic works out to 20 m for levels 1-2, 40 meters for levels 3-4, and 60 m for levels 5-6.

However, if a skill that can be performed at a "Distance" is done via direct contact or touching the object or individual then there is a +10 bonus to the action. Any unwilling character can declare they are "defending" as per the melee action "defending" and this nullifies the +10 bonus for touching. Note: the "glove" penalty applies if a character cannot remove their glove. The touch bonus in this case is only +5.

**Range Distance Mechanic  
(Skill Level  $\div$  2) rounded  
up and X 20 meters**

## DAMAGE BY PSYCHIC SKILLS

Damage of any type caused by psychic skills is based on the level of the skill. The formula is skill level divided by 2 and rounded up in d10 dice of damage. Example: a character at level 1 in Psychic Attack will do 1d10 worth of damage with a successful attack ( $1 \div 2 = .5$  rounded up to 1). If an ability save is appropriate then the attack will only do half the damage. This works out to 1d10 for levels 1-2, 2d10 for levels 3-4 and 3d10 for levels 5-6. If an item is rated in Structural points instead of STA then the damage is 5 points per level of skill in structural damage.

**Damage Mechanic  
(Skill Level  $\div$  2) rounded up  
and X 1d10**

## DURATION OF PSYCHIC EFFECTS

Some psychic skills are obviously instantaneous but may require a duration. Unless stated otherwise the formula for this is 5 minutes per level of skill in that psychic ability if not being used in combat. The duration of skills with long lasting effect that are used during combat is 5 rounds per level. Note: most skills require

concentration for the skill effect to remain in play and this carries a -5 penalty to other actions taken during that time. Also, many skills have a triggering event that ends the effect. For example, Deflect Energy ends once it deflects an energy blast. See the skill descriptions for details.

No two psychic skills can remain in effect at the same time. The one exception to this is using Clairvoyance in connection with Dimensional Shift.

## ABILITY SAVES AGAINST PSYCHIC ACTIVITY

The victims of unwanted psychic activity, influence, or attacks have an ability save. The result may be nullification of the effect or  $\frac{1}{2}$  reduction of the effect. To determine which ability is used for the save, consult skill description below. Only characters, artificial intelligence, living creatures, or aliens get an ability save; inanimate objects do not.

Many stat blocks in the game only list the STA and RS ability scores. If an ability save is required from one of the missing ability scores on a stat block a referee can simply use the STA or the RS score as he sees fit, generate the missing ability score, or make one up.

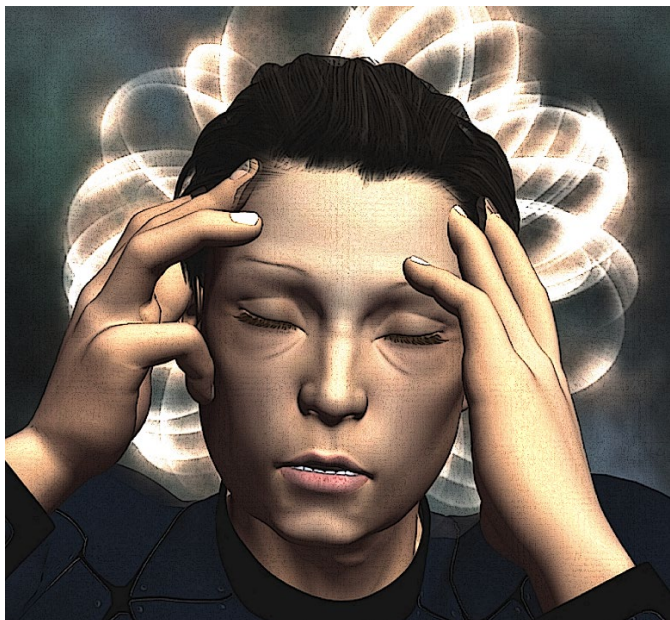
## AREA OF EFFECT

Unless stated otherwise, the area of effect of any psychic skill is 10 m per level of skill. For example: a psy-sensitive character with level 2 Cryrokinesis is trying to lower the temperature in the area surrounding herself to nullify the damage caused by the presence of lava. The area she can effect is 20 m in diameter. As long as the other members of her party remain within the area of effect, they will also avoid damage from the heat.

**Area of Effect Mechanic  
10 meters per Skill Level**

## CONCENTRATION

Many skill descriptions state that the skill requires concentration to maintain with a -5% penalty to all other action. This means that the skill's effect can be maintained for the standard duration mechanic but with a penalty for all other actions during that time that require a skill or ability check.



item has been untouched, the dimmer the impression.

**Range:** Touch

## CLAIRAUDIENCE

This skill allows a character to listen through walls to an area distant from him. The area to be listened to is 10 m in diameter. Any sound-based attacks (flashbang grenade) in that area fully effect the character employing clairaudience and the character must make a concentration check.

The skill requires concentration (-5 to all other actions).

**Range:** Distance

## CLAIRVOYANCE

This skill allows a character to see through walls to an area distant from him. The area to be seen is 10 m in diameter. Any sight-based attacks (flash bang grenade) in that area fully effect the character employing clairvoyance and the character must make a concentration check. The skill requires concentration (-5 to all other actions).

**Range:** Distance

## CONFUSION

This skill allows the character to try to confuse an enemy. A successful use causes a -20 penalty to all actions in the character affected. The victim can make a LOG check for half that penalty (-10). If a character attempts to interact with the confused character like talking his way past a confused guard the PER check receives a bonus equal to the confusion penalty the character is under. Confusion might mean a character allows or believes something he might not otherwise consider valid. If the someone is trying to convince him of something so outrageous the referee might allow another LOG check to completely dispel the confusion at that point. The skill requires concentration (-5 to all other actions).

**Range:** Distance

## CREATE HALLUCINATION

This skill allows the psychic character to create an illusionary vision in another character's mind. The victim gets a LOG save to completely dispel the effect. If the victim fails their ability save, they will believe the hallucination is real for 5 minutes per level out of combat or 5 rounds per level in combat. The skill requires concentration (-5 to all other actions).

**Range:** Distance

## CRYOKINESIS

This psychic skill focuses on an object or individual to cause it damage through cold. The psychic or psy-sensitive character must spend 3 rounds concentrating and then rolls for success on the 3<sup>rd</sup> turn. During the 3 rounds the temperature around the focus of the attack will drop. A successful attack does cold damage to STA for an individual or structural damage for an object. Characters get an STA save for half damage. If the psychic is touching the object to be damaged (for the touch bonus on a distance discipline) they are immune to the temperature change.

Note: robots are objects that are treated as characters in the rules, they have an STA instead of a structural rating. Roll for damage against the STA same as a character but the robot does NOT get an STA save. A robot may not even be aware of this attack if it is low level or lacks sensors to tell it that the temperature is changing. Level 5 & 6 robots will realize they are being damaged and will likely take some action to mitigate this.

Cryokinesis can also be used to simply create a cold effect in an area but not actually cause damage. Example: A psychic is in an area where the referee has determined has enough heat that will cause damage (raging fire, presence of lava, etc.) but the psychic can use this skill to simply lower the temperature and mitigate the effects of the heat.

**Range:** Distance

## DEFLECT ENERGY

This psychic skill allows a character to deflect electromagnetic energy away from their person. They can deflect a laser blast, climb an electric fence, or shunt an electric sword attack to ground. If the character is

Additionally, if a character is maintaining a psychic skill by concentration and takes damage from any attack, they must make an LOG check to continue maintaining concentration that round. If they are hit by several attacks in one round, they only need to make one LOG check to maintain concentration.

If a character has both Manipulate Metabolism (Trance) and another skill requiring concentration he can activate both skills and remain in one spot doing nothing, i.e. he is in a trance, and maintain the other effect for the duration of the trance. For example: a psychic with Manipulate Metabolism (Trance) at level 3 and Detect Psionics at level 1 could go into a trance for weeks (because he's level 3) and detect the use of psionics at a range of 20 m radius during that time. This is one of the few instances when two psychic skills can be employed at the same time.

# PSYCHIC SKILLS

## ANALYSIS

This skill is the combination of Analysis 1 & 2 from Zeb's Guide. The skill allows a character to determine an item's intended use and whether it is alien in origin. A separate use of this skill allows a character to read the psychic impressions on an item left by a former user: what the user looked like, what he thought while using it, what he was doing for the last few hours before the item left his possession. The longer the

expecting an attack, they can spend the Mental Point to activate this skill and it will be in play for 5 combat rounds per level of skill. During that time, they must concentrate on the skill but may do other things at a -5% penalty. Any laser, electric, or similar attack that strikes the character will be deflected with a successful skill check. The effect of this skill ends with any one attempt to deflect an energy-based attack.

Alternately, if the character was not expecting an attack, they may make a RS check then make a deflect energy skill check. Whether they succeed or fail the RS check they may not take any other action this turn or if they already did take an action, they may not take an action next turn.

A character with this skill can do something like climb an electrified fence. There is no skill check they simply use the skill to channel the electricity through and around their body without any effect to themselves.

**Range:** Self

## DIMENSIONAL SHIFT

Use of this skill allows a character to manipulate subspace and pi-tachyon particles to shift to a location they can see and within the range limits of their skill level. It takes 3 turns of concentration and on the 3<sup>rd</sup> turn a skill check is required. Failure causes 1d10 LOG damage. The LOG damage is temporary and they gain back 1 point per 10 minutes.

A character may use clairvoyance to see a location within range but this will require two separate activations of Psychic skill and use up two Mental Points. Range is technically self but the distance of teleport is limited to the psychic's range limitation determined by the of level skill.

*Note: this is my least favorite psychic skill and I almost did not include it. I've coached is explanations in the terms used for subspace radios and void jumping of star ships. In isolated circumstances a game master might allow for a character with this skill to sense something going on in subspace or to "almost see Pi-tachyon particles" via this skill because it suits the narrative of the adventure in some way.*

*Also, a referee might allow a character with this skill to teleport another individual with*

*them. Personally, I'm not in favor of this but if there was a cost or a limit for doing it then why not? I would suggest something like for every two levels of skill the psychic can also teleport one other individual with them or that at 3<sup>rd</sup> level they can send another individual instead of themselves. One might also exact an extra mental point for taking a second individual on a dimensional shift or 1d10 LOG points temporarily lost for transporting a second person.*

## DENSITY

A character using this skill can manipulate their density up or down. Decreased density allows all of the following effects: add 1m of movement per level, reduce falling damage from a fall by 5 points per level, climb with a +5% bonus per level, multiply glide distance by level (for Yazirians only), and float on water without effort. Increase density has the following effects: act as a rope anchor (for one character per level divided by 2 and rounded up i.e., 1 character at levels 1-2, 2 characters at levels 3-4 and 3 characters at levels 5-6), crash through normal glass without effect, crash through doors or walls at a rate of 10 structural points per level (must be able to completely overcome the structural points

of the barrier in one turn), reduce damage kinetic/inertia damage by 1 point per level.

While the effect lasts, the character must concentrate which carries a -5 penalty to other actions. This skill may be used on another willing character through Touch. Taking kinetic damage requires a LOG check to maintain concentration otherwise the effect ends.

**Range:** Self or Touch

## DETECT PSYCHIC ACTIVITY

When this skill is active the character can automatically (no skill roll) detect the use of psychic skills within his allowable range (level divided by 2 and rounded up then multiplied by 20 m). The character will know the direction and distance to the character that just used a psychic skill. This effect will last for the standard duration but requires concentration (all other activity is at -5 penalty).

This skill can also be used to detect another psychic, within range, who is not actively using a psychic skill. This action requires a skill roll and the effect ends with that skill roll. The character will have a mental image of the other psychic or psych-sensitive and know direction and range if they cannot currently see them.



IMAGE BY SCOTT MUIJDER

Range is distance but a character can perform this skill while touching an individual to determine if they are a psychic or psy-sensitive and gain a +20 to the skill check.

**Range:** Distance

## DRAIN ENERGY

The use of this skill allows the character to bleed off energy out of an energy source into subspace. The energy source will typically be a 20 SEU energy clip, power belt, power backpack or parabattery. The amount of energy drained is 1d10 per level of skill. The skill can be used to interrupt power flow to a lock or detonation device. A referee will need to decide if the interruption of power allows a lock to be opened or a bomb to be defused.

**Range:** Distance

## EMPATHY

This psychic skill acts very similar to the empathic understanding subskill of the Psycho-social skill. It allows the character to gain a general impression of the mood or intentions of individuals or groups of beings. It can be used to broadcast the sincere mood or intentions of the psychic. It only allows vague general information to be conveyed and may be only used once per encounter but the duration mechanic is in effect. The skill requires concentration (-5 to all other actions).

Note: If used in conjunction with the empathy subskill of psych-social skill the character gains a bonus of +5% per level of skill in Empathy the psychic/psy-sensitive skill to the empathy subskill of psych-social skill in the Bio-social PSA. This bonus stacks with the penalty for concentration meaning the character must concentrate on maintaining the psychic skill while attempting the psych-social subskill thus he will have the -5% penalty for concentration and the +5% bonus per level of psychic skill. At first level the bonus and penalty cancel each other out.

**Range:** Distance

## FEAR

This skill allows the character to attack the id of another character and fill them with the desire to flee. A successful attack does 1d5 points of damage per level of skill

to the victims PER score. The victim gets a PER save to resist the urge to flee AND for half damage. A character reduced to 0 PER is paralyzed with fear for d100 rounds during which time PER score will remain at 0. This PER damage is temporary and wears off at a rate of 1 point per 10 minutes.

**Range:** Distance

## HEAL

A character using this skill can heal themselves or others with no skill check for 1d10 per level of skill. It may also be used to stabilize a dying character, but this requires a skill check.

**Range:** Self or Touch.

## INFATUATION

The use of this skill requires a skill check, and the victim gets a PER save for no effect. A successful use means the psychic gains a +5% bonus per level of skill to an NPC reaction roll with one individual. This bonus stacks with any other reaction modifiers like those on the Racial Reaction Modifiers Table in the Alpha Dawn rules. Example: humans have a -10 reaction modifier to vrusk characters.

This effect does not necessarily mean a romantic interest and might simply be used to modify an NPC reaction or cause it to not attack the character using this skill. NPCs will not behave in ways that violate their core beliefs but rather be inclined to go along with what they view as acceptable behavior. The skill requires concentration (-5 to all other actions).

**Range:** Distance

## LEVITATION

Use of this skill allows a character to levitate. The effect can be to simply remain in one position above the ground or to move at a rate of 5 m per turn per skill level in any direction for as long as the character concentrates. Concentration for this skill is involved and the character cannot perform other actions and

a LOG save is required to maintain the effect if they are attacked and take damage.

Range is Self but this action can be done on another character at Distance for -10% penalty. A small to medium object can be picked up and flung as an attack: 10 kg per level. This action has an attack range of Distance and the damage is 1d10 per skill level divided by 2 and rounded up. The victim of the attack gets a RS save for half damage.

## MANIPULATE METABOLISM (TRANCE)

The use of this skill allows a psychic to manipulate their metabolism up or down by entering a Trance. The range is always Self.

A slowed metabolism will allow a character to hibernate or fake death. At levels 1-2 a character can hibernate for days, at levels 3-4 for weeks and at levels 5-6 for months. The effects of poison are slowed during this time and even the best doctors can misjudge the character to be dead. The character can come out of this hibernation at any time but their body takes 3 rounds to fully wake up with a progressively improving penalty for actions during those rounds: first round is -15%, second round is -10% and the third round is -5%. Poison will become active again after the character leaves hibernation.

In the sped-up metabolism trance, the character's healing time is cut in half. The character can feign a fever, heart attack, or other maladies. While using a sped-up metabolism the characters IR signature is enhanced and under the right circumstances



IMAGE BY BRIAN PHONG LUANGTHAM

NPCs or robots might misinterpret the character as a piece of machinery or a heating duct. The character may come out of this trance at any time but it takes 3 rounds for the body to cool down similar as for the slowed metabolism trance with the same penalties for action in those 3 turns.

While a character is using this skill, they can do nothing else.

**Range:** Self

## PARALYZE

This is an attack on a creature's motor center of their brain that allows it to actively use its body. The victim gets a PER save for no effect otherwise they are paralyzed and unable to move or defend themselves for 5 rounds per level of skill. If they are attacked the paralysis effect is broken and they can act normally on the next round. Other triggering events determined by the referee may break the paralysis with a PER save.

**Range:** Distance

## PSYCHIC ATTACK

The use of this skill is a psychic attack against a sapient character's mind. A successful attack does damage against the LOG score but the victim gets an LOG save for half. If a character's LOG score reaches 0 by this method, they become catatonic for d100 rounds during which time their LOG score remains at 0. This damage to LOG is temporary and the character gains back 1 point of LOG per 10 minutes. Stim dose will rouse a catatonic character and restore 10 points of LOG but only one dose

of Stim dose can be used this way in a 20-hour GST day.

**Range:** Distance

## PYROKINESIS

This psychic skill focuses on an object or individual to cause it damage through heat. The psychic or psy-sensitive character must spend 3 rounds concentrating and then rolls for success on the 3<sup>rd</sup> turn. During the 3 rounds the temperature around the focus of the attack will increase. A successful attack does heat damage to STA for an individual or structural damage for an object. Characters get an STA save for half damage. If the psychic is touching the object to be damaged (for the touch bonus on a distance discipline) they are immune to the temperature change.

Note: robots are objects that are treated as characters in the rules, they have an STA instead of a structural rating. Roll for damage against the STA same as a character but the robot does NOT get an STA save. A robot may not even be aware of this attack if it is low level or lacks sensors to tell it that the temperature is changing. Level 5 & 6 robots will realize they are being damaged and will likely take some action to mitigate this.

Pyrokinesis can also be used to simply create a heat effect in an area but not actually cause damage. Example: A psychic is in an area where the referee has determined that cold will cause damage (raging blizzard, trapped in alien deep freezer, etc.) but the psychic can use this skill to simply increase the temperature and mitigate the effects of the cold. Success is automatic in

this case and duration is the standard duration mechanic.

**Range:** Distance

## SHIELD

This skill is used as a defense against psychic attacks. Once activated it will remain in effect for the standard duration mechanic but requires concentration (-5 to all other actions). It will completely block one psychic skill-based attack: Confusion, Create Hallucination, Cryokinesis, Fear, Infatuation, Paralyze, Psionic Attack,

Pyrokinesis, or Suggestion which halts the shield effect. It also blocks Clairaudience, Clairvoyance, Empathy, and Telepathy but without ending the shield effect.

Alternately, if the character was not expecting an attack, they may make a RS check then make a deflect Shield skill check. Whether they succeed or fail the RS check they may not take any other action this turn or if they already did take an action, they may not take an action next turn.

**Range:** Self

## STATIC

With a successful skill check a character can send out a field of psychic static that hinders other psychics or psy-sensitive characters from employing their psychic skills. Any psychic or psy-sensitive within the character's range will sense the static field. If they choose to activate a psychic skill there is a -20% penalty to doing so. The use of this skill can interfere with subspace radio transmission and reception. A character employing this skill must concentrate on the static field: -5% penalty to all other actions.

**Range:** Self with area of effect centered on the character.

## SUGGESTION

The use of this skill plants a simple suggestion that a character will act on. It requires a successful skill check and the victim gets a PER save for no effect. The psychic may make a number of suggestions equal to their skill level but the first time the victim makes a PER save nullifies all suggestions.

The suggestions must be simple and something the character is likely to go along with. A security trooper could be convinced that, "these aren't the robots you're looking for," but not to go kill himself. However, a character that was already suicidal might act on a suggestion of killing themselves. A game referee will have to make a determination on the core beliefs of the victim and decide whether they will go along with the suggestion. This means that a successful skill check can be overturned because the player was so outrageous with their suggestion.

**Range:** Distance



IMAGE BY TOM VERREAUULT

## TELEPATHY, ANIMALS

This skill allows mental communication with animals or non-sapient beings. Only the most general concepts can be communicated but this improves with highly intelligent creatures. If the psychic is trying to convince a creature to go against its instinct, a skill check is required. Once this skill is activated with a particular creature it will remain in effect for the standard duration or until the character fails a required skill check. For as long as the telepathy session lasts the psychic must concentrate and suffers a -5% penalty to all other actions.

If the creature was classified as a “monster,” like a sathar attack creature, a skill check is required and failure by the psychic results in 1d5 turns of disorientation for the psychic and -10 to all activity during that time.

**Range:** Distance

## TELEPATHY, ARTIFICIAL INTELLIGENCE

This skill allows for telepathic communication with robots and AI. When the Star Frontiers ruleset was originally published artificial intelligence was not well understood and it was represented as the robotic brain. For purposes of this skill a character can communicate with both robots and AI whether the AI is limited to robotic brains or allowed to be an entity withing a computer network.

Lower-level robots will be very myopic in their responses relying on and often defaulting to the strict programming of their Missions and Functions. Higher level robots may be reasoned with but a skill check will be required to convince them to act in a way not already covered by their Missions or Functions.

A psychic character with robotics skill may make a Telepathy AI skill check and attempt to rewrite a mission or function of a robot telepathically but the robot gets a save equal to its level x 10%. Rewriting a mission via telepathy carries a -10% penalty. Range is Distance but direct Touch conveys a +10% bonus to skill checks unless the robot is resisting the character.

**Range:** Distance

## TELEPATHY, SAPIENT

This skill allows telepathic communication with other sapient beings. It occurs without a skill check unless a being wishes to block the communication. Even with a skill check a resisting creature can make a LOG save to block the communication. Since the communication is mind to mind differences in spoken language do not apply. Range is Distance but direct Touch conveys a +10% bonus to skill checks.

**Range:** Distance

## TRUESIGHT

If a character’s sight is hindered by temporary or permanent blindness, whether from complete darkness, blindfold, flashbang grenade, or being under water, the use of this skill allows them to see their surroundings and function without any penalties or hinderance from lack of sight. The skill requires concentration (-5 to all other actions).

**Range:** Self or Touch

## VACUUM BUBBLE

With this skill a psychic can create a pocket of atmosphere that conforms to their body shape that will allow them to breath in a vacuum for a duration of time



IMAGE BY SCOTT MULDER

determined by the standard duration mechanic for their skill level. Maintaining the effect does require concentration with a -5% penalty to other actions.

**Range:** Self

## PSYCHIC EQUIPMENT

Over the years some psychic equipment has appeared in the pages of the Frontier Explorer, you can locate those items on the table below. Item names are hyperlinks to the on-line resource.

## OTHER PSYCHIC RESOURCES

Frontier Explorer #12 had a psychic theme and spot lighted the “[Thought Police Archetype](#)”.

ITEM	COST	MASS (KG)	SOURCE
<a href="#">Mental Shield Helm</a>	5,000	1	Frontier Explorer #12
<a href="#">Mind Reading Helm</a>	25,000	100	Frontier Explorer #12
<a href="#">Psi-Beam Emitter</a>	8,000	-	Frontier Explorer #12
<a href="#">Psychic Power Cells, Backpack</a>	1,500	10	Frontier Explorer #12
<a href="#">Psychic Power Cells, Belt</a>	750	5	Frontier Explorer #12
<a href="#">Psychic Screen</a>	5,000	2	Frontier Explorer #12
<a href="#">Synapse Enhancement Diadem</a>	1,000	-	Frontier Explorer #12
<a href="#">Translator Microbes</a>	1,000	-	Frontier Explorer #20
<a href="#">Voturnian Psi-crystals, Tiny</a>	50	-	Frontier Explorer #19
<a href="#">Voturnian Psi-crystals, Small</a>	250	-	Frontier Explorer #19
<a href="#">Voturnian Psi-crystals, Medium</a>	1000	0.1	Frontier Explorer #19
<a href="#">Voturnian Psi-crystals, Large</a>	100k-500k	0.25	Frontier Explorer #19

**TITAN RISING**

**2299**



**NEW EPISODES  
RETURNING SOON!**

# SOLAR MINOR SYSTEM BRIEF

BY OSCAR RIOS

SOLAR MINOR	
Star Type	F8 (Yellow-White Dwarf)
Stellar Radius	1.03 x 10 <sup>6</sup> km (1.48 sol)
Stellar Mass	2.53x10 <sup>30</sup> kg (1.27 sol)
Stellar Temperature	6213K (1.07 sol)
Luminosity	1.37 x 10 <sup>27</sup> W (3.57 sol)
Planets	4

## HISTORY

### THE EARLY YEARS

The Solar Minor system was discovered in FY66, by the exploration vessel Nirvana (a heavily modified Rollo's Renege class yacht), on contract from the Synthcorp Megacorporation. Once settlement rights were settled, Synthcorp launched dual settlement projects for the two habitable worlds, which had been named Circe, and Kir'-Kut. Both worlds were organized and developed for industrialized agricultural production and development for food-stuffs primarily for Vrusk and Human markets.

The system's corporate headquarters, industrial centers, and research labs were focused on the inner of the two worlds, Kir'-Kut. Settlers for this world came from two different nearby star systems. First was the industrial world of Zit-Kit, a moderately well populated Vrusk world in the Kizk'-Kar system. An equal number of colonists came from the agricultural and industrial world of Kdikit, a heavily populated Human world in the Madderly's Star system.

The outer planet, Circe, was developed for agricultural production. Its settlers came from three worlds. One being the moderately populated agricultural and industrial Vrusk settled world of Ken'zah-Kit, in the K'aken-Kar system. The other settlers came from both Kdikit (see above) and Gollywog, a heavily populated mining planet in the White Light system. The Kdikit settlers were selected from people put on waiting lists to settle Kir'-Kut,

having just failed to advance in the selection process. The settlers from Gollywog, being primarily miners without any agricultural background to speak of, had the most to learn in their new homes. They also had the most to gain, as Gollywog offered little opportunity to better their situation.

As the colonies became more settled, cultural differences developed between the two worlds. Kir'-Kut became more urban and corporate, with most of the people working in offices, factories, and laboratories. Circe became more rural, with a greater focus on physical labor and most of its people working on large scale farms, ranches, orchards, plantations, and fisheries. Eventually these differences grew contentious, as those living on Kir'-Kut enjoyed a much higher standard of living, while the conditions for those living on Circe were sub-standard at best.

The citizens of Circe complained to Synthcorp but were ignored. Complaints became protests, which were answered by brutal crackdowns, sparking a spiral of violence which threatened to send Solar Minor into a civil war. At this time, Mega-Corporations abusing the citizens of their settled worlds was becoming a huge social and political issue. The Council of Worlds and the UPF stepped in and passed laws to regulate and halt the purchase, governance, and development of habitable worlds by Mega-Corporations. Synthcorp ignored these new regulations and enacted a planet wide crackdown on Circe in FY 79. The crackdown was carried out by heavily armed Synthcorp security forces, and units of "loyalists" militia from Kir'-Kut.

After the crackdown of FY 79 tensions simmered. The brutality of the military action began turning public opinion in Kir'-Kut against the conflict, and many began supporting improving the working conditions on Circe. Meanwhile, on Circe, numerous militia groups began forming, training, building secret bases, and stockpile military hardware. The people of Circe intended to be ready for the next crackdown. The Council of Worlds did nothing

to defuse the situation, as their attention was soon firmly centered elsewhere.

### THE SECOND SATHAR WAR

In FY 79, a couple of weeks after the crackdown on Circe, a massive Sathar force attacked Volturnus. As Spacefleet rushed to engage the Sathar on the other side of the Frontier, Solar Minor was left to its own devices, forgotten and undefended. This was exactly what the Sathar wanted, as the attack on Volturnus was merely a diversion. In FY 81 two Sathar Fleets launched a devastating attack on the Solar Minor system.

Solar Minor fell in three days. The Synthcorp security forces were quickly withdrawn to defend Kir'-Kut, hoping to delay the Sathar long enough for the population to mount an evacuation. To settlers on Circe this came as a betrayal and felt they as if they were sacrificial lambs left out before the Sathar wolf. If this was Synthcorp's plan, it failed, as the hastily assembled evacuation fleet was overtaken by the Sathar, with all vessels but one either captured or destroyed. Resistance on Circe lasted for two years, as small groups of partisans, mostly hiding in the wilderness and struggling to survive, mounted a resistance while waiting for UPF Spacefleet to rescue them. That rescue never came. By FY 83 the last of the organized resistance groups were pacified by a mix of Sathar troops and their attack monsters.

As the war turned against the Sathar they were driven out of Solar Minor after massive attack by Strike Force Nova in late FY 83. But they did not leave empty handed. The people of Circe and Kir'-Kut were rounded up and transported to the Sathar's forward operating base, the star system they'd named Outpost #1. Here the people of Solar Minor were used as slave labor and exploited as living shields. They endured nightmarish conditions, with some being used as test subjects in various Sathar weapons programs. This lasted seven long years, until Outpost #1 was finally conquered by Spacefleet and the newly formed Landfleet in FY 90. It is said



that for every three people forcibly transported to Outpost #1 from Solar Minor, only 1 would survive long enough to be liberated.

For two years the people of Solar Minor were detained, debriefed, and medically treated on Outpost #1. Nearly all of them were dreadfully malnourished, and many disfigured by medical experiments. It became a security nightmare as hundreds of Sathar agents and collaborators were discovered hiding within their ranks. Many star systems shut their borders to the survivors of Solar Minor, either unwilling to take the security risk of letting potential Sathar agents into their midst, or unable to handle a massive influx of displaced refugees. This suited the majority of the survivors just fine, and in FY 92 the resettlement of Solar Minor began.

## THE RECONSTRUCTION

The resettlement of Solar Minor began in earnest in FY92. The process differed drastically on the two worlds, as the planets fell to the Sathar in quite different matters. Kir'-Kut was taken with relatively little damage, as the bulk of its population were captured in space attempting to evacuate. Circe, on the other hand, managed to mount a defense as the population had been arming in secret for two years, expecting renewed conflict with Synthcorp. Because of this, several population centers were bombed from orbit by Sathar warships, and regions of the planet remain uninhabited to this day.

Synthcorp attempted to reestablish control over Solar Minor, with only limited success. The company's failure to protect its citizens from nearly a decade of occupation and enslavement did not sit well with either the citizens of Kir'-Kut or Circe. Ultimately, they had some limited success in Kir'-Kut, becoming the planet's largest single employer and having some say in the reconstructed government. However, they no longer had the total control they once enjoyed, and over two dozen small Vrusk trade houses now control about 40% of the planet's economy.

On Circe these efforts failed disastrously. Synthcorp tried to rebrand itself to the people of Circe, taking on a more conciliatory posture and offering them

better living conditions, higher wages, and more representation within the company's board of directors. After a number of violent protests, Circe began arming civilian spacecraft, skills they learned as slaves to the Sathar military industrial complex. After amassing a respectable flotilla for the inevitable conflict, Starfleet stepped in.

With Solar Minor a clear front line system against the Sathar, the UPF could not afford any internal instability. The Council of Worlds and the UPF Frontier became committed to restoring confidence in its ability to protect its members, erase the shame of the tragedy of Solar Minor's conquest, and atone for its failings to these citizens. They were determined to force Synthcorp to adhere to the edicts of FY 79, which were made even stricter at the end of SWII. Additionally, Solar Minor became a key system in a revised strategy of the defense of the Frontier, and they planned to permanently station elements of both Landfleet and Spacefleet in the system.

The government of Kir'-Kut, heavily influenced by the board of Synthcorp, attempted to stall the establishment of a formal and permanent military presence in the system. They claimed it would make Solar Minor a target for future attacks. However, many suspected this was because Synthcorp planned to re-take control of Circe by force at some point in the future and the possibility of Landfleet and Spacefleet forces getting caught in the crossfire would be disastrous.

However, with little support from the citizens of either Circe or Kir'-Kut, Synthcorp relented. The megacorporation granted more freedom to the people of Kir'-Kut and totally relinquished its claim to Circe. Circe struggled for a few years to recover, dipping into an economic depression without the financial support of Synthcorp during the early years of reconstruction. Landfleet and Spacefleet leased Circe's moon Ulysses for 75 years, transforming it to a major military base and training center. New markets opened up to the people of Solar Minor and they recovered their footing. Factories re-opened, crops were planted and harvested, items began being exported and today the system's economy is thriving.

## TODAY (FY 111)

Currently Solar Minor is as secure as any system in the Frontier. Its economy has financially recovered, and even surpassed, its pre-SWII levels. While some tension and resentment remains between Circe and Kir'-Kut, time and a regime change within Synthcorp are healing most of those wounds. Nearly every executive connected to the mishandling of pre-war Solar Minor has been removed from power, and the few that remain were drastically demoted and marginalized. While the megacorp's new leadership is currently sending out feelers for more joint ventures with Circe and expanded development within Kir'-Kut, it is clear that the corporation faces an uphill battle with the now independent-minded governments of both worlds.

## A TOUR OF SOLAR MINOR

At the center of the system is, of course, the yellow white dwarf star named Solar Minor. The system has four planets, and two asteroid fields. However, this was not always the case. About 875,000 years ago the system had six planets and only one asteroid field. For reasons unknown, the orbits of the system's 2<sup>nd</sup> and 3<sup>rd</sup> planet converged, causing them to collide. Both worlds shattered, creating the massive Charybdis asteroid field. This cataclysm also changed the orbit of Kir'-Kut, throwing it into a high elliptical course. This triggered a mass extinction event from which life on the planet has not yet recovered from. Because of the recent (astrologically speaking) changes in the system's layout, comets and meteor showers are common across the system.

The system is arranged as follows:

### K'ZEN-KIT

The closest planet to the star. A small rocky planet with a thick toxic atmosphere, intense atmospheric pressure, and extremely high surface temperatures.

### THE CHARYBDIS ASTEROID FIELD

A vast field of debris that stretches 70% of the way around a complete orbit. The magnetic disturbances between some of

## THE PIRATES OF CHARYBDIS

Before the Second Sathar War these asteroids were home to a lawless collection of pirate bases. However, many of these pirates rushed to engage the Sathar invasion force and were destroyed, while the rest fled the system never to return. The most famous of these pirates was a Yazarian named Kauber (pronounced KAW-ber), an honored local hero. He saved 20,000 citizens from slavery when his ship, a corvette named *Sin of Pride*, boarded and captured a Sathar transport heading to Outpost #1. To ensure the ship's escape the pirates had to delay a pursuing Sathar destroyer. Heavily damaged and out of torpedoes, Kauber rammed *Sin of Pride* into the enemy destroyer. This heroic action resulted in the destruction of both vessels and the loss of all hands. Today, Kauber is honored across Solar Minor, with a holiday to mark the date of his death, and a Rest and Relaxation Station named him his honor (Kauber Station, in orbit around Circe).

Organized piracy in Solar Minor is no longer an issue. However, every once in a while, a ship laden with cargo goes missing, only for said goods to be offered on the black markets weeks later. People still search for these hidden pirate bases, hoping to find a hidden treasure horde. Law enforcement organizations also launch periodic searches for these bases, in the hopes of dismantling them. They do not wish for a pirate band to reestablish itself in the system using one of these long-abandoned facilities. Any pirate band attempting to establish itself in Solar Minor would be either very bold or very foolish, considering the heavy military presence here which would love to augment their training regimen with a bit of pirate hunting.

the larger asteroids cause displays of colorful lights, strange glows, and the occasional burst of ionic energy (appearing as lightning in space). While a very dangerous place to navigate, the Charybdis Asteroid Field can be quite beautiful when viewed from a safe distance. It has become a popular tourist destination for interstellar spaceliners and day trips from Kauber Station (see Circe).

## KIR'-KUT

A lightly populated, moonless world, settled jointly by Vrusk and Humans. Kir'-Kut is a former corporate world once run by the Synthcorp megacorporation. Kir'-Kut has a very high elliptical orbit, giving it very long years (724 days), marked by lengthy cold and dark winters, followed by short, very hot summers. It is a world of drastic weather patterns and seasonal shift, black sand, and towering lava plumes. Because of a resent (geologically speaking) mass extinction event, the planet has very little life on it. Kir'-Kut is an industrial world, with dozens of factories and research labs, churning out much needed items and trade goods, while testing and developing new products. It is the only industrial focused world for thirteen light years, its nearest competitor being Zik-Kit, in the Kizk-Kar system.

## GWEN AKIERS (TRADING STATION)

This space station is a major center for trade and restocking provisions for starships. By law, no goods produced on Kir'-Kut can be sold on the station, so the majority of items sold here are produced on Circe or Zik-Kit, in the Kizk'Kar system. However, goods sold on the surface of Kir'-Kut can be loaded to ships docked in Gwen Akiers. Nearly every company and trade house rent warehouse space on the station, but sell their goods out of showrooms, shops, and dealerships located on the surface of Kir'-Kut. The portions of Gwen Akiers that aren't dedicated to servicing starships and warehousing goods form a massive mega mall, with sections catering to all budgets. Everything from 2<sup>nd</sup> hand, bargain basement shops, to luxurious department stores filled with high end items can be found on Gwen Akiers.

## CIRCE

A lush subtropical world, with a light population of Vrusk and Humans, also a former corporate world owned by Synthcorp. A major center for agricultural production, the farms, fields, and fisheries of Circe feed its population, the Starfleet and Landfleet forces stationed on its moon, Ulysses, and are exported far and wide. Much of the planet was damaged during the Sathar invasion during SWII, and even today (20 years later) vast regions of the planet are considered too dangerous to resettle (called the Restricted Zones). The areas of Circe that have been resettled were structured with protecting the environment as a top priority. With agriculture as the foundation of its economy, the post-Synthcorp government focused on ensuring that the air, water, and soil of the planet be protected to ensure quality of its produce and prosperity.

## ULYSSES (MOON)

The single moon of Circe, Ulysses, has been fully leased by both Landfleet and Starfleet for the next 75 years. While details and specifics concerning Ulysses are highly classified, it's a known fact that Landfleet keeps considerable forces stationed here, both in troops and their equipment. Facilities are also in place for a rapid buildup of forces (vacant barracks, massive supply depots, and very well stocked armories).

Starfleet has made Ulysses a major center for training. Some of the fleet's most promising fighter pilots and assault scout crews are deployed here for extended training, with rumors of a program with instructors comprised of some of the top aces (pilots with at least 5 confirmed enemy kills) from SWII. There are also rumors that Ulysses maintains several assault scouts here, ready for deployment at a moment's notice. There have also been sightings of at least three different tactical fighter wings (both of dedicated space supremacy fighters and assault bombers) moving between Ulysses and the Scylla asteroid belt, where they hold full scale training exercises. The surface of the moon is also armed with various energy and projectile batteries.

While the exact number of personnel is classified some estimates can be made, based on the amount of food shipped there from Circe. Based on their food purchase somewhere between 60,000 and 100,000 Landfeet and Starfleet personnel are currently stationed on Ulysses. Not all of these are military personnel, as the families of most officers also live full time on the various bases hidden across this moon.

### **FORT HAPLON (ARMORED SPACE STATION)**

Guarding the space lanes between Ulysses, Circe, and Kauber Station (see below) is the Armored Space Station Fort Haplon. Armed with a laser battery, and a well-stocked rocket battery, the station also has a missile defense system (ICM), a water vapor laser defense system (MS), and a coating of laser resistant paint (RH). Stores of rockets and anti-missile defensive rockets are kept in the massive armories below the surface of Ulysses, allowing Fort Haplon to be resupplied almost indefinitely. Crews often drill by making high speed restocking runs between Ulysses and Fort Haplon under mock combat conditions. While dwarfed by the much larger Kauber Station, Fort Haplon is a key fortification in Solar Minor's defensive strategy. For Spacefleet personnel a tour of service in Fort Haplon is often assigned as a reward for heroic service, due to the close proximity to the Rest and Relaxation Station, Kauber Station. The station is named after a Rim Coalition Light Cruiser of the same name, which was lost to Sathar ground defenses over Outpost #1, while screening troop ships which were landing Landfleet forces.

### **KAUBER STATION (REST AND RELAXATION STATION)**

This massive resort station, filled with casinos, restaurants, night clubs, concert and sporting arenas, zoos, amusement parks, hotels, and theaters is named after the Solar Minor folk-hero, Kauber the space pirate. It is one of the most popular vacation spots in this section of Frontier space. A good part of the station's income (upwards of 35%) comes from military personnel stationed on the Ulysses. It is also a popular spot with spacers, taking a break at the end of the establish trade

route, and locals (especially those from Kir'-Kut) who visit for everything from a long weekend to full, three-week long vacations. Many breakout performers and chefs, especially among the Vrusk, get their start on Kauber Station, honing their craft on both theater stages, nightclubs, concert halls, and restaurant kitchens. Some Vrusk call the station Kut-K'ekar Kawl-tsa or The Hatchery of Talent.

### **KIR'ZAH-KUT**

A mid-sized gas giant planet is the outermost planet in the Solar Minor system. Kir'zah-Kut has an impressive series of several hundred large rings, composed of a mix of ice and rock. Most of the material from these rings were once outer planets beyond Kir'zah-Kut's orbit, and its own moons. The high gradational pull eventual drew in all outer planets of Solar Minor, causing them to collide with Kir'zah-Kut's moons and with each other. These collisions pulverized the moon and ensnared planets into the material which now forms its massive and impressive rings.

### **THE SCYLLA ASTEROID FIELD**

The smaller of the two asteroid fields in Solar Minor, this one rests at the outer edge of the system. Any ships approaching it are warned, by automatic recorded transmissions, to stay away, explaining that the area is used for military training and portions of it are mined against enemy incursion. It is rumored that some of the larger asteroids are used as bombing targets for tactical star fighters. There are also rumors that some of asteroids are used as early warning subspace detectors or listening posts, with their sensors pointed towards suspected Sathar space.

One thing is certain, ships that linger or ignore the warning are fired upon, and at least one ship, a Nebula class yacht called *Pagoda Twilight* has been destroyed here. Some say the ship was simply off course, others claim the ship carried journalists investigating the region for a story. A few whisper that the crew of *Pagoda Twilight* were Sathar agents attempting to map out the minefield. The official Spacefleet statement is that, despite a number of proven facts to the contrary, the incident in question never happened.



IMAGE BY JERRY BOUCHER

# CULTURAL NOTES AND QUIRKS

## THE BRANDS

The most respected people on Solar Minor are those who experienced the occupation years and horrors of Outpost #1. They are clearly visible because the Sathar branded each and every prisoner with a barcode to keep track of them. On humans, the brand was placed on the left cheek, and on Vrusk, the top of their head. Even babies born on Outpost #1 were branded. Any citizen of Solar Minor born before FY 90 are likely to carry such a brand, and they wear them proudly, calling them Survivor Marks.

Many of the people living in Solar Minor came during the resettlement era and do not have these marks. Those who have them are called “Founders”, while those without them are called “Settlers”. While Founders carry their marks with pride, they do not look down on Settlers. They know that without the influx of settlers, who risked everything in coming to a shattered system struggling to get back on its feet, Solar Minor would have never risen from the ashes.

The children of “Founders” often get a tattoo where the brand would be, typically a leaf, flower, or a sprig of wheat (from Circe), or a snowflake, hammer, or lava plum (Kir’-Kut). This group identifies as “Decedents”. Children of Settlers born in Solar Minor have begun getting tattoos as well, most often depicting a Phoenix, and call themselves “Embers”. Typically, such people are young adults under 20 years of age.

## A BLENDED CULTURE

Vrusk and Humans from Solar Minor aren’t like Vrusk and Humans from anywhere else. The Vrusk of Solar Minor tend to be more relaxed and artistic than Vrusk living elsewhere. The Humans of Solar Minor are more industrious and organized than average humans found in other places as well. After several generations of living, working, and struggling to survive together, the two cultures slowly bled into one another.

Those Humans and Vrusk from outside of the system find their counterparts from Solar Minor to be “odd”, but often envy them. Most Vrusk wish they could be as artistically inclined and relaxed as those living in Solar Minor, but can’t imagine how to get that way. Most humans wish they could be as hard working and organized while remaining as apparently stress free and happy as those from Solar Minor, but can’t comprehend how such a mindset is possible. For those of Solar Minor, they can’t explain how they do it, or why. They just say, “We are what we are, we do what we do, and it works.”

## THAT’S ENTERTAINMENT

Because of the blended culture, and extended educational system, Vrusk growing up in Solar Minor have more time to pursue elective studies. To fill this time, young Vrusk often focus on artistic pursuits, with many becoming performers, designers, artists, composers, writers, and actors. Many of the Frontier’s most famous Vrusk artists and entertainers hail from Solar Minor. This has become an item of regional pride in Solar Minor, and many aspiring Vrusk artists and entertainers come to Solar Minor to hone their craft. It is on the stages of Kauber Station (the Rest and Relaxation station in orbit around Circe) where many famous Vrusk entertainers get their start. StarPlay Industries has not one, but two major offices in Solar Minor, one on Kauber Station, and the other in the capital of K’zen-Zawdl, on Kir’-Kut.

## RIVALRIES

While no longer bitter enemies the citizens of Kir’-Kut and Circe are not exactly friends. Sure, if a fight were to break out in a spacer bar, all the people from Solar Minor would end up on the same side. However, their differences were well established and divided into two camps from the earliest days of colonization. Kir’-Kut was settled by Vrusk from Zik-Kit, a much more industrialized planet than Ken’zah-Kit, which is a wholly agricultural world where the settlers of Circe are from. In simple terms Kir’-Kut was settled by industrial workers who knew a bit about gardening, and Circe by professional farmers, a classic urban vs rural cultural divide.

For the human colonists, Kir’-Kut was settled by factory workers and industrialists from Kdikit. Circe, on the other hand, got only 40% of its human colonists from Kdikit, with the other 60% coming from the heavily populated mining planet of Gollywog. Most of that group had no agricultural experience, and at least a fifth of them were prisoners offered early parole if they resettled on Circe and worked for a sponsoring company for at least 5 years. In their simple terms, Kir’-Kut was settled by factory and office workers, while Circe was settled by a mix of factory workers, miners looking to start a new life, and paroled criminals.

## ONE DRALASITE JOKE ABOUT PEOPLE FROM SOLAR MINOR

“While waiting tables, if you spilled soup on someone from Solar Minor, how could you tell if they were from Circe or Kir’-Kut?”

The one from Kir’-Kut would hit you with a bill for his dry cleaning, and then his company would hit you with a massive markup for all your restaurant’s soup ingredients.

The one from Circe would just hit you, probably in the face, with either a rock or a manure covered shovel.”

## LAST THOUGHTS

Tune in for Part Two of this series next issue – A full planetary brief on Kir’-Kut.

For the latest information on what’s going on in Solar Minor, tune in to the Citizens of Star Frontier actual play on YouTube, and consider joining our Patreon to become part of the action –

- <https://www.youtube.com/channel/UCN07DjX9cwaEdNkgYeg-SCnA>
- [https://www.patreon.com/user?u=17228105&fan\\_1anding=true](https://www.patreon.com/user?u=17228105&fan_1anding=true)

# MYSTERIES OF THE FRONTIER

BY TOM VERREULT

Every setting needs a few mysteries. The following have some inspiration in real world history and some in the canned Star Frontiers setting but some are part of my take on the setting. They are offered as the basis for plot hooks, adventure seeds or rumors in your game. To generate a random mystery roll 2d10:

ROLL (2D10)	MYSTERY
2	The Lost Colony of Xanadu
3	The Dancing Plague of Rupert's Hole
4	The Armored Dralasilites of Groth
5	The Tetrarch Rosetta Stone
6	The Lost Pan Gal Regiment of Laco
7	The Shroud of Yazim
8	What Happened to Seccitte Zebulon and his Crew
9	How Far Did the Eorna Exploration Ships Travel Before Encountering the Sathar
10	The Tetrarch Pyramids and Ruins
11	What Happened to the Imperial Warhon of Yazira
12	Manufacture of the Eorna Solar Lantern
13	The Lost Journal of Captain Leonine
14	The Centauri Jump Route
15	The Treasure Map of Hatzk Naar
16	The Dralasilite Ripper
17	The Jump Route to Yazira the Yazirian Home System
18	Free World Rebellion Mass Graves
19	Who Built the Ruins on Lossend
20	Where is Grog Doffa

## THE LOST COLONY OF XANADU

The explorer, Xander Kinkade, returned from his last scouting mission having had a religious epiphany or awakening. He organized a personality cult the deified himself as the living embodiment of the Great Galactic Spirit (also known as the Great Bird of the Galaxy). He and his followers

disappeared in a decrepit star ship to an unknown star system where they were supposed to set up a paradise under Xander's leadership.

## THE DANCING PLAGUE OF RUPERT'S HOLE

During the year before the outbreak of the Blue Plague, a mysterious ailment began to afflict some of the inhabitants of the Rupert's Hole farming colony. Those afflicted exhibited uncontrolled spasms and contortions that were characterized as "dancing." Of the 400 reported victims, the mortality rate was 24%, largely from heart attacks and exhaustion. Dralasilites seemed to have been immune to the affliction as none contracted it. After the formation of the Medical Services Organization, an investigation into the Dancing Plague and its possible connection to the Blue Plague was launched but so far, the source of the Dancing Plague and whether it was connected to the Blue Plague has remained a mystery.

## THE ARMORED DRALASILITES OF GROTH

Prior to the First Sathar War a story is told of two dralasilite buddlings found in the wilderness of the planet Groth (Fromeltar). They had a patchwork of thick growths of dermal tissue described as a tough armor that made them immune to needler weapons and reduced damage from other sources. One died shortly after its "gaining of voice" ceremony, but the other is reported to have lived 20 years on Groth before disappearing. After gaining its voice the surviving buddling claimed to have come to Groth by a "gate" from another dimension, reality, or distant star system - all three possibilities have been alleged in various version of the tale. The dermal armor is said to have disappeared from this dralasilite over time. No one is sure of the truth of this story, but some

have explained the dermal growths as being a random mutation of the dralasilite genome and the story of the "gate" as fanciful fabrication.

## THE TETRARCH ROSETTA STONE

Reputed to have been discovered on Laco before being sold to a collector on Triad, the Tetrarch Rosetta Stone now resides at the Triad Institute of Technology. It is a jet-black, obsidian-like stone but when exposed to a sonic dampening field, like that of a sonic screen it becomes translucent and reveals mysterious diagrams and characters within its depths. Different sides or facets of the stone reveal different diagrams and characters. It has been hypothesized that some of the diagrams are star charts. One professor at TIT, a vrusk named V'n'kk (Voynich in Pan Gal), claims to have partially decoded one diagram and a handful of characters within the stone.

## THE LOST PAN GAL REGIMENT OF LACO

During the scramble to respond to the Sathar invasion of the First Sathar War, Pan Galactic Corporation Executive Vice President Francis Germaine raised a mercenary regiment out of his own pocket for the defense of the Frontier. During the Battle of the Pyramids, he and his regiment disappeared in a sand storm never to be seen again. Theories of their disappearance include capture and abduction by the sathar, being swallowed by a sink hole, becoming lost in a slot canyon after seeking shelter from the sand storm, and outright supernatural explanations. During the ten years of Laco's War, many mercenaries reported seeing a regiment or company marching during sand storms. Many unexplained disappearances in Laco's Devil's Basin area have been blamed on the ghostly Lost Regiment.



IMAGE BY JERRY BOUCHER

## THE SHROUD OF YAZIM

Found in the ancient ruins on Lossend (Timeon System) and worshiped by the primitive wypongs, this apparent burial shroud appears to depict a dead yazirian. The image on the shroud cannot be explained as it is not painted on but appears to be like a photographic negative embedded in the fabric. Some claim it is a yazirian hero of legend that transcended reality and traveled to Lossend to instruct the primitive wypongs. The Family of One has declared it a fake and dismissed it as unimportant. Others have insisted that it is potentially the burial shroud of one of the yazirian explorers sent out in search of a new home world prior to the Star Exodus and one clan claims it resembles one of its members that was on those expeditions. No one has been able to explain the shroud's origin or manufacture. It is now displayed in a small yazirian separatist monastery in the mountains of Lossend.

## WHAT HAPPENED TO THE IMPERIAL WARHON OF YAZIRA

During the Star Exodus, the only ship to not reach the Frontier was that of the Imperial Warhon of Yazira and the bulk of his bodyguard. Remnants of his bodyguard, called Clan Renegade, suspected Clan Anglann of Hentz and the Family of One which eventually led to Clan Renegade declaring Clan Anglann and the Fo1 as their "life-enemy." Clan Anglann quickly suppressed Clan Renegade

but decades later a secret cadre turned up by the name Clan Renegade with a mission to take down the Fo1 and government of Hentz. What happened to the Warhon's starship remains a mystery though some explorers have sought it out in the region of space surrounding the Arak's system.

## HOW FAR DID THE EORNA EXPLORATION SHIPS TRAVEL BEFORE ENCOUNTERING THE SATHAR

Records show that over 900 years ago the Eorna launched several exploration ships just prior to the Day of Doom when the Sathar devastated their planet. It is presumed that these expeditions are what

led the Sathar to the planet Volturnus. It remains a mystery as to what actually happened to these Eorna scout ships. A mysterious and ancient wreck found in the ocean of Faire (Capella system) has been alleged to be remains of one of these ships. On Hargut (Guna Garu system) there are weathered rock carvings of great age that predate the arrival of Yazirians to that planet that have been ascribed to be of Eorna origin.

## THE TETRARCH PYRAMIDS AND RUINS

The current scientific thinking about the Tetrarch Pyramids and their associated ruins is that the Tetrarch society died out 10,000 years ago on Laco (Dixon's Star). One curious fact is that the pyramids appear to be unaffected by time. This phenomenon cannot be explained. Little about the Tetrarchs can be explained.

## WHAT HAPPENED TO SECCITTE ZEBULON AND HIS CREW

The merchant captain, Seccitte Zebulon, was the first Frontier's man to set foot on Volturnus. When he returned from Zebulon system only one other member of his crew accompanied him, a dralasite called Caius Mondo. Mondo seems to have promptly disappeared upon arriving in Truane's Star. Zebulon sold the jump route to the Zebulon system to the government of Pale before settling on a resort island in the equatorial zone of Pale. Decades latter a holographic journal by Mondo turned up with statements that seem to implicate Zebulon in the death of his crew and that Mondo was afraid that Zebulon presented a threat to his life. Family members of the missing crew took Zebulon to court for wrongful death on the basis of the journal and the circumstantial evidence that the graves of the crew could not be located where Zebulon claimed they were on Volturnus. When it appeared that the plaintiffs might succeed in court, Seccitte Zebulon liquidated his assets, bought a

runabout starship capable of interstellar jumps and claimed he would recover the remains of the missing crew himself. He disappeared from Truane's Star on the same day the court ruled in the favor of the families of his missing crew. He has not been seen since and the missing graves have never been located either.

## MANUFACTURE OF THE EORNA SOLAR LANTERN

There are 5 Eorna Solar Lanterns known to exist. They were first described in Frontier Explorer issue 9 (p. 22). <https://frontierexplorer.org/content/issue-9>. The secret of their manufacture has been lost in the millennium since the Day of Death on Volturnus. The mega-corp CDC, in conjunction with the Triad Institute of Technology, is actively working on unravelling the secrets of this artifact. Two were stolen from the Volkos Heritage Museum and the Eorna ruling council alleges they are in the possession of the mega-corps PGC and Streel. These corporations deny the allegation as baseless. The Eorna Council has initiated negotiations for the return of their cultural heritage in the possession of the CDC and the Triad Institute of Technology but so far nothing has happened as far as a repatriation of the two artifacts in the possession of those institutions. For now, these marvelous solar lanterns defy scientific scrutiny into their secrets.

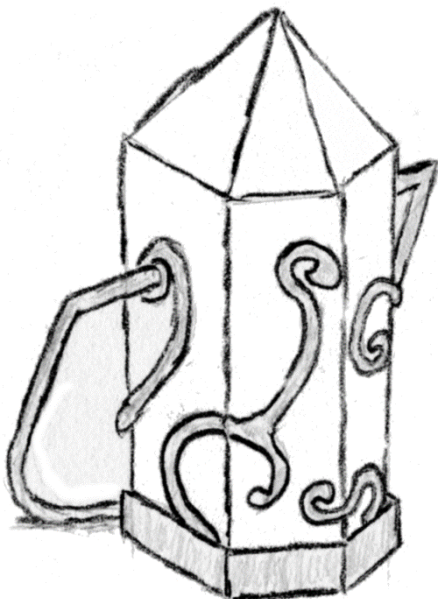


IMAGE BY TOM VERREAU

## THE LOST JOURNAL OF CAPTAIN LEONINE

Captain Leonine was the hero of the human colony expedition to the Frontier deducing what had happened to the colony fleet when it mistakenly entered void space on its outbound journey from Proxima Centauri (Centauri system). He developed a working theory of void travel and saved the floundering human colony expedition which allowed the bulk of the ships to reach Theseus and a smaller group to reach White Light. He went on to found the constitutional monarchy on Clarion and the Leonine Dynasty. His private journal was located after his death and it included a new theory of void travel, that if correct, would allow star ships to shorten their interstellar journeys by a factor of 10. It created a stir for 5 years as mathematicians and astronomers poured over it. Then just as suddenly, every database with electronic copies were corrupted by a virus and the few facsimile copies also disappeared. This mystery has been a fruitful source of conspiracy theories ever since.

## THE CENTAURI JUMP ROUTE

Found in the Palace library on Clarion, the Centauri jump route is attributed to King Leonine I. If it truly is the jump route to the Centauri system, early analysis suggests that it would take an astogator 12,000 hours to calculate the jump. The conclusion of the author is that the chance of misjumping would be 99%. The jump route was discovered on a file computer manufactured after the time of King Leonine and for that reason many believe it is a fake. The UPF Frontier Astrographic Commission is currently custodian of the jump route file, having classified it as secret lest anyone attempt the impossible jump to what is likely to end in their death.

## THE TREASURE MAP OF HATZK NAAR

The infamous Hatzk Naar, a vrusk pirate and raider from before the formation of the UPF, may or may not have had a treasure horde but his treasure maps are a popular commodity in the back alleys and dark corners of the Frontier. All of them are likely fakes. Even the Interstellar Pirate Museum on Lossend sells a Hatzk Naar treasure map in its gift shop. When the ships of the First Common Muster caught up with Hatzk Naar and his pirate fleet, very little was recovered in the way of portable valuables. It's believed he stashed his loot somewhere between the Dramune and Timeon systems but decades of search by numerous treasure hunters have failed to locate where it is. The most prevalent and current theory is that he stashed it in a hollowed-out asteroid.

The Interstellar Pirate Museum of Lossend hosts a yearly symposium on pirates with Hatzk Naar or the Star Devil usually being a topic. It has become a pilgrimage destination for treasure hunters as its collection contains the ship's computer from the Vengeance, captained by one of Hatz Naar's lieutenants, as well as the Hatzk Naar Holographic Oral History Project which is holographic recordings of witnesses to the pirate raid and the First Common Muster.

## THE DRALASITE RIPPER

After the First Sathar War and the founding of the UPF there occurred a grisly series of murders in Port Loren of dralasites. The murders occurred at the rate of 1 to 2 a year for a decade then nothing for 6 years when suddenly they resumed for another 8 years. The dralasite victims were eviscerated and pieces of their skin removed. The dralasite population of Port Loren was left in fear for decades and the murderer was never caught. Star Law, despite its mandate to pursue sathar agents and interstellar crime became involved when the failure of the Port Loren Police became a political issue. There are many theories of who it might be as well as numerous books written on the topic.

Decades later with the last murder fading from popular memory this mystery is largely pursued by amateur detectives and writers of true crime.

## THE JUMP ROUTE TO YAZIRA THE YAZIRIAN HOME SYSTEM

After the Star Exodus and the Family of One confirming the destruction of the planet Yazira by a wandering brown dwarf star (Oolongu bei Maissungu or Eye of Evil in Pan Gal), it declared the system holy ground and forbade travel to it. It also managed to erase every copy of the jump route from every yazirian ship in the colony fleets that arrived in the Frontier. It is believed that the Family of One maintains the jump route in a secret vault at the city of One Home on Hentz. The modern cadre known as Clan Renegade has as one of its objectives to find out what the Fo1 does not want anyone to see in the Yazira system. To do this they are trying to recover this jump route either from a database that the Fo1 missed, by discovering the lost ship of the Imperial Warhon or by pure luck through scouting beyond the Great Expanse.

## FREE WORLD REBELLION MASS GRAVES

During the Free World Rebellion on Kdikit (Madderly's Star) atrocities were committed. Some mass graves have been located but they in no way account for all the Vrusk population that disappeared during the rebellion. Approximately 44,000 vrusk are unaccounted for. The human government of Kdikit has dragged its feet about locating and repatriating the Vrusk casualties of the rebellion which has made the missing graves difficult to locate. The prevailing view is that the government of Kdikit prefers to forget the incident and pretend it never happened. Locals can be hostile toward searchers seeking to dig up the past. The graves of the missing 44,000 Vrusk citizens may remain a mystery for decades if not centuries.

## WHO BUILT THE RUINS ON LOSSEND

The temple ruins on Lossend (Timeon system) are a conundrum with many theories as to who might have built them. Other than the temple ruins, there is no other evidence of a prior civilization on Lossend. Theories ranging from the Wypongs to the Tetrarchs abound to explain their origin but so far none have proven satisfactory. They are the object of wypong worship of the "sky gods" but most experts don't believe the wypongs could have built them. While there are some superficial similarities to Tetrarch structures on Laco, preliminary dating suggests they are only 6,000 years old not 10,000 like the Laco ruins.

## WHERE IS GROG DOFFA

Before the Malthar rose to power on Dark World Station there was Grog Doffa. Doffa was a brutal dralasite mafioso and crime lord on Outer Reach. He was known for slave trading, gun running, and ties to piracy. He mysteriously disappeared when

the Malthar came to power and while theories and rumors abound, no one is sure what happened to him. Rumor has it that it is extremely unwise to ask about the fate of Doffa in the presence of the Malthar.



IMAGE BY JERRY BOUCHIER

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# THE BATTLESUIT

BY JERRY BOUCHER

The battlesuit is the result of prolonged research that began after the First Sathar War, initially within the UPF's Advanced Operations Experimental Unit but then in combination with a similar unit within Star Law. The aim was to provide its combat-orientated personnel with a 'universal' counter to various weapons, so that the choice of wearing skeinsuits, albedo suits,

screens, power supplies, etc. would be less of an issue when pre-empting combat situations. The suit would also provide protection against hostile environments and in turn be further developed into a specialised version for operations in space. It is not normally available to anyone except specialist UPF troops or Star Law

operatives assigned to high-threat combat situations.

In appearance it outwardly resembles a military skeinsuit covered with sections of a rigid armour, worn in conjunction with a full-face helmet and rugged boots/footwear. The suit weighs 5kg, although may weigh more when spaces within it are used to store other equipment. It absorbs three-quarters (rounded down) of the damage caused by any weapon, acid, or fire. Once it has accumulated 300 points of damage or more, it becomes useless. It cannot be worn with other defensive suits or beneath ordinary clothing, but can be worn with screens and Explorer vests. When first being fitted for the battlesuit, dralasites must decide how many limbs they will normally have when wearing it. Alterations cannot be made once this decision has been taken and the suit manufactured. For game purposes, the battlesuit costs 12,000 Cr.

The materials that make up the armoured parts of the suit and their method of manufacture are a closely guarded secret. Several megacorps, notably Streel, have made repeated attempts to obtain information about these methods and are rumoured to be developing suits of their own design. However, it is unclear whether these are in any way comparable to the protection given by the battlesuit.

It is comprised of several components:

## UNDERSUIT

The charcoal-grey undersuit completely covers the body of the wearer and is tailor-made to fit them only. There are various points around the suit onto which the armoured sections can be attached, as well as reinforced sections over major joints. It acts in the same way as a Deadsuit (see *Zebulon's Guide p70*) but also has various other functions that can be controlled via the forearm piece:

- **heating/cooling:** depending on local conditions, the suit can be heated or cooled to provide comfort for the wearer.



IMAGE BY JERRY BOUCHER

Heating the suit does not compromise its capability as a Deadsuit.

- **permeability:** the undersuit's material is permeable to air by default but can be switched over to being airtight when the wearer decides to use the battlesuit's gas mask or oxygen cartridges (see below). It is not permeable to water.

The undersuit is self-sealing in a similar way to a spacesuit, and the same rules apply for punctures (see *Knight Hawks Campaign Book*, p28). The battlesuit is supplied with a pack of 20 patches, which can also be used to seal holes made in the armoured sections.

## ARMOUR

The various pieces of rigid armour and an armoured helmet are designed to protect all the major organs and limbs for any of the Frontier races. Each battlesuit and helmet is tailor-made to fit one wearer only, and thus the armour is measured and formed to provide the optimum fit and comfort for them. One forearm piece is designated at the outset to be fitted with various controls for the functions of the undersuit (see below), as well space for three other small items (i.e. a toxyrad gauge, a rafflur M-1, etc.).

Ordinarily, the armour pieces are a neutral blue-grey colour unless some other shade is chosen while the suit is being made. They can also be repainted in a wide variety of shades applied with a single-use spray can, one of which is enough to cover an entire suit including the helmet and footwear.

## HELMET

The helmet completely covers the wearer's head and face, and is broadly similar to various other designs commonly available across the Frontier. A helmet power pack provides power for the undersuit as well as the visors and other equipment mounted within the helmet. It contains a radiophone, a polyvox, a combination white light/infra-red powerlight, and a multi-function visor. This visor combines the capabilities of solar goggles, magnigoggles and infra-red/electromagnetic/ultra-violet goggles (as described in

*Alpha Dawn* and *Zebulon's Guide*). Switching between these is done by voice command or via a small button on the side of the helmet. There are 2 other ports within the helmet suitable for the fitting of helmet rafflurs, etc., as well as connection point for a bodycomp helm link.

Another feature of the helmet is a clean air/oxygen system. This works in much the same way as a gas mask, although for Vrusk's this system is mounted on the upper part of the abdominal area. Oxygen is supplied by a chemical reactant cartridge that attaches to the rear of the helmet (or to a Vrusk's upper abdominal area) and has a supply that lasts one hour. Each cartridge weighs 200 grams. For Dralasites, the system channels clean air/oxygen into the undersuit via the helmet/cartridge.

## FOOTWEAR

The battlesuit includes a set of boots very similar in form and function to Explorer boots (see *Zebulon's Guide* p86). For Vrusk, Osakar, and Humma the boots are equally rugged foot coverings. Alternatively, the boots can be replaced with reinforced flippers for underwater tasks.

## OTHER FEATURES

The battlesuit includes a utility belt with attachment points for holsters, small pouches, etc. Sturdy gloves cover the hands as an extension of the undersuit and are partially armoured. For combat purposes, treat these as brass knuckles. Should the wearer wish to use shock gloves, the suit's gloves must be removed first. Exoskeletons, explorer vests, backpacks (both for storage and energy storage), swing arms, and slide mounts can all be worn with a battlesuit.

For Yazirians, the undersuit covers the wing folds and this in turn is covered by small plates of armour which in turn are covered by a strong, lightweight fabric. A similar design

protects long flexible Osakar necks. Gliding distance whilst wearing the battlesuit is reduced by 20% at all gravities.

## THE BATTLESUIT-V

The Battlesuit-V (the V stands for 'vacuum') was designed for operations in space. It resembles a standard battlesuit, although it is chunkier and weighs 7 kg. The bodysuit is insulated against the vacuum and hard radiation of space and has the same self-sealing capability as a standard bodysuit. The supplied patches work equally well in a vacuum for both the bodysuit and armoured sections. The suit's footwear has removable soles so that either magnetic or velcro versions can be used as required. Rocket packs and anchors can be used by the wearer in the same manner as a regular spacesuit.

Oxygen is supplied to the suit via the standard battlesuit cartridge system. Alternatively, there are 5, 10 or 20-hour versions but these are attached to an adaptor on the suit's back (or a Vrusk's upper abdominal area). These weigh 1, 2 or 4 kg respectively.



IMAGE BY JERRY BOUCHER

# DYING FOR A DRINK

## IN THE MINZII MARKETPLACE

BY TOM VERREAULT

A looper mounted ul-mor directed ranger Modiphius of the Volturnian Ranger Service to the body of prospector he had been searching for. It looked like the lost dralasite prospector had died leaning against the water cistern of the local ul-mor tribe.

Modiphius made his assessment, the dralasite had clearly become lost using only the compass in his cheap knock off survival knife for navigation. However, he had found an ul-mor water cistern but it looked like he had presumed that his powered waterflask would filter the water when all those things could do was chill or heat the water in them.

Modiphius pulled out his environmental scanner and scanned the water in the cistern. The readings show dangerous levels of arsenic, something the ul-mor were immune too but not dralasites. He knew he could not simply write cause of death as ignorance like he wanted to. That was clearly what happened here. The deceased had purchased survival gear but not purchased wisely. If he had only bought a canteen with a filter, he might have been found alive.

Modiphius shook his head, he could wait to write this report till after the autopsy, even though he was certain what that would reveal. He collected a sample of the water and body bagged the corpse before loading everything in his explorer and heading for the station.

### CANTEEN WITH FILTER

This one-liter canteen has a filter that will filter 95% of dangerous particulate



IMAGE BY BRIAN PHONGUANGTHAM

matter, whether toxin, microbial, chemical, or radioactive. It is not perfect in its protection but it's better than nothing. The filter is rated for 25 filtrations of 1 liter of water before its protection rapidly drops to nil. It takes 5 minutes to fill the canteen. Brand new, it comes with one filter and the refill pack of filters which is sold separately comes with 3 filters. The padded belt pouch for the canteen can hold 3 spare filters plus the canteen.

**Cost:** 30 Cr

**Weight:** 1kg full or n/a empty

### FILTER REPLACEMENT PACK

**Cost:** 12 Cr for 3 filters

**Weight:** n/a

### THERMOFLASK

Keeps liquid hot or cold for 1 GST day. Holds 1 liter.

**Cost:** 10 Cr

**Weight:** 1kg full or n/a

### THERMOFLASK, POWERED

This water container uses the SEU micro disc (*Zebulon's Guide* - 10Cr to replace) to either chill water or keep it piping hot for one week's time on the power in a micro disk. It can melt snow at the rate of 1 liter in 10 minutes. If using the "**Catastrophic Setting: Cold**" rules from *Star Frontiersman #18* hot liquid to drink will increase the time a character can endure the cold by +25%.

**Cost:** 30 Cr

**Weight:** 1kg full or n/a

### THERMOFLASK, POWERED, MILITARY

Both Land Fleet and military forces of Pale have issued this flask for units working in cold environments. It differs from

the standard power flask in that it will heat but not chill liquids. Otherwise it performs identical to the standard flask. It comes only in white.

**Cost:** 25 Cr

**Weight:** 1kg full or n/a

### INSTA FLAVOR TABS

This product dissolves in and flavors one liter of water. It comes in a tea flavor for all members of the core four species as well as coffee for humans and dralasites. There is also ool juice flavor for dralasites and grub juice for vrusk.

**Cost:** 5 Cr for 25 tabs

**Weight:** n/a

### SURVIVAL KNIFE, MILITARY ISSUE

These knives have a blade 20 to 25 cm long. It is sharpened on 1/3 of the backside of the blade and the other 2/3rds is a large tooth serration for sawing branches. The handle is hollow with a screw on pommel cap. The underside of the pommel cap is a compass and in the hollow handle is an all-weather blanket, vitasalt pills, a length of snare wire and a small piece of flint.

**Cost:** 50 Cr

**Weight:** n/a

### SURVIVAL KNIFE, COMMERCIAL ISSUE

A cheap commercial knock-off of the military issue knife. It has the all-weather blanket, snare wire, and compass as the original. However, it does not meet the requirements of military specifications or "milspec". Anytime a character is using the knife or the items stored in this knife for an action that requires a skill check and the result is 96-100% then the knife or its survival items will fail. For example, a character attempting to find directions or navigate with the compass will discover that the compass is of such poor quality that it gives false readings. Another failure might be the knife blade breaking.

**Cost:** 25 Cr

**Weight:** n/a

# THE DAWN CLASS EXPLORATION/TRANSPORT

## A TRAVELLER STARSHIP

BY RICHARD "SHADOW SHACK" ROSE

The Dawn class Exploration/Transport was initially a design drafted by the Imperial Interstellar Scout Service intended to complement their large Survey Cruisers. However, it proved too expensive compared to existing craft such as the Donosev Survey Scouts and the tried & true Scout/Courier operated by significantly smaller crews. However, the design proved itself well in the civilian sector as an independent passenger transport, along with the occasional daring crew that utilizes the craft as it was initially intended: exploration and adventure.

Unique to the design is a quartet of airlock chambers connecting the two decks, intended to both prolong and restrict access to the various areas of the ship. A twin bridge further complicates the design, split by a bay housing a pair of launches. On the stern, the engine room is also split by a vehicle bay typically housing an ATV and Air/Raft. The generous fuel capacity allows for lengthy periods of operation as well as jump capability, and the eight-ton life support storage area is often utilized as an auxiliary hold to compliment the ship's 30-ton cargo bay.

## SS SERENA DAWN

500-ton Dawn class Exploration/Transport

**TL:**12 **EP:**15 **Agility:**1

**Power Plant:** 3

**Maneuver Drive:** 1

**Jump Drive:** 3

**Fuel:** 220 tons (4 parsecs + 16 weeks maneuver)

**Cargo:** 30 tons (+8 tons of Life Support storage)

**Bridge:** Port - Pilot, Co-Pilot, Nav, & 2 remote gunnery stations  
Starboard - Sensor, Comms, & Chief Engineer stations

**Ship's Vehicles:** 40-ton bay (2 launches), 14-ton bay (ATV + Air/Raft)

**Computer:** Model/3

**Crew Accommodations:**

1 Captain's Suite

1 Officers' Suite (dbl)

2 triple cabins

2 quad cabins

1 doctor's cabin

**Passenger Accommodations:**

4 single cabins

8 double cabins

10 low berths

**Weaponry:** 2 Dual Beam Laser Turrets

**Misc:** Streamlined, Fuel Scoops w/Purification Plant

### Crew **18**

Pilot/Captain	1
Co-Pilot	1
Navigator	1
Chief Engineer	1
Aux. Engineers	2
Medic	1
Stewards	3
Computer	1
Asst. Computer	1
Communications	1
Sensors	1
Technicians	2
Gunners	2

## MINIMAL CREW

## QUALIFICATIONS

**Pilot/Captain:** Pilot-2, Admin-1

**Co-Pilot:** Pilot-1, Ship's Boat-1

**Navigator:** Navigator-1

**Chief Engineer:** Engineer-2

**Aux. Engineer #1:** Engineer-1, Ship's Boat-1

**Aux. Engineer #2:** Engineer-1

**Ship's Doctor:** Medical-2

**Chief Steward:** Steward-1, Admin-1

**Steward #2:** Steward-1

**Steward #3:** Steward-1

**Computer Operator:** Computer-1, Electronics-1

**Asst. Computer:** Computer-1

**Radio Operator:** Electronics-1

**Sensors Officer:** Electronics-1

**Technician #1:** Mechanical-1, ATV-1

**Technician #2:** Mechanical-1, Air/Raft-1

**Gunnery Officers (x2):** Gunnery-1

## DECK PLANS

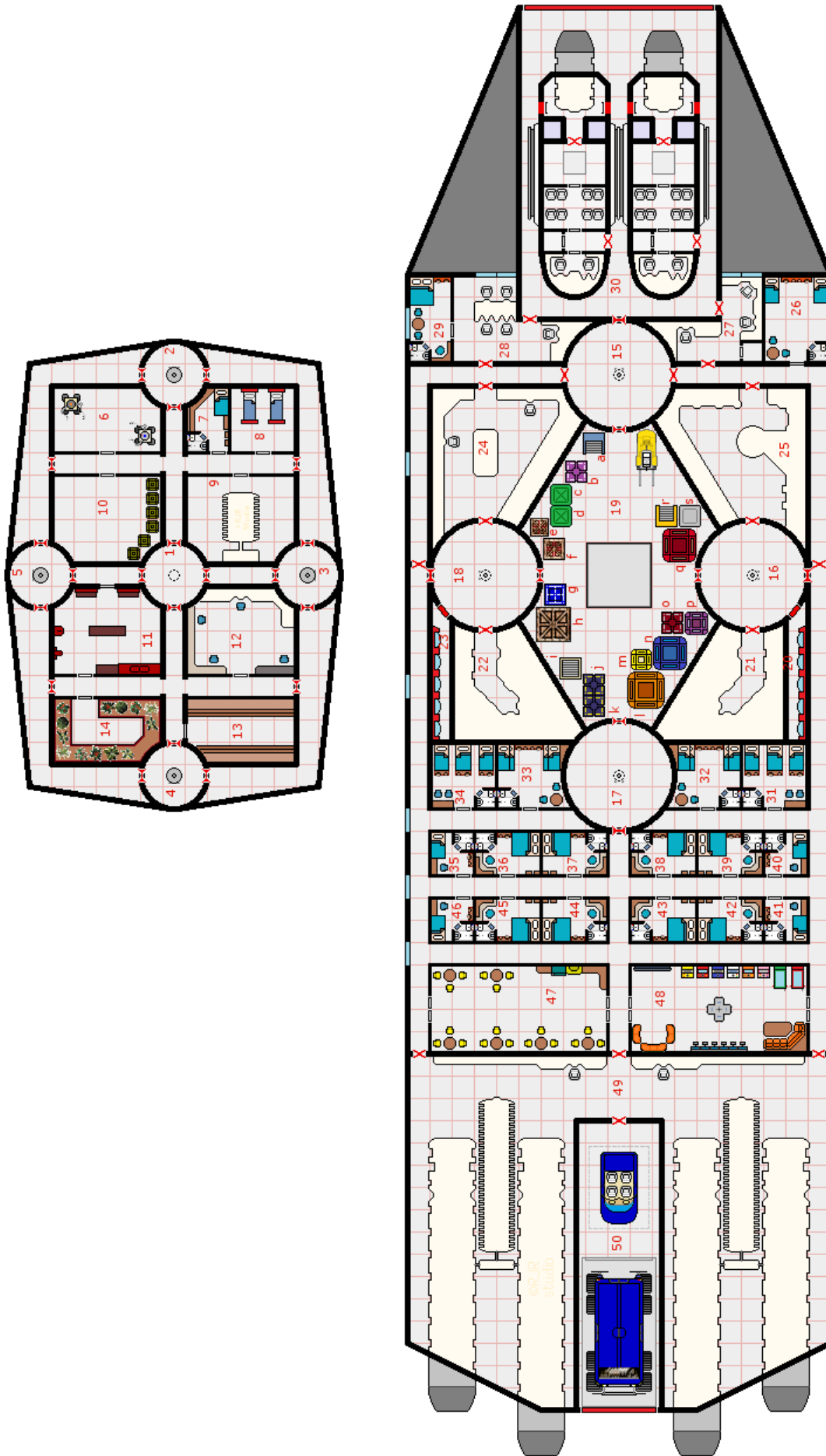
Deck plans are presented on the following page. The keys below describe the areas labeled on the plans.

### UPPER DECK KEY

- 1 - Main Airlock - Overhead hatch leads to outer hull
- 2-5 - Fore, Starboard, Aft, & Port Airlocks - Hatches to main deck
- 6 - Robot Storage - a pair of maintenance robots are stowed here; both are not functional and in need of repair
- 7 - Ship Doctor's Quarters
- 8 - Medical Bay
- 9 - Back up Powerplant (Solar Generator)
- 10 - Life Support Storage - 8-ton capacity
- 11 - Workshop
- 12 - Laboratory
- 13 - Spare Parts Storage
- 14 - Hydroponics

### MAIN DECK KEY

- 15-18 - Fore, Starboard, Aft, & Port Airlocks - Hatches to upper deck and various areas of main deckT
- 19 - Cargo Hold - 30 ton capacity
- 20 - Starboard Low Berths
- 21 - Starboard Jump Drive
- 22 - Port Jump Drive
- 23 - Port Low Berths
- 24 - Computer Room
- 25 - Comms & Sensors
- 26 - Officer's Suite - double occupancy, typically reserved for navigator & chief engineer
- 27 - Starboard Bridge - Sensor, Comms, & Engineer stations, ship's locker
- 28 - Port Bridge - Pilot, Co-Pilot, Navigation, & 2 remote gunnery stations
- 29 - Captain's Suite
- 30 - Launch Bay
- 31-34 - Crew Cabins - triple & quadruple occupancy as depicted
- 35-46 - Passenger/Specialist Cabins - single & double occupancy as depicted
- 47 - Galley
- 48 - Recreation Area
- 49 - Engine Room
- 50 - Vehicle Bay - ATV & Air/Raft



# ESCAPING THE SS SERENA DAWN

## A SAMPLE SCENARIO UTILIZING THE DAWN CLASS EXPLORATION/TRANSPORT

BY RICHARD "SHADOW SHACK" ROSE

**Editor's Note:** This is a translation of the opening bit of SF0: Crash on Voltornus reimaged for the Traveller universe using the Serena Dawn deck plan provided in the previous article.

### CHARACTER GENERATION

Up to ten characters can be used for this adventure (ideally 5-6) with a maximum of four terms served. Above average STR, DEX, and/or END scores are preferable as the characters will be subjected to unarmed combat against armed opponents, the GM may feel free to adjust these scores so at least two are above average to allow a better chance of 5-6 characters surviving the adventure, or adjusting just one to above average for 7-10 characters.

Characters surviving and reenlisting after a fourth term can be considered "active duty" for the sake of this game (allow three money rolls for active-duty characters and adjust to 10% as they have not truly mustered out yet, this simply permits some income for gear). Try to discourage players from spending money on weaponry (as they will lose it during the game), suggest that miscellaneous equipment will serve them much better in this adventure. See the sample/pre-gen characters at the end for an idea of typical characters for this adventure.

### ADVENTURE SYNOPSIS

Read this introductory section aloud to your players:

*The Imperial Interstellar Scout Service base in Mertactor has recently organized an exploration of a newly discovered world. You will travel to system 567-908 via the exploration transport SS Serena Dawn destined for Sunrutlov and map as much of the planet as possible. The IISS is especially interested in contacting and studying any intelligent life on the planet. If you meet an intelligent race, you*

*are to make friendly contact and learn as much about them as possible.*

*The first expedition to Sunrutlov disappeared without a trace last year. If possible, you are to locate and rescue any survivors of that mission.*




*As you boarded the transport that will take you to Sunrutlov, the steward gave you an interior plan of the starship and urged you to study it carefully. He also searched your luggage and placed all weapons and ammunition in the ship's locker located on the starboard bridge. His assistant placed your protective armor in the cargo hold. The only items permitted to be taken to your cabins are toolkits and miscellaneous (non-weapon) equipment.*




*In the event you must evacuate the ship, you have been instructed to proceed immediately to the launch bay located at the Serena Dawn's fore where a pair of launches are stored. Each launch can accommodate ten persons. If it becomes necessary to use these launches, you have been instructed not to open the hatches until all persons using it are assembled and ready to enter. This is because the launches automatically depart five minutes after the hatch is opened, however this can be overridden by a character with Ship's Boat or Pilot skill for manual operation. Otherwise, the automated launch will then seek the nearest habitable planet and land in the first available safe spot.*

Rather than risk more of their own ships, this time the IISS has chartered an independently owned exploration transport to ferry the team and equipment to Sunrutlov and is scheduled to return three months later to reacquire the team. Unfortunately for the Scout Service, this second mission is doomed to the same fate as the prior mission...

### NOTES ABOUT THE SERENA DAWN

Sliding doors (such as those found in cabins, rec areas, and galleys) are simply privacy screens. They are not airtight nor are they difficult to override. They may be locked from inside or by the computer. As with iris valves, a red indicator light illuminates for such conditions. If the ship power is off, they will not function but can be forced open using a total of 10+ Strength points (single or multiple characters), adding a +4 DM for using a prybar.

Manual hatches (    ) can be opened by anyone aboard the ship. They can be locked with a prybar or other such item wedged through the handwheel thus preventing it from being turned.

Iris valves (    ) may only be opened by authorized crew via sliding their ID card through a card reader adjacent to the valve. A valve may be locked from either side or by the computer, and a red light glows by the card reader to indicate such a condition. Closed valves may be forced open by throwing 9+ ; DM +1 for Strength 10+, +2 for Dexterity 10+, -3 if wearing a vacc suit, +2 if ship power is off, and -8 if valve is locked.

### PIRATE ATTACK!!!

Two corsairs (a type A2 Far Trader and a modified Scout/Courier) will attack the Serena Dawn as it arrives near Sunrutlov in 567-908. The captain will announce an alert as the crew attempts to fend off the pirates. Unless the characters state otherwise, they will begin the game in their cabins. If the GM prefers, this space duel can be portrayed utilizing the ship stats in **Supplement-7 Traders & Gunboats** --- otherwise just assume the pirates will be able to disable the Serena Dawn's

defenses and drives efficiently enough for boarding actions. The A2 will perform the docking & boarding operation with the Scout/Courier observing nearby. For the purposes of this adventure, the A2 is temporarily carrying more crew & passengers than normally allowed (this can be justified by having a hidden/secret base of operations on the planet's surface where the extras were initially stationed).

## RANDOM ENCOUNTERS

Check every turn by rolling 1D with a 1 resulting in an encounter. The GM may randomly determine the encounter or go in order of the six possible encounters below:

### 1> LEO QUINN

647664 1 term Pirate (rank-0 Henchman)

Skills: Blade-1, Brawling-1  
Blade

Leo will attempt to take the closest player hostage with his blade at the character's throat, threatening to kill the character unless the rest of the party complies. He will attempt to herd the group into the nearest cabin and lock them in. If this happens, the characters can attempt an escape and Leo may be encountered again...although he will fight to the death next time.

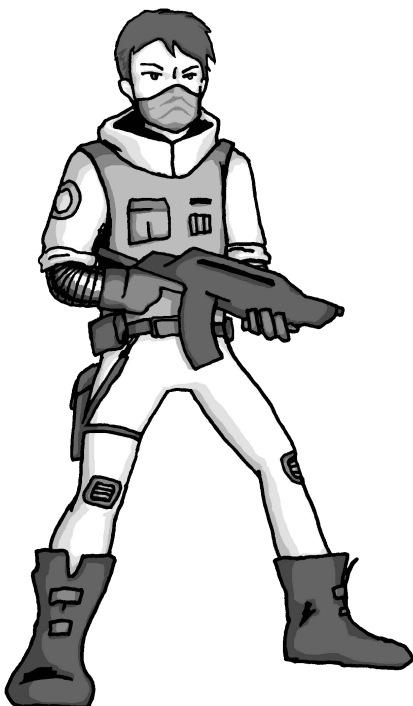


IMAGE BY BRIAN PHONGUANGTHAM

### 2> NICOLAS WILLIAMS

788565 1 term Pirate (rank-0 Henchman)

Skills: Brawling-1, Cudgel-1  
Cudgel; crew ident card (for iris valves)

Nick will attempt to clobber the closest player with his nightstick. If Nick takes any damage and is still conscious, he will attempt to flee toward the bridge.

### 3> EVANIER COLOMBO

584673 1 term Pirate (rank-0 Henchman)

Skills: Brawling-1, SMG-1  
SMG, 1 spare magazine

Evanier will immediately fire a burst at the party. He will fight until the death, going down swinging if he runs out of ammo.

### 4> SIMON & SALAZAR SILVA

**Simon Silva** 67C462 1 term Pirate (rank-0 Henchman)

Skills: Brawling-1, Dagger-1  
5 daggers

**Salazar Silva** 5B4756 1 term Pirate (rank-0 Henchman)

Skills: Brawling-1, Laser Pistol-1  
Laser Pistol w/powerpack (see **Double Adventure-2 Mission on Mithril** for specs)

Brothers Simon & Sal will be encountered together. Simon will begin hurling daggers at the party and will close to melee range when he gets down to his last blade. Salazar will fire his laser pistol, staying clear of any close confrontations.

### 5> LUKE GRUBER

89C923 1 term Pirate (rank-0 Henchman)

Skills: Body Pistol-1, Brawling-1  
Jack, Body Pistol w/spare magazine; crew ident card (for iris valves)

Luke has donned a uniform from one of the Serena Dawn's slain enlisted ratings (including the ident card for accessing the iris valves). He will attempt to enlist the aid of the characters, feigning injury to cover the blood-stained coveralls he is now wearing. As the group closes, he will draw

his body pistol and fire at point blank/close range.

### 6> MARCO ANTHONY

5689BC 1 term Pirate (rank-0 Henchman)

Skills: Auto Pistol-2, Brawling-1  
Automatic Pistol w/3 spare magazines

Marco will immediately attack with his pistol, utilizing cover when possible. He will fight to the death (or unconsciousness, whichever comes first).

### 7> SHIP EXPLOSIONS

Use this encounter if the group is wasting too much time exploring or otherwise avoiding the launch bay:

The ship begins to vibrate badly. The group hears three loud explosions and the ship lurches violently. Each character must throw their DEX or less on 2D or fall to the deck. Afterwards pieces of the ship begin flying about, roll doubles on 2D for each character to be struck by such debris for 1D damage. If the group runs toward the launch bay, they will meet no resistance along whatever route they utilize AS LONG AS THEY PROCEED DIRECTLY TO THE LAUNCH BAY. Otherwise continue with random encounters and/or follow up with more explosions and flying debris with similar results. There will be one launch remaining in the bay once the group arrives.

## PLANNED ENCOUNTERS

### 1> BEGINNING THE ADVENTURE

Read this description aloud:

*You hear the sounds of scuffling outside your cabin (or whatever room the players are in). This continues for a few seconds before you hear a cry for help. A loud thump follows after the cry and all is silent again...*

Pirates are hijacking the Serena Dawn! One of them has just attacked a crewman in the corridor and has rendered him unconscious. Once seen, the pirate will commence brawling with his fists against the player(s). He will surrender if he takes damage without falling unconscious.

**Jackson Roberts** 94A948 1 term Pirate (rank-0 Henchman)  
Skills: Brawling-3

**Oliver Jensen** 790789 2 term Merchant (rank-1 4th Offcr)  
Skills: Computer-1, Electronics-1  
Steward-1

Oliver is the assistant steward that stowed the players' protective gear. If revived he can assist them in reacquiring these suits from the hold. Oliver's Endurance score is normally 6 at full health.

## 2> FIGHT IN THE CORRIDORS

As the group reaches one of the corridors between the passenger cabins (opposite of where encounter 1 takes place if applicable), read the following description to them:

*You see a trio of pirates in the corridor between the cabins. The first pirate, wielding a cutlass, stands at the port end of the corridor. The second, carrying a cudgel, stands at the central junction of the corridor. The third, holding a revolver, is positioned at the starboard end of the corridor.*

Each pirate will attack the first character they see and continue attacking until he or the character(s) are rendered unconscious/killed.

**Tom Finnigan** 736465 1 term Pirate (rank-0 Henchman)  
Skills: Brawling-1, Cutlass-1  
Cutlass

**James Kowalski** 682777 1 term Pirate (rank-0 Henchman)  
Skills: Brawling-1, Cudgel-1  
Cudgel

**David Wagner** 657534 1 term Pirate (rank-0 Henchman)  
Skills: Brawling-1, Revolver-1  
Revolver w/one reload

## 3> SEARCHING THE CARGO BAY

If the group wishes, they may search the cargo bay for useful equipment. Read the following descriptions they enter the hold:

*You have entered the Serena Dawn's cargo bay. There are numerous crates, containers, and boxes stashed here with just enough room to maneuver between them.*

A prybar can be procured in this area, one has been stowed on the fork lift at the forward portion of the hold (it may also be used later as a cudgel or to lock a hatch behind the group). As the characters search each item, note the contents in the table below. Note that it takes a turn to open a container and another turn to remove the contents. Multiple characters can search and/or remove contents of multiple items per turn.

If Asst. Steward Oliver Jensen is with the group, he can facilitate the searching by procuring a manifest, the characters can use this manifest to determine which items are worth opening/taking and which are deemed useless, thus saving time and reducing the chance of random encounters.

### CARGO MANIFEST

- a> 24 High Fashion Human Dresses (6kg total)
- b> Ship Doctor's Spare Medical Kit (10kg)
- c> 24 axes (treat as sword, 1kg each)
- d> Costume Jewelry (5kg total)
- e> 12 TL-8 Short Range Communicators (100g each)
- f> Preserved Chocolate Anchovies (8kg total)
- g> 12 Cases of Body Wax (4kg/case, 12 jars/case)
- h> 12 Computoys (8kg each)
- i> 24 Vargr Punching Bags (2kg each)
- j> 6 Bolts of Silk (3kg/bolt)
- k> 12 Boxes of Ball Bearings (1kg each)
- l> Prize Aslan Statue (20kg)
- m> 10 magazines each of SMG, Shotgun, Automatic Pistol, and Revolver ammunition
- n> 120 Dehydrated Food Packets\* (1kg/dozen)
- o> Characters' Protective Suits
- p> 6 Cases of Steambath Perfume (2kg/case, 12 bottles/case)
- q> 36 Various Size Machine Gears (1-10kg each)
- r> 24 Volume Imperial Galactic Encyclopedia (1kg per book)
- s> Holographic Fireworks Projector (5kg)  
\* Each packet will feed one person for one day

Use these two pirates as separate random encounters if needed:

**Patrick Zolie** 344564 1 term Pirate (rank-0 Henchman)  
Skills: Revolver-2, Brawling-1  
Revolver w/one reload

**Arias Zhen** 787667 1 term Barbarian (rank-1 Barbarian)  
Skills: Sword-2, Blade-1, Sporting Crossbow-1  
Hand Axe (treat as sword), Sporting Crossbow w/12 bolts

## 4> GUNFIRE IN THE AIRLOCK CHAMBER

As the group enters the forward airlock, they will see two pirates.

*There are two pirates in this airlock chamber, one is in the airlock itself and the other is visible in the open hatch above. They move to attack immediately as you enter the area.*

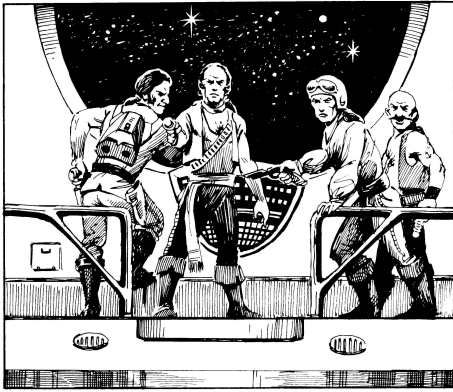
**Quentin Parker** 788772 1 term Pirate (rank-0 Henchman)  
Skills: Auto Pistol-1, Brawling-1, Mechanical-1  
Auto Pistol w/spare magazine, Flechette Grenade (see **Book-4 Mercenary** for details)

Quentin will toss his grenade immediately once anyone else enters the airlock chamber below, with no concern of getting his teammate injured. He will follow up with his pistol. Quentin has partial cover with a -2 DM to be hit by those in the airlock chamber *below*.

**Joe Sullivan** 665873 1 term Pirate (rank-0 Henchman)  
Skills: Brawling-1, Revolver-1, Zero G Cmbt-1  
Revolver w/1 reload

Joe will attack with his revolver, using it as a cudgel once empty. Note he will take damage from Quentin's grenade along with anyone else inside the airlock chamber.





## 5> RETREAT FROM THE BRIDGE

Once the group enters the starboard side bridge area, read the following description to them:

*As you open the iris valve to this area you see two dead bodies. From your vantage point, you can also see the weapons locker has been looted.*

The deceased crew members are the sensor and communications officers. They have been stripped of weapons but still have their ID cards. If Nicolas Williams was encountered earlier and escaped, he will be here. Otherwise, this area will be vacant of any pirates.

Once the group enters the port side bridge area, read the following description to them:

*As you open the iris valve, you immediately realize a struggle has taken place here. Command chairs, instruments, and even unresponsive crew members lie strewn about the deck. You also see four armed pirates on the bridge.*

These pirates will hold the bridge at all costs. As such they will open fire as soon as they see the group. All but the captain will pursue if the characters attempt to flee.

### Captain Gideon 'Slag' Rastifer

7AC987 4 term Pirate (rank-5 Ldr)  
Skills: Laser Pistol-2, Brawling-1, Cutlass-1, Pilot-2, Vacc Suit-1, Leader-1, Ship Tactics-1  
Ballistic Cloth w/partial combat armor (vest), Cutlass, Laser Pistol w/power-pack (see **Double Adventure-2 Mission on Mithril** for specs)

**Leanord 'Dog' Martin** 74896A 2 term Pirate (rank-1 Corporal)  
Skills: Auto Pistol-1, Brawling-1, Gunnery-1, Zero-G Cbt-1  
Mesh, Auto Pistol w/2 spare magazines

**Jake 'Snake' Bauer** 675787 2 term Pirate (rank-1 Corporal)  
Skills: Brawling-1, Computer-1, Engineering-1, SMG-1  
Mesh, SMG w/2 spare magazines

**Andrew 'Andy Cap' Capolla** 693A66 1 term Pirate (rank-1 Corporal)  
Skills: Brawling-1, Dagger-1, Shotgun-1  
Jack, Dagger, Shotgun w/spare magazine

The bodies of the co-pilot, navigator, and both gunners are slumped in their command chairs or laying on the deck. They are beyond medical help, and they have been stripped of weapons & ID cards.

## 6> UPPER DECK

Read this description as the characters exit the upper airlock chamber into any deck corridor leading to the outer hull airlock:

*As you pass through the hatch you see a pair of pirates at the opposite end standing guard over the outer hull airlock access hatch. They move to attack as soon as they see you.*

**Belinda "Big Bertha" Bertholini** A7C674 2 term Pirate (rank-2 Sgt)  
Skills: Brawling-3, Cudgel-1, Dagger-1, Engineering-1, Mechanical-1  
Cloth; Auto Pistol, Cudgel, Dagger

Belinda is a former contender in the professional wrestling circuits and will use this to her advantage if she can close the distance with any character.

**Wesley 'Phoenix' Simmons** 757667 2 term Army (rank-1 Sgt)  
Skills: Brawling-3, Cutlass-1, Rifle-1, SMG-1  
Cloth; SMG, Cutlass

Wesley is overly violent by nature and loves going toe to toe with an opponent. He too will attempt to close the distance with any character to engage in hand-to-hand combat.

In the event the group has split up, these two pirates will be seen in the other outer

hull airlock corridor. If necessary, place one pirate in each corridor to protect this area.

98BC7A 2 term Rogue  
Skills: Dagger-1, Demolition-1, Shotgun-1, Streetwise-1  
Cloth, Dagger, Shotgun

B98A8A 2 term Belter  
Skills: Brawling-2, Electronics-1, Vacc Suit-1  
Cloth, Shotgun

## 7> OUTER HULL AIRLOCK

Once the group manages to dispatch the corridor guards, read this description as they open the hatch to this area:

*You see two more pirates here, one standing guard and the other crouched over administering first aid to one of four unresponsive bodies. The standing guard raises his shotgun as you open the hatch...*

The corsair's doctor is prepping these four unconscious bodies for low berthing, to be used as slave labor.

**Doctor Jackie Díaz** 84B795 3 term Merchant (rank-2 3rd Offcr)  
Skills: Medical-2, Admin-1, Computer-1, SMG-1, Streetwise-1  
Cloth, SMG w/spare magazine

**1st Mate Rosh Larris** 8999C6 4 term Pirate (rank-4 Lt)  
Skills: Brawling-1, Shotgun-1, Navigation-2, Pilot-1, Vacc Suit-1, Air/Raft-1, Computer-1, Forgery-1, Streetwise-1  
Ballistic Cloth w/Ablate Jack, Shotgun w/2 spare magazines

Rosh will attack with his shotgun, protecting the doctor.

The four crew members being prepped for cold storage are as follows:

### Captain Ivan Aramovich

67(9)0(7)88A Age 46 7 term Merchant (rank-5 capt)  
Skills: Shotgun-2, Revolver-1, Pilot-2, Engineering-1, Navigation-1, Vacc Suit-1, Computer-1, Electronics-1, Mechanical-1, Medical-1, Admin-1

**2nd Officer Hermann Krieger** *chief engineer* 7(9)0(3)0(3)4AC 5 term Merchant (rank-3 2nd Offcr)  
Skills: Cudgel-1, Auto Pistol-1, Engineering-2, Vacc Suit-1, Electronic-2, Mechanical-2

**Mission Manager Elijah Lewis**  
0(4)B1(6)A97 Age 34 4 term Bureau-crat (rank-4 Mngr)  
Skills: Body Pistol-1, Computer-2, Admin-2, Instruction-1, Leader-1, Liaison-1, Recruiting-1  
watch

**Diplomat Doris Boothe** 3(5)0(8)689C  
Age 50 8 term Diplomat (rank-4 Cnslr)  
Skills: Dagger-1, Vacc Suit-1, Computer-1, Grav Vehicle-1, Liason-3, Carousing-2, Admin-1, Forgery-1, Instruction-1

The group may attempt to carry these crew members to the launch bay or revive them if possible, although all of their equipment has been stowed aboard the corsair.

DO NOT PERMIT THE GROUP TO ATTEMPT ENTRY INTO THE CORSAIR. If they try, allow Rosh to escape up the hatch and seal off the entry to the far trader. If necessary, have the ship detach and begin firing shots at the Serena Dawn. Proceed to Random Encounter 7 if needed.

## OTHER AREAS OF THE SERENA DAWN

### COMPUTER ROOM

Both computer operators' bodies are here, slumped over in their duty chairs. They have nothing of value on them, including their ID cards. If a character with computer skills attempts to use the ship's Model/2 bis to gain any information, he/she will find it is currently engaged with the anti-hijack program. The only other information accessible will be the following:

**EMERGENCY ALERT! EMERGENCY ALERT!**  
**SECURITY VIOLATION ON THE BRIDGE. REPEAT: INTRUDERS ON THE BRIDGE!**

**EMERGENCY ALERT! EMERGENCY ALERT!**  
**EXPLOSION REPORTED IN SHIP'S LOCKER. REPEAT: SHIP'S LOCKER COMPROMISED.**

### CREW CABIN #34 (MAIN DECK)

The crew steward's corpse is in this room, he still has his ident card but nothing else of value.

### ENGINE ROOM (MAIN DECK)

The corpses of a technician and both auxiliary engineers are in this area, killed by the explosions that disabled the maneuver drives. There is a one-in-six chance that each crew member's ID card is functional, otherwise nothing of value will be found here.

### LABORATORY (UPPER DECK)

Two scientists' dead bodies are slumped on the deck here, stripped of anything valuable (including their ID cards).

### LOW BERTHS (MAIN DECK)

Both port and starboard low passage areas are completely vacant with no passengers.

### MEDICAL BAY (UPPER DECK)

The ship doctor's dead body is laying in the corridor between his quarters and the med bay. He has been stripped of weapons and ID.

### PORT & STARBOARD CORRIDORS (MAIN DECK)

There is a two-in-six chance that characters near any view port may see the pirate's Scout/Courier circling the Serena Dawn at any given moment. The lead steward's dead body is in the secured port corridor (between port and forward airlocks), and a technician's corpse is between the starboard bridge and sensor bay iris valves. Both have been stripped of anything value (including their ID cards).

### ROBOT STORAGE (UPPER DECK)

The two maintenance robots stowed here are not functional and the parts needed to make them functional cannot be found on the ship. They are far too heavy for characters to attempt to move as well.

### WORKSHOP (UPPER DECK)

Vacant, the components of an Electronic Tool Set (5kg) and a Mechanical Tool Set (20kg) can be found and assembled in 12 turns (4 for the former and eight for the latter).

Nothing useful will be found in any of the other areas.

### ESCAPE!!!

As the characters enter the launch bay, read the following description out loud:

*The bay is empty save for one of the two launches that are stored here. Once the hatch is opened, an automated verbal announcement is heard: Launch in five minutes, please take your seats and secure all belongings." It repeats in 30 second intervals.*

*Suddenly, the Serena Dawn lurches, and you hear three explosions coming from the port bridge area. The ship trembles violently for a few seconds, then lurches again with another explosion. You hear sporadic squeaks and groans as the deck buckles beneath your feet.*

The launch is large enough for ten characters. Once the five minutes expires (or a character with Ship's Boat or Pilot skill overrides the automation), it can depart the bay.

*As the launch leaves the Serena Dawn, you see it tremble once again. A few chunks of debris float out the bay along with your craft, one bounces harmlessly off the hull. Soon all is quiet as the launch rotates about, and you can see a Type-A2 Far Trader hovering over the lifeless Serena Dawn. You also spy a Type-S Scout/Courier departing the scene, dropping down toward the surface of Sunrutlov below. As you begin to accelerate away from the Serena Dawn and towards Sunrutlov, the corsair's turrets begin firing on your small craft, scoring several hits. Aside from some sluggish feeling from the maneuver drive, all seems well. The corsair continues its barrage until you enter the atmosphere, not scoring much in the way of hits on your hull.*

*As you approach the daylight side of Sunrutlov, you initially see nothing as the launch passes through some thick cloud coverage. This continues for quite some time, clearing*



The characters have managed to escape the pirates, but now face an even more difficult challenge...survival! Thus, ends the mini-adventure. The GM can follow up in any way he/she sees

fit, from waiting at the crash site for an IISS rescue, searching out the hidden pirate base, or fabricating a full-fledged campaign from here. If a campaign adventure is desired, it is suggested that the GM acquire the Star Frontiers series of modules SF-0 to SF-2 a.k.a the Volturnus Trilogy and convert the content within to Traveler specs, as this scenario is an adaptation of the opening to that first module.

up only as the launch passes into the other side of Sunrutlov where it begins its descent into the dark, clear night.

Suddenly, sparks fly from the helm instruments. Then, after several seconds of rough jolting, the maneuver drive explodes as a fire erupts on the stern exterior. The fire grows larger and hotter as you descend, threatening to enter the passenger compartment. After two minutes of intense heat, the launch crash lands into the sands of a vast desert. The fire seems to die down, having been doused in sand from the landing...but flames still flash from the engine room and helm. Fire extinguishers are found in each area and you are able to douse the flames, although thick black smoke continues to reach for the sky.

There is a slight chance for each character to become injured from the rough landing. Throw 12 on 2D to indicate this, with a resulting 2D damage. A quick search of the cargo bay will net some survival gear stowed, which includes the following:

- 10x Cold Weather Clothing (TL-1)
- 10x Filter/Respirator Mask Combos
- 10x Tarpaulins
- 10x Survival Rations (food & water for one person for 7 days)
- 4x Shotgun w/6 magazines
- 4x Carbine w/1 magazine
- 2x Revolver w/10 reloads
- 1x Compass
- 1x Binoculars
- 1x Inertial Locator
- 1x Radiation Counter
- 1x Oil Lamp w/10 refills
- 1x Medical Kit

## NOTES ON SUNRUTLOV

While Sunrutlov (E532000-0) is a barren wasteland with a thin atmosphere, there is an abundant amount of native life. The Bachanda Forest is a miraculous overgrowth of trees with thick sturdy branches intertwining with each other, some towering over 50 meters in height. Several species of intelligent life inhabit the various regions, and native flora & fauna is also abundant. Some of this plant & animal life can be cooked and ingested safely, however most cannot. In the desert regions, a character must ingest four liters of water per day to avoid dehydration (the survival rations on the launch will accommodate this requirement for one person for seven days per ration). Food & Water are not plentiful in the wasteland regions so the group must prepare accordingly, or else they can quickly succumb to the elements!

## SAMPLE PRE-GEN CHARACTERS

798783 Age 33 3 term Scout  
Cr75,701

Skills: Pilot-2, Air/Raft-1, Computer-1, Jack-o-T-1, Shotgun-1, Vacc Suit-1 Cloth, TL-10 Med Range Comm, Hand Computer, Tent, Cold Light Lantern w/2 recharges, Inertial Locator, Filter/Respirator, Binoculars, Compass, 2 weeks rations & water

ABA983 Age 33 3 term Merchant (rank-4 1st Officer) Cr35,040  
Skills: ATV-1, Cutlass-1, Electronics-1, Engineering-1, Jack-o-T-1, Laser Rifle-1, Mechanical-1, Medical-1, Pilot-1 Cloth, Video Recorder, Filter Mask

9A8777 Age 36 4 term Army (rank-4 LtCol), active duty Cr1,250  
Skills: Rifle-3, SMG-2, Auto Pistol-1, Bayonet-1, Brawling-1, Helicopter-1, Mechanical-1  
Cloth, Telescopic Sight, Light Intensifier Goggles

9BA782 Age 34 4 term Marine (rank-2 Capt) Cr10,350  
Skills: Laser Rifle-2, Vacc Suit-2, Auto Rifle-1, Cutlass-1, Revolver-1, Tactics-1  
Cloth w/Reflec, TL-10 Cold Weather Clothing, Respirator Mask

6B8886 Age 36 4 term Navy (rank-3 LtCmdr), active duty Cr350  
Skills: Medical-2, Computer-1, Cudgel-1, Mechanical-1, Ship's Boat-1, Vacc Suit-1  
Cloth, Medical Kit

799686 Age 35 4 term Other Cr24,840  
Skills: Brawling-1, Jack-o-T-1, Forgery-1, Revolver-1, Air/Raft-0  
Jack, Lockpick Set, Voice Recorder, Psionic Shield Helmet

7C9663 Age 37 4 term Merchant (rank-2 3rd Offcr), active duty Cr50  
Skills: Electronics-2, Bribery-1, Cutlass-1, SMG-1, Streetwise-1  
Mesh; Electronic Tool Set

ABA695 Age 33 3 term Army (rank-3 Major) Cr17,650  
Skills: Brawling-2, Rifle-2, ATV-1, Bayonet-1, Dagger-1, SMG-1, Mechanical-0  
Cloth, Carpentry Tool Set



# GRYMZ



## 4TH WALL BREAK...

THE ESCAPE PLAN WRITER'S SHED,  
UNDISCLOSED SECRET LOCATION,  
PRE-PRODUCTION STAFF MEETING...



ANYONE GOT  
ANY COFFEE  
AROUND HERE?

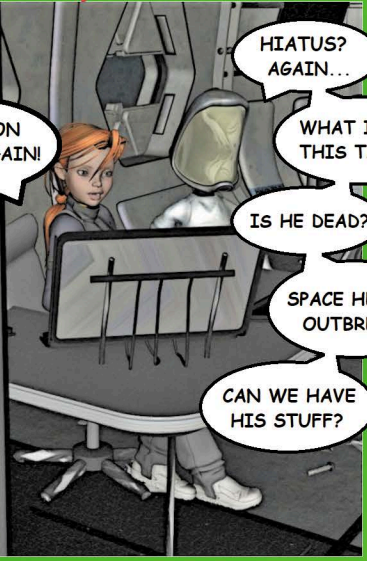
MONDAY,  
TIME TO CHECK  
THE EMAILS...



OH, HERE'S A NEW  
EMAIL FROM OUR  
ILLUSTRATOR...

CRAP!

...WE'RE ON  
HIATUS AGAIN!



HIATUS?  
AGAIN...

WHAT IS IT  
THIS TIME...

IS HE DEAD?

SPACE HERPES  
OUTBREAK?

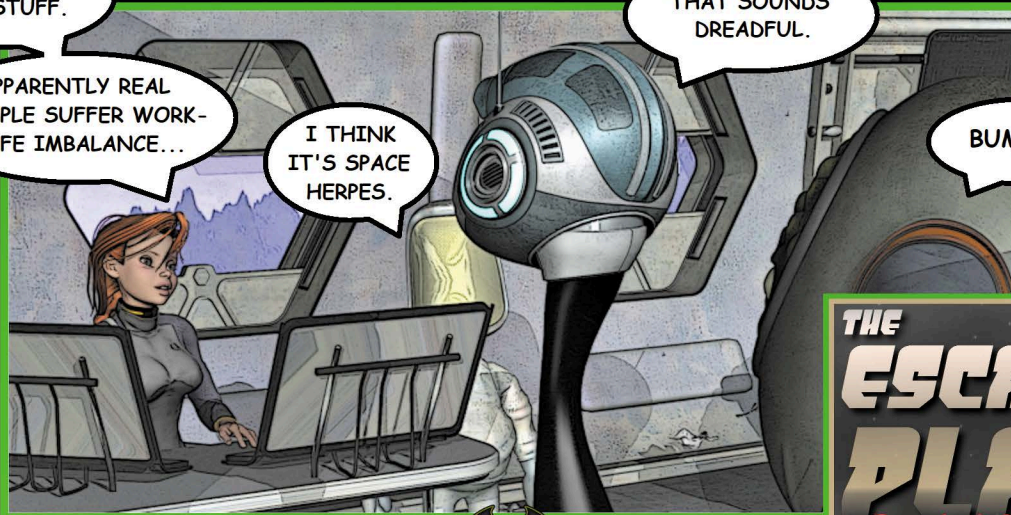
CAN WE HAVE  
HIS STUFF?

NO, NONE OF  
THAT STUFF.

APPARENTLY REAL  
PEOPLE SUFFER WORK-  
LIFE IMBALANCE...

I THINK  
IT'S SPACE  
HERPES.

THAT SOUNDS  
DREADFUL.



BUMMER

THE  
**ESCAPE  
PLAN**  
RETURNING SOON...



#2021-06-27-000037 2021 SRM

