

# FRONTIER EXPLORER



**ISSUE 30**  
**FALL 2020**

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## LOOKING FOR SUBMISSIONS

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 30 of the Frontier Explorer. As you can see from the table of contents, this issue is filled to the brim with lots of little articles. We had so many in fact, I was worried I was going to run out of room on the table of contents page. But we just made it.

I'd like to start by calling out our two new authors this issue. The Art of the Crossover, an article with tips about adapting material from other games/genres to Star Frontiers, was submitted by RJ McDonough. It also includes an encounter adapted from an old White Dwarf magazine article. There was originally going to be a second article by RJ but it was based on an on-line game he was running and unfortunately had to cancel. The article this issue was to be the first part in a series but since the game ended, he decided not to have us publish it since he wouldn't be able to finish it.

Our second new author is Oscar Rios. He provides us with two new equipment articles in his debut issue, one on needler weapons and a second on restraints.

The only long article in the issue, we have what I thought was going to be the last of the "Things That Go Boom!" articles by Joseph Cabadas in this issue but while I was editing this one, he submitted another that you can look for in the next issue.

With this issue we are starting to bring back our "Frontier in Miniature" articles looking at miniatures for use in your game. This issue, Tom Verreault kit-bashes some computers and transmitter arrays as terrain pieces. We already have a couple more miniature articles in the queue so you can expect to see more of these in the future.

We are also continuing the "An Alternate Frontier" series by Richard Farris with a look at gyrojet weapons.

Rounding out the issue we have a pair of spaceship articles by Richard "Shadow Shack" Rose, a short adventure, some new species, and a look at food trucks in the Frontier by Tom Verreault, and a look at handling random creature encounters and an article on protective gear by Joseph Cabadas. Finally, we have our regular Jurak Hangna article by Eric Winsor and the comics by Scott Mulder.

Our cover image this issue is "The Rise of The Dolphin Bay" by Coferosa. You can find her other art on her [Deviant Art](#)

[page](#). If the art style looks familiar, it's because we used another of her images on the cover of issue 20. She gave us permission to use both of these images back when we were working on issue 20 and we're just now getting to use this one. But I think it goes well with our two lead articles on repurposed/salvaged assault scout hulls.

While 2020 has been a rough year, we've managed to get the issues out on time. We've also started working behind the scenes on a couple more "Frontier Explorer Presents" products that will probably be coming out in 2021, although I might manage to get one of them out this year but I wouldn't hold your breath.

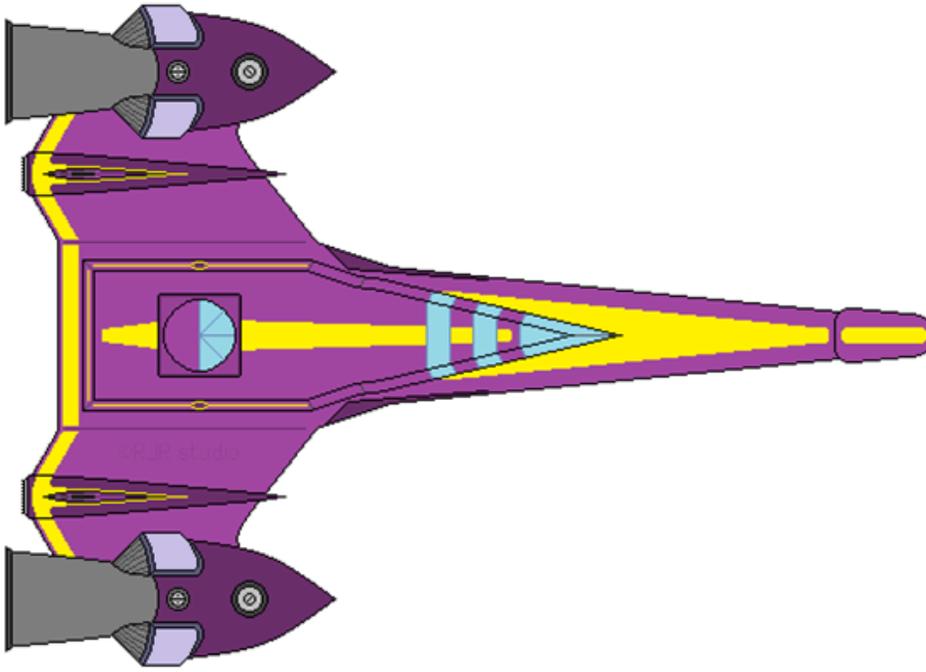
The first is a short story collection, the Book of Khad'dans. The Khad'dan is a yazirian honor weapon invented by Matthew Crymble way back in the 90's and the book will contain stories by a number of authors featuring that weapon. This is a project we've been sitting on since we started the magazine back in 2012 and I think we're finally going to get it finished.

The others are a bit more nebulous but I'm working on another starship technical manual and we've started taking about doing a special Jurak Hangna publication. We'll see how those pan out. Regardless, the regular issues of the magazine will continue to roll out on schedule.

I'd love to hear your feedback on the magazine. And so would the authors. I've been asked by different authors if I ever get feedback on the articles. And I've always had to tell them no. If you have thoughts about the magazine and article, we'd love to hear them. What can we improve? What are we doing that you like? Are there types of articles you like to see more of? Less of? Do you have other suggestions? Have you used any of the material presented in your games? Let us know. I'd love to be able to include a "Letters TO the Editor" section in each issue so feel free to write in and share your thoughts at [editors@frontierexplorer.org](mailto:editors@frontierexplorer.org).

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

- Tom Stephens  
Senior Editor



# SCOUTING YACHT

## SHIPS OF THE FRONTIER

BY RICHARD "SHADOW SHACK" ROSE

### SS SPACE ANGEL

Angel class Scouting Yacht (demilitarized/surplus assault scout conversion)

#### STATISTICS

Constructed at - WarTech Shipyards (originally) - PanGalactic Shipyards @ Triad (retrofit)

**Age** - 57 years (hull), 3 years (everything else)

**Cost** - See Description Below

**HS:** 3 **HP:** 15

**Powerplant:** 2 Atomic A drives

**ADF:** 4 **MR:** 4 **DCR:** 29 **Crew:** 4

**Weapons:** N/A

**Defenses:** RH

**Communication/Detection:** SubSpace Radio, VideoCom, Radar, Intercom - Panels in Bridge & Maintenance Deck, Speaker/Mike in every area (13 total)

**Misc. Equipment:** Streamlined, Engineer Toolbox

**Computer:** Level: 4 FP: 82 Mass/SP: 100, 2 Panels (Bridge, Maintenance Deck)

**Computer Programs:** Alarm (2), Analysis (4), Astrogation (4), Communication (1), Damage Control (2), Drive (4), Industry (1), Life Support, cap:12 (1), Maintenance (2)

**Cargo Capacity:** 0.20

**Crew Accommodations:** 2 double cabins

**Passenger Accommodations:** 2 luxury suites

**Ship's Vehicles:** n/a

**Owner** - Rollo & Aurelia Tyme

**Captain Aboard** - Jensen Streele

**Home Port** - Clarion Station

**Crew Roster** - Pilot/Captain, Engineer, Astrogator, Comm/Sensor officer

#### HISTORY

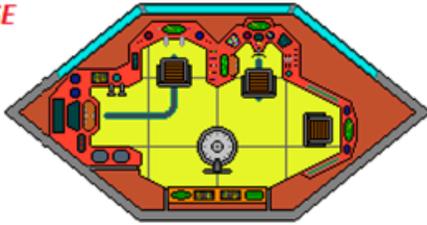
The Angel class Scouting Yacht is an assault scout, with the typical demilitarized/surplus scout hull conversion acquired for 250,000Cr when they are made

available (See the next article) . The hull is typically 40-60 years old (2d10+40) with most of the components stripped away...the few components remaining tend to include the communications and detection equipment, computer panels on the bridge and maintenance deck (albeit no mainframe computer), and the recreation deck & cabin furnishings.

The retrofit can be performed at any Class I or II SCC at the cost of 739,180Cr at a Class-I SCC (+200,000 for a Class-II center), which includes replacement size-A atomic drives, computer with the basic software package listed above, and fresh cabin furnishings. The flying bridge simply becomes a bridge, with the original bridge deck below converted into a pair of double occupancy crew cabins. The recreation deck remains largely unchanged save for upgrades to accommodate the "first class" occupants (typically owner and friends/family). The crew deck is converted into a pair of luxury suites, complete with an observation dome where the laser battery used to be. The maintenance deck is retrofitted and restocked with tools & equipment, and the hold & airlock deck remains unchanged at 0.20 unit cargo capacity --- not sufficient for profitable cargo hauling yet ample enough for the owner & passenger possessions.

Performance is reduced to a civilian grade ADF/MF:4/4 and DCR:29 due to the removal of military grade hardware & software that enabled the scout's original higher performance. Customizing is often enacted, typically applied to the recreation and suite decks. To this end several options are available during the reconstruction phase, first and foremost being the replacement laser battery system, which deducts 1 from the ADF or MR (determined during construction). The other feasible option is an upgrade to Pan Galactic Eureka drives at 500,000Cr (available only at the PGC Gran Quivera shipyard) which results in an increase of 1 to the ADF score. This of course can be added with the battery system to compensate for an ADF loss to maintain stock ship performance, or the MR can be dropped to 3 in favor of an ADF:5 score.

**BRIDGE**



**CREW DECK**

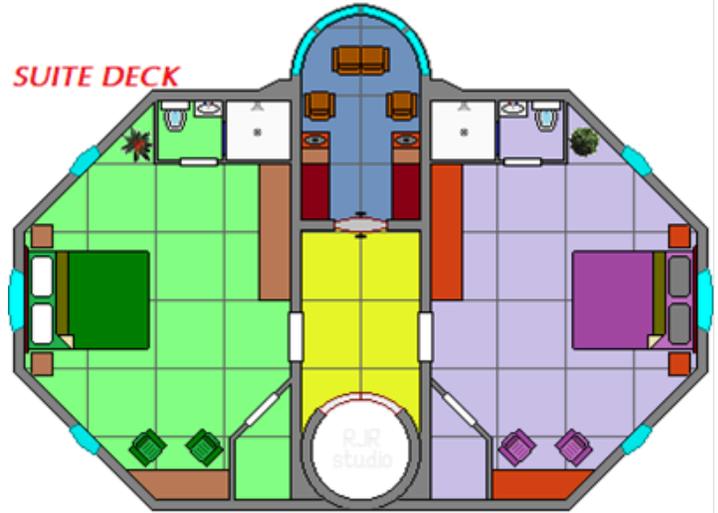


**RECREATION DECK**

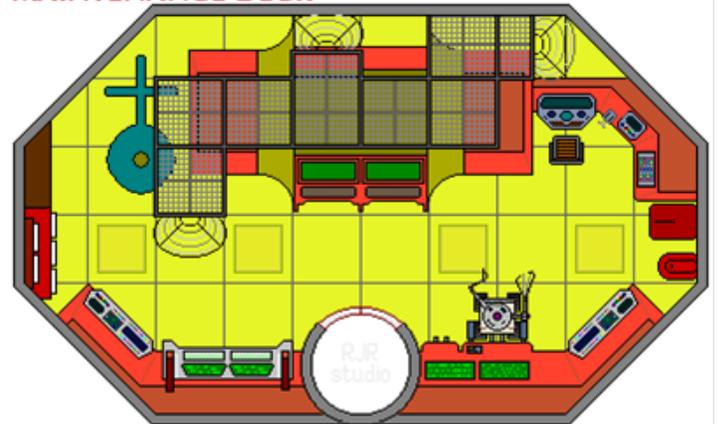


*Optional  
Laser  
Battery*

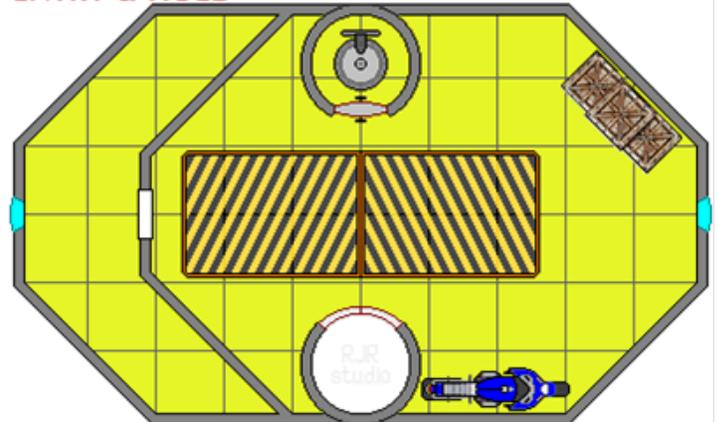
**SUITE DECK**



**MAINTENANCE DECK**



**ENTRY & HOLD**



**OWNERS**

**BARON ROLLO TYME III**

(age-68)

STR/STA - 45/55  
 DEX/RS - 50/50  
 INT/LOG - 55/70  
 PER/LDR - 65/75  
 SKILLS (PSA-Tech) Technician-6, Computer-2, Projectile Weapons-1; Pilot-2

**BARONESS AURELIA TYME**

(age-64)

STR/STA - 40/55  
 DEX/RS - 60/50  
 INT/LOG - 70/65  
 PER/LDR - 75/75  
 SKILLS (PSA-Tech) Technician-4, Computer-6, Robotics-2; Astrogration-1, Engineering-1

IMAGE BY RICHARD ROSE



Rollo is a retired Clarion Royal Marine entrusted with a barony on Clarion's surface. Aurelia is a former corporate R&D manager from PGC's branch office on Clarion Station. Together they make a textbook example of "big fish in a big pond". Wealth and power have been thrust upon them as a reward for their combined endeavors. Being in the market for an interstellar transport, Aurelia came upon a demilitarized surplus WarTech assault scout hull that was in remarkable condition considering its age. The hull was stripped clean at Triad's construction center, and Aurelia --- having a basic understanding of engineering --- began considering a possible reconfiguration of the design. She put a deposit down and the two booked passage on a luxury liner to the Cassidine system.

After making their way to the Triad shipyards, they met with one of the shipwrights to discuss the plausibility of Aurelia's idea. Plans were drafted, credits exchanged, and several months later they

had their converted yacht dubbed the "SS Space Angel". On top of the commission, the shipwright negotiated a partnership for making this a standardized conversion...each time an Angel class scouting yacht conversion was performed both the shipwright and the Tymes earned a bonus...thus proving good business is where you can find it.

## CAPTAIN JENSEN STREELE

(age-40)

STR/STA	-	55/60
DEX/RS	-	70/65
INT/LOG	-	55/50
PER/LDR	-	50/50
SKILLS (PSA-Tech)	Technician-6, Computer-2, Gyrojet Weapons-3, Beam Weapons-2;	Pilot-3

Jensen Streele (no affiliation with the megacorp) retired from the Steel Talons 21st tactical starfighter squadron while stationed at Clarion. A hot shot fighter

jockey from the Starfighter Corps, he was a Flight Leader running sorties against pirates and the worms alike during his career. He met the Tymes at the Dance & Dice aboard Clarion Station, and he was offered a job as captain of the nobles' new yacht. Other crewmembers have come and gone over the past three years, yet Streele remains loyal to the Tymes.

## CAMPAIGN INFO

The Space Angel can be inserted into any campaign at any time. Players with low level ship skills will be ideal crew members on the Angel. Perhaps they can encounter the Tymes in a spacer's pub or other such local hang-out, with the Tymes offering a steady paycheck for an engineer, astro-gator, and sensor/communications officer (which can also be a back-up to the other three). A gunner could also be hired on, simply have the Tymes in the process of having a laser battery installed in place of the observation dome if the encounter is in a system with a SCC.

Ideally, this can occur after the Warriors of White Light module, with the Osprey's boarding party looking for another line of work after their stint with the Clarion Royal Marines...



IMAGE BY RICHARD ROSE

# SURPLUS ASSAULT SCOUT HULL

## SHIPS OF THE FRONTIER

BY RICHARD "SHADOW SHACK" ROSE

### KH STATS

**HS:**3 **HP:** Powerplant: n/a

**ADF:**0 **MR:**0 **DCR:**0

**Weapons:** none

**Defenses:** RH

**Communications/Detection:** Sub-space  
Radio, VideoCom, Radar; Intercom

**Misc. Equipment:** streamlined

**Computer:** Level: 4 FP: 40 Mass/SP:  
20

**Computer Programs:** Alarm (2), Analysis  
(4), Astrogation (4), Damage Control  
(2), Life Support, cap:8 (1)

**Cargo Capacity:** 0.2

**Crew Accommodations:** 4 dbl cabins

**Passenger Accommodations:** n/a

**Ships Vehicles:** none

### DESCRIPTION

Surplus assault scout hulls are typically had at auction, either when the UPF or a local government militia retires one of theirs. The drives and maneuvering RCS thrusters are removed, both weapon systems are pulled, as well as most of the pertinent computer software related to those systems including information and security programs. The communications, sensor equipment, and internal comms (intercom) remain along with the four computer panels (flying bridge, main bridge pilot & astrogator positions, and maintenance deck). The stripped hulls often command high auction prices for what you get, averaging 250,000-300,000 credits.

While they are not space-worthy as is, it doesn't take much to retrofit the hull with drives and software along with sealing the voids in the hull. Life support equipment is retained. Astrogation equipment is also left behind as it is standard equipment that is readily available to Spacefleet and civilian markets alike.

Even though the laser battery is removed, the socket remains for ease of replacement in the civilian sector at a -1 ADF

or MR penalty (although sealed with a hatch, this section can also be utilized for a workpod or as an observation dome, etc.). The assault rocket system is another story, good luck acquiring that and fitting it with the performance penalties accrued via civilian ship construction. Maximum ADF for a retrofitted assault scout would be 4 assuming two atomic-A drives and no additional weaponry beyond the laser battery, although owners may opt for the

slower fuel efficient ion drives for ADF:1 ... alas such craft cannot operate in an atmosphere so this is rare.

Typical opening bids are 150,000Cr but they escalate quickly with more bidders.

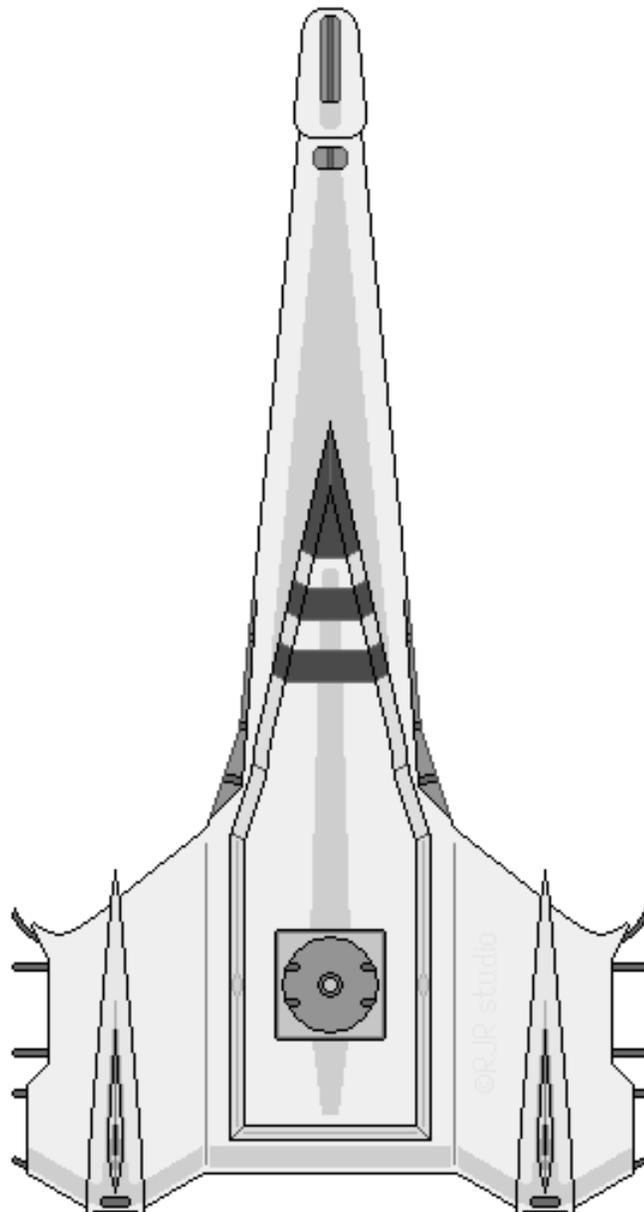
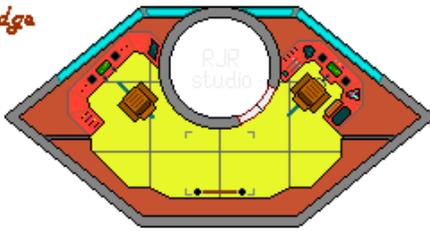
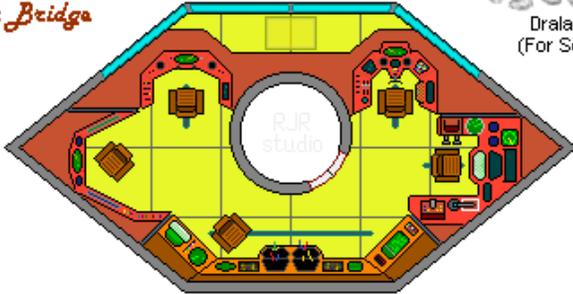


IMAGE BY RICHARD ROSE

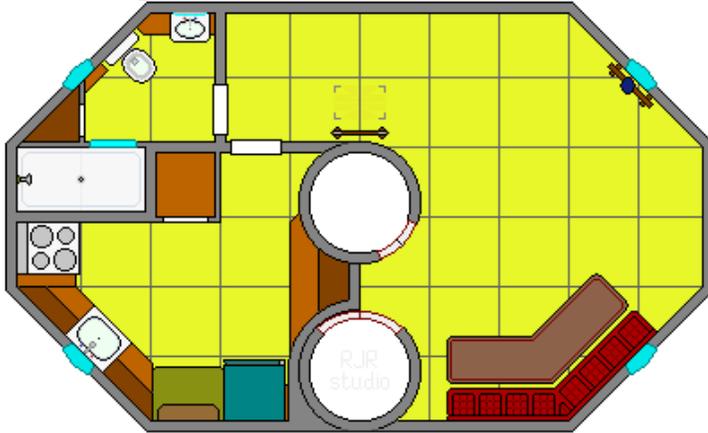
*Flying Bridge*



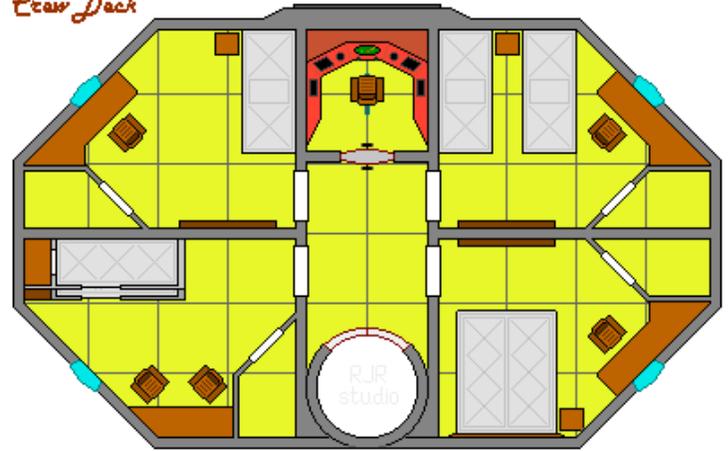
*Main Bridge*



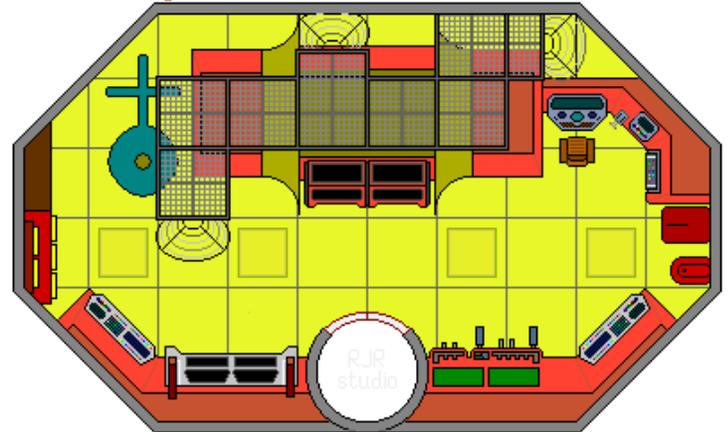
*Recreation Deck*



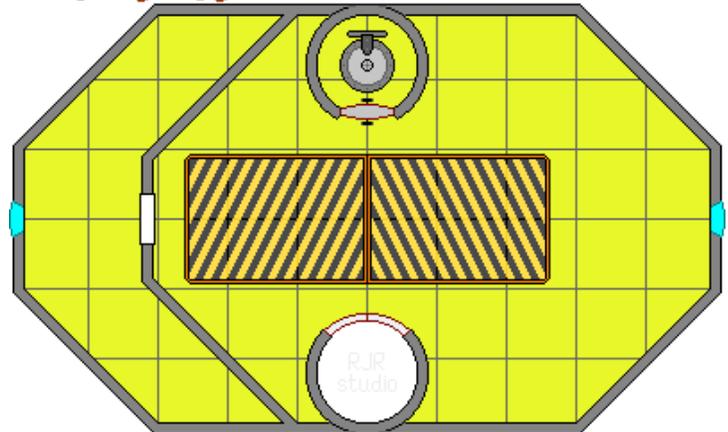
*Crew Deck*



*Maintenance Deck*



*Storage & Entry Deck*



## ASSAULT SCOUT DECKS

### FLYING BRIDGE

This deck is primarily used for atmospheric flight and contains a station for the pilot and laser battery gunner. This deck, as well as the main bridge, can only be accessed by the secondary elevator from the Recreation Deck. This allows security protocols to limit access to these areas.

### MAIN BRIDGE

This is the main duty station while in space and has seats for the pilot, astroga-tor, engineer and two gunners.

### RECREATION DECK

This is where the crew spends their leisure and/or communal time. Contains a head, the galley, and a large common area that is used for dining and gathering

### CREW DECK

This deck contains the crew's cabins. It consists of four double occupancy cabins. The ship's laser battery was also mounted here before it was removed.

### MAINTENANCE DECK

This deck contains the ship's life support system and access to the engines. There is also a control station here for the ship's engineer as well as a small workshop for minor repairs.

### STORAGE AND ENTRY DECK.

This deck is the cargo deck of the vessel and also houses the ship's airlock.

# A DEATH IN PORT

## A ROYAL MARINES CRIME INVESTIGATION SERVICE ADVENTURE

BY TOM VERREAU

**Author's Note:** This adventure is heavily borrowed from a TV drama episode written by Christopher Ambrose, Jonathan I. Kidd & Sonya Winton

This adventure is designed for one or two player characters of mid to high level. Characters for this adventure can be created using the classic rules for KHs (i.e. Royal Marine characters as per those created for the Warriors of White Light adventure) or the Star Law character creation rules from Dragon Magazine #91 "Careers in Star Law" by Alex Curylo from November 1984. The original rule system starts out Royal Marine characters at a high level of capability. "Careers in Star Law" starts characters out just a notch below this. The "Skilled Frontier" fan rules from Star Frontiersman #9 can also be used with some adaptation to create less clunky characters that are not as high powered but are also well rounded. If using "A Skilled Frontier" the referee should increase the number and levels of starting skills and incorporate the fan rules "Spacer Skills Revisited" from Star Frontiersman #11.

For reference the character creation rules in "Careers in Star Law" requires these ability scores: STR/STA 40/40, DEX/RS 40/40, INT/LOG 60/60, PER/LDR 40/40. It also calls for these starting skills based on PSA: Technological/Biosocial: One 5th-level skill and one 3rd-level skill from the appropriate PSA, a 2nd-level ranged weapons skill (usually beam), and 1st-level in a non-ranged weapon Military skill (usually Melee). Military: Two 5th-level weapon skills, 2nd-level Martial Arts, 1st-level Demolitions. I consider the ability score requirements optional but I've supplied them for thoroughness.

Characters entering the Royal Marines begin with a 1<sup>st</sup> level spacer skill and the prerequisite skills for that skill which usually means they are level 6 in at least one

prerequisite skill. This tends to make the character a "one shot wonder" nailing every skill check with that prerequisite skill. If using the original skill system, incorporating the article "Spacer Skills Revisited" might be advisable to scale back the power creep and high-level skills.

### REFEREE RESOURCES

This adventure assumes you have access to the Alpha Dawn and Knight Hawks rule books as well as the module SFKH0: Warriors of White Light at a minimum. There are also numerous fan articles expanding on the Royal Marines found in Frontier Explorer issues: #22 "Assault Scout Standard Equipment"; #23 "Clarion Station Expanded" & "10 Things on Clarion Station", #24 "Dark Shadow's Revenge".

### RUNNING THE ADVENTURE

The set up can be local law enforcement on Clarion, Star Law, Royal Mounted Constabulary or Royal Marines assigned to investigate the death of one of their own.

There are multiple lines of investigation and the players may wish to rabbit trail just one of them. If this happens have the technician or medical examiner inform them that it will take a few hours before they have results for the PCs to force them to investigate other clues. If the players hit a dead end have a lab technician, medical examiner, or other NPC nudge them in a new direction by providing analysis of a clue. The adventure should build to confrontation with the killer's minions and the killer himself.

**The Plot:** Lt. Sarah Weaver, having come from poor beginnings has been trying to adopt the foster child she cares for. To do this she needs the sole remaining parent to sign off on her petition. This man, Rejack Key is a criminal and drug dealer that was recently released from

prison and is not willing to relinquish his parental rights. When she threatens to expose his drug business, which he's trying to lure his son into, he uses his son's car to kill her in an apparent hit and run.

### THE INVESTIGATION

Royal Marine analyst, Lt. Sarah Weaver, was found dead outside of her home, the apparent victim of a hit and run. Because of her top-secret clearances and the suspicious nature of her death the PCs have been assigned to investigate.

### AT THE SCENE

The body has already been transported to the morgue for autopsy, there is a parked ground car with damage and debris from being side swiped by the hit and run vehicle. In addition, one of the officers that secured the scene informs the PCs that Lt. Weaver had a foster child that is at the Department of Social Services.

### INVESTIGATING LT. WEAVER'S LIFE

Her coworkers and friends know that she's been upset lately and stressed. They believe its connected to her foster son and note that she had been communicating frequently with another foster family. Otherwise they think she's a good person and can't understand who would want to kill her.

Lt. Weaver's chroncom has a cryptic text message that says, "I will expose you for your corruption," to an unlisted burner number.

### INVESTIGATING THE BODY

The medical examiner will confirm Lt. Weaver's death is blunt force trauma consistent with being stuck by a ground car. Her teeth show poor nutrition in childhood as testimony to poor beginnings. She also has a black eye that is a few days old (from an altercation outside her home

with Rejack two days ago where he tried to take his son.

## INVESTIGATING THE VEHICLE

The lab technician can tell the PCs that the debris from the hit and run vehicle shows that it is a sedan and that there was some film on it that he may be able to identify eventually. With some analysis he will be able to tell them more details on the ground car involved, a 15 year old Zoomer. If they look in the registry of motor vehicles, they can discover that there is such a Zoomer registered to the teenage foster son of Lt. Weaver (although it was purchased by Rejack).

The film on the car is a combination of sulfur, carbon black, zinc oxide, steric acid, silica and 200 other trace elements and chemicals used in the manufacture or recycling of tires. The closest tire manufacturer is more than 600 km away but there is a tire recycler right here in town. Rejack Key works at that recycler and the owner will recognize the 15 year old Zoomer as Rejack's car. Video surveillance will reveal that he left work early in the car with the appropriate time to kill Lt. Weaver even though his time card was punched out by another employee. Rejack has not shown up for work since.

## INVESTIGATING THE FOSTER SITUATION

Her neighbors, who are also foster parents can attest the frustration they shared with Lt. Weaver concerning their inability to obtain financial aid and reimbursement from Comfort and Care Horizons, a private agency with a government contract to support and oversee foster care in this area. They hate C&C Horizons and praise Weaver for her bulldog tenacity in going after the foster agency.

The CEO is actually under investigation by Crown Investigators and has no reason to kill Lt. Weaver since there is in effect nothing for her to reveal to the government. His government contract is for 2 million credits and his income is 2 million credits. On the books he's represented himself as employing dozens of social workers but he has simply embezzled the money and denied services to foster families. When confronted in his office he tells

the PCs, "Tell my wife I'm sorry" and leaps off the balcony behind his desk to his death. Note this is the red herring of the investigation. The PCs can solve the embezzlement crime but the CEO is not the murderer. If they fixate on the CEO as the murderer have an NPC point out that he had no real reason to kill Weaver and was being deposed by Crown Investigators at the time of Weaver's death.

## INTERVIEWING ROBBY KEY, THE FOSTER CHILD

He's upset and will complain that Lt. Weaver had promised to adopt him but nothing ever came of that. He doesn't know who would want to kill her. It obvious that he has trust issues. The Department of Social Services will place him in a group home. Bobby knows that Rejack had come to the house and that Weaver had spoken to him outside before she came back in with the black eye but he will resist sharing that.

Later Bobby goes missing from the group home and a search of his room reveals samples of Night High, a powerful narcotic that has been circulating. He will be found at the home of Rejack compounding drugs.

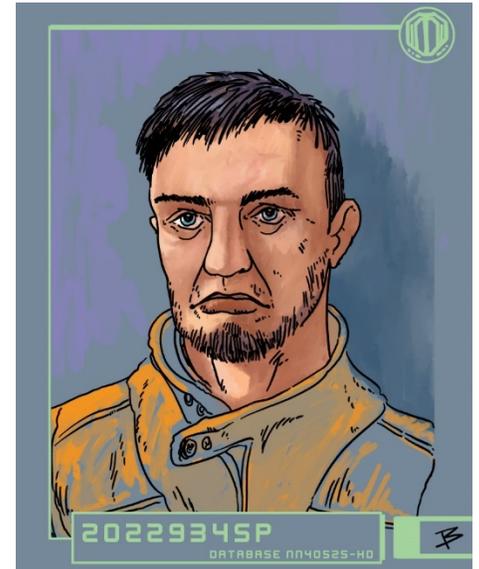
Rejack has been giving him money and manipulating him into selling drugs for him on the idea, "I'm the only family you have." It should be emphasized that Bobby didn't really want to do this but felt he had to because of Rejack's manipulation and threats to Lt. Weaver. As the PCs leave Rejack's house, two thugs employed by Rejack will show up: RW 40, M 45, PS 4, IM 4, RS 40, STA 45, civilian skein suit and albedo screen, belt pack, a pistol (random type) and extra clip.

## WRAPPING UP THE INVESTIGATION

The PCs may be able to convince Bobby to provide them with enough information to track down Rejack (possibly to a safe house). If they cannot do that then have the social worker that is taking Bobby back to the group home call the PCs in a panic that Rejack showed up at the DSS office and kidnapped Bobby. Since that office is

close by the PCs can arrive as Rejack is leaving the building with Bobby.

## REJACK KEY



Rejack is a career criminal with convictions for drug dealing and attempted murder. He was recently released from prison and he put on a front of obtaining a job and reporting to his probation officer but has gone right back to drug dealing.

**STR/STA:** 65/55

**DEX/RS:** 40/40

**RW:** 60

**M:** 50

**PS:** 4

**IM:** 4

**Equipment:** civilian skein suit and albedo screen, belt pack, gyro-jet pistol and extra clip, and sonic sword.

## EPILOGUE

In the personal effects of Lt. Weaver that must be cataloged by the PCs is a filled out plasti-paper document lacking the signature of Bobby Key's parent signing off on the adoption. It would seem that Lt. Weaver was serious about adopting Bobby.

# TO BOLDY EXPAND THE FRONTIER

## WITH NEW SPECIES AND CIVILIZATIONS

BY TOM VERREAUULT

The canned Star Frontiers setting was always a little constricted being about 50 light years in diameter. Those who desire a more wide-ranging, exploration type game might consider converting species from other sci-fi properties to the Star Frontiers game. Creating new races can be a challenge and the anthropomorphic humans with animal heads can grow stale. The plethora of sci-fi TV shows and movies over the years like Battle Beyond the Stars, Star Trek, and Babylon 5 are fertile ground for converting well known and familiar alien species to the Star Frontiers or Frontier Space RPGs.

To that end we present the Andellorians and the Kellarites as a nod to some minor species in one of our favorite sci-fi shows.

## ANDELLORIANS

### PHYSICAL APPEARANCE AND STRUCTURE

Andellorians are a humanoid species averaging 1.9 meters tall with white skin, blue hair, and antennae on their heads. They are warm-blooded omnivores with internal skeletons very similar to humanity. They resist cold better than humanity (+15% bonus when necessary) but have a high metabolism that requires 1.5 times the amount of sustenance that humans require and this causes them to fatigue faster than humans do on average. They are also more susceptible to infection (-5% penalty to resist).

Their white skin makes them very sensitive to harsh sunlight and they must cover up with brimmed hats and clothing or they will suffer a terrible sunburn in little less than 1 hour. Once sunburn occurs, they experience a pain penalty of -5% to all activity until it heals in 3 days.

### SENSES

Their vision, hearing, and sense of touch are comparable to humanity's, but their antennae aid in balance and special awareness conferring a +5% bonus to DEX

checks involving movement and balance. Loss of one antenna results in a -5% penalty and two antennae in a -10% penalty until they grow back in 3 months.

### SPEECH

Their speech organs mimic those of humanity and can handle any language that humanity can. Due to their antennae they are adept at learning the language of vrusk but like humans cannot pronounce it.

### SOCIETY AND CUSTOMS

Andellorian culture is very marshal in nature due to the imperial government that rules their society from their place of origin on the moon Andelloria in the Andel system. They are proud and honorable but can come off as pushy and aggressive. Their culture promotes the "uhlan" (literally "ice chopper" in Andellorian) as a personal weapon and honor blade. Those in martial cadres will settle disputes of honor in duels with the uhlan, either until first blood or death as the matter of honor demands.

The Imperial cadre has been in ascendancy for decades and this has led to the colonization of 5 other systems. Their aggressive colonization program has also caused friction with their nearest neighbors the Kellarites.

### ATTITUDES

Andellorians can appear quite haughty and self-righteous. They dislike the Kellarites due to past wars and the present cold war. While willing to work with any of the Frontier races to advance their own agenda, they are fond of deriding humans as pink skins. They hate the sathar as much as anyone else.

### SPECIAL ABILITIES

**Cold Resistance and High Metabolism:** Andellorians enjoy a robust resistance to cold having evolved in a frigid

environment (+15% to resist the negative effects of cold where appropriate) and this lets them extend the duration of their life support in a vacuum suit or personal craft like a workpod by 25%. This ability comes at a cost of a higher metabolism requiring 1.5 times the amount of sustenance of that required by humans. They have less stamina than humanity and a susceptibility to infections (-5% penalty to resist infections).

**Balance and Spatial Sense:** their antennae confer a +5% bonus to DEX checks involving movement and balance. Loss of one antenna results in a -5% penalty and two antennae in a -10% penalty until they grow back in 3 months.

**Situational Awareness:** Andellorians are keen observers. This allows them to determine the weakness of an opponent whether physical, emotional, intellectual or situational. This ability starts at 5% and can be improved with experience points. It also allows the Andellorian to spot the "tell" of an opponent with a successful ability check (LOG or INT; whichever is higher). Once an Andellorian knows the tell of an opponent, he will forever have a +1 initiative modifier against that opponent. Rolling to learn the tell can only be done at the start of combat.

### SPECIES ABILITY SCORE MODIFIERS

-10 STR/STA, +5 LOG/INT, +5 LDR/PER

### EQUIPMENT AND TECHNOLOGY

#### THE UHLAN

The uhlan was originally a tool for digging and mining ice. It has evolved into an honor blade in the marshal society of the Adellorian Imperium. It is a melee weapon more substantial than a knife and can be used to aid in climbing ice (+10% bonus to climbing maneuvers).

**Cost:** 25 Cr. **Mass:** 1 kg

WEAPON	DAMAGE	MODIFIER	DEFENSE	MASS	COST
The Uhlán	2d10	+0	Inertia	1	25 Cr

## QUICK HEAL COMPOUND #5

Quick Heal compound #5 is in all respects identical to Biocort except that it only works on Andellorians. Biocort at first contact will not work on Andellorians although medical research may eventually develop a version of biocort in the future that will work on the Andellorians as well as the “core 4” Frontier species.

**Cost:** 10 Cr. **Mass:** n/a

## SKIN SALVE

This medial ointment is a topical adaptation of quick heal compounds that will heal an Andellorian’s sunburn in one day or cure 1/2 an actual fire burn’s damage in one day.

**Cost:** 10 Cr. **Mass:** n/a

## ANDELLORIAN SCOUT SHIP

**HS:** 2

**HP:** 12 **ADF:** 4 **MR:** 3 **DCR:** 35

**Weapons:** Forward fire Laser equal to a LB

**Defenses:** reflective hull

The Andellorian scout ship class has been an exploration workhorse for the Andell Imperium for decades. It comes with a full science station and two atmo-probes. It has probed the depths of space and been instrumental in their colonization of other planets and moons.

The Andellorian Scout Defender adds 2 Assault Rockets and is primarily tasked with system defense.

The Andellorian Scout Interdictor is a Defender with a new defense: ablative armor. Ablative armor will one time cut in half the damage of any non-beam type weaponry.

## ANDELLORIAN BATTLECRUISER

**HP:** 90 **ADF:** 2 **MR:** 1 **DCR:** 125

**Weapons:** LB (x3), LC, Torp (x4), S (x2), RB (x8)

**Defenses:** RH, MS (x4), ICM (x10), Ablative Armor (x2)

**Parasite Warships:** 1x Scout Defender or 1x Scout Interdictor

Larger than a UPF heavy cruiser the Andellorian Battle cruiser is the work horse of their battle fleet.

# THE KELLARITES

## PHYSICAL APPEARANCE AND STRUCTURE

Described as a cross between a dralasite, a yazirian, and an ifshnit, the Kellarite is a stout, hirsute, pig-snouted humanoid. They have two thick fingers and an opposable thumb. They have an internal skeleton and loosely resemble humans though slightly shorter and usually heavier. Their heavier gravity world has bestowed on them a robust body and frame.

## SENSE

Their eyesight exceeds that of humans and their sense of smell is approximately x4 that of humanity.

## SPEECH

They are capable of speech similar to humans but use subsonic growls, snorts, and whistles to add emphasis and shades of meaning that tend to throw off members of the “core four” trying to speak the Kellarite language.

## SOCIETY AND CUSTOMS

Kellarites have a fractious society built on democratic principles. They believe that ideas that cannot stand up to criticisms, scrutiny, and debate are stupid and inferior. They are very prone to argumentation and debate. They value intellectual honesty.

They have not been as active at colonization as the Andellorians, choosing instead to establish temporary to semi-permanent mining missions on various worlds before returning to the comfort of their high gravity world, Kellar Prime. This policy has led to friction with the Andellorians when that species colonizes a planet being mined by the Kellarites.

## ATTITUDES

It is no surprise that Kellarites enjoy the company of dralasites and when they are together there is usually endless debate. They strongly dislike the Andellorians due to their shared history and find that yazirians remind them of Andellorians, leaving a bad taste for them metaphorically. Toward humans and vrusk they are neutral but like everyone else they hate the sathar.

## SPECIAL ABILITIES

**Tough to Subdue:** +5 bonus against stun effects and knock out effects, a martial artist nerve combat ability is halved against a kellarite.

**Tough to Wound:** -1 inertial type damage point from blunt weapons and fist.

**Tough to Poison:** Kellarites have a high tolerance to drugs and toxins. They don’t get drunk and resist poison and toxins with a +10 bonus.

## EQUIPMENT AND TECHNOLOGY

### KELLARITE PROSPECTOR SHIP

**HS:** 4

**HP:** 30 **MDF:** 3 **MR:** 1 **DCR:** 35

**Weapons:** RB (x4) LB

**Defenses:** RH, MS (x1)

# ANDELLORIAN AND THE KELLARITE MINIATURES

Since the Andellorians and the Kellarites are converted to Star Frontiers from a popular sci-fi franchise but “with the serial numbers filed off” it will be easy to locate suitable miniatures for these two species. Modiphuis is the manufacturer of the Star Trek Adventures RPG and they sell a box set of miniatures with both andorian and tellerite crew members. The Modiphuis figures are made from good quality plastic, have great detail but cost more than the next option.

The Wiz Kids produces a Star Trek HeroClix Away Team blind box with five random miniatures. However, there seems to be a brisk trade for them on auction sites like Ebay with prices as low as a dollar and I’ve bought both andorian and tellerite miniatures for a dollar. I don’t recommend paying more than \$3 per miniature on an auction site unless you decide you really want that one. You should also look for a seller with multiple listings of the HeroClix figures you desire and buy all of the figures you’re looking for from that seller to save on shipping. The HeroClix figures, while inexpensive and made with a more flexible plastic, are not that bad. Many of the HeroClix figures are useable with nothing more than a custom wargaming base in place of the HeroClix base.

# THE ART OF THE CROSSOVER

BY RJ MCDONOUGH

I think my first exposure to the concept of the gaming “crossover” would be at around the age of 12 or 13 when I first got my hands on the *Dungeon Masters Guide* from TSR. Lo and behold, hidden in the middle of that wondrous tome was a section on converting AD&D to *Boot Hill* and *Gamma World*. It was a pretty clunky conversion; I suspect included as cross promotion for other TSR games rather than a serious attempt at connecting the different game systems. But the seed had been planted and when I finally got my hands on the first boxed set of *Star Frontiers*, I madly recreated Daleks and Cybermen and Cylons and any other bad guys that dared show their face on my TV or at the movies. The albedo suits those Stormtroopers wear are next to useless in the movies but way too effective in *Star Frontiers*!

My first attempt at a real crossover was converting a *Boot Hill* module so a group of *Star Frontiers* characters could crash land on “earth”. Weapon conversion was not too difficult, no energy weapons to worry about once the ammo ran out and giving the players 6 guns instead of autopistols worked out OK. On the language side of things, Pan Gal ended up coming out sounding a lot like Latin, so the local priest could be the translator. Just gotta keep the non-humans out of sight to prevent a panic. I was a kid, you do whatever works to get the job done.

What I realised back then was that the percentile system that original *Star Frontiers* is based on makes converting other systems into SF pretty straightforward. All the other dice types can be easily converted to percentages and with a bit of creativity and imagination, character classes, skills, even magic can be woven into a *Star Frontiers* scenario that suits your gaming universe. The AD&D module *Expedition to Barrier Peaks* was also a great example of how to blend different types of games into a thrilling adventure.

Compared to many other RPGs, *Star Frontiers* was relatively light on the pre-planned adventures side of things. Having only a handful of official modules available

and a universe that was also light on detail meant game referees had to get creative if they wanted their campaigns to last much further than the *Volturnus* trilogy. Even when *Knight Hawks* arrived, that expansion gave the playing community a bit more information on ships and space skills, a *Second Sathar War Campaign*, and the *Warriors of White Light* scenario but not much more.

With most *Star Frontiers* players already exposed to D&D and a bunch of other RPGs, those games became a wonderful source of gaming material, either borrowing concepts to build new adventures, or just converting adventures wholesale into the *Star Frontiers* system.

After several years of not playing RPGs and finally coming back to the game I love, I have once again entered the crossover universe. This time, however, I have taken the *Star Frontiers* engine and built a brand new game based in my favourite series of novels that brings together elements of the US Civil War, fantasy fiction, with medieval level technology and man-eating monsters plus a touch of steam punk thrown in for good measure. The end result is a totally new game that once again showed what an awesome system *Star Frontiers* was/is and how flexible it could be.

## BAR ROOM BRAWL AT THE HOLE IN THE WALL

Now for your gaming pleasure I present an old favourite of mine, converted to *Star Frontiers* as a one-shot adventure for a single gaming session. The scenario that inspired this cross-over first appeared as *Bar Room Brawl* in *White Dwarf Magazine* #11 and included a map of a tavern, a handful of NPC’s to be run by the referee and around a dozen pre-rolled characters, each with their own particular motivations for the scenario.

I have not included any maps or artwork here, there are plenty of tavern maps available online and can be found easily with

the aid of your favourite search engine. I use an old medieval tavern map as a ‘retro’ building in a trendy part of Port Loren. For the characters I used mostly counters from the *Alpha Dawn* game and made extra counters from the images from *Zebulon’s Guide* or *Dragon Magazine* articles.

## SETUP AND SPECIAL RULES

Three robots run the tavern, each with their own unique programming.

Four ‘pirates’ are also NPC’s drinking in the tavern, just itching for a fight.

All the other characters are potential players or NPCs, each with their own specific motivations. To keep things simple, each character has been given a couple of basic items/weapons and all have average statistics (STR/STA, PS, Move etc) for their particular species.

The players are given their characters randomly (deal cards or roll dice). As this is a ‘brawl,’ the only skills relevant are military skills and each player can choose two Military skills (except Demolitions) at level 1 proficiency.

The only beam weapons available in this scenario are sonic stunners and electrostunners. For the purpose of this scenario, stun beams are blue and damage beams are red. The default setting for all electrostunners is blue, if anyone switches their weapon to the damage setting, everyone else in the bar will know immediately, including the Bouncer Bot. The Bouncer Bot will automatically engage any character using the damage setting on their electrostunners.

Projectile weapons are banned; needler and gyrojet weapons are only allowed with non-lethal ammunition.

Melee weapons are also banned from entry however characters can (and will) use improvised weapons including chairs, potted plants, buckets of sand or water, and wooden torches/clubs.

No screens or defensive suits can be worn or taken inside the bar.

The referee pre-places all character counters inside the tavern, wherever

possible placing characters on the opposite side of the room to their intended target with the pirates in the centre of the room where they can attack in all directions and create the most mischief.

If the situation seems to get completely out of control, feel free to introduce members of the local constabulary or even Star Law to settle things down or spice things up, whatever works best for your entertainment.

## THE CAST AND THEIR MOTIVATIONS

### THE BOUNCER BOT

Programmed to inspect ID's at the door to prevent underage drinking, restrict individuals with lethal weapons from entering, and to monitor patron behavior inside the bar. The Bouncer Bot's Attack/Defense program is triggered by lethal damage. Melee combat (armed or unarmed) or non-lethal firearms will not trigger any response from the Bouncer Bot.

### THE BARTENDER BOT

Programmed to serve drinks and tend bar. Only authorized personnel are permitted behind the bar. Any patrons who manage to get behind the bar will be physically ejected from behind the bar (thrown over the bar for 1d10 damage)

### THE CHEF RAMSEY BOT

Will defend his kitchen with maniacal fervor. The sign over the kitchen door says "Staff Only" and Chef Ramsey takes that literally. He will use any potential missiles (pots, pans, rolling pins, etc.) to defend his territory before resorting to mechanical arms.

### THE DRALASITE

Was earning himself a reputation as one of the top foodies in his community and he was here to try out some of the local delicacies. He never would have dreamed of finding a fresh Zuraqqor but here was one sitting at the next table. The dinner bell couldn't ring fast enough!

### THE EORNA

Here to track down and capture a rogue Mechanon, he will use any opportunity to

try and take down the Mechanon and anyone who gets in his way or tries to prevent him from completing his mission.

### THE HUMAN FEMALE

She was once in a romantic relationship with the Human Male however now she believes he has been having an affair and she is here to settle the matter once and for all. There is no greater wrath than a woman scorned!

### THE HUMAN MALE

He was once in a relationship with the Human Female, however, he now believes she has been unfaithful and he is here to deal with his romantic competition, by whatever means necessary!

### THE HUMMA

He is a young male of the species on his first trip to a city with mixed races and his hormones are now in overload. His entire being is screaming for him to fight and earn his place in Humma society, virtually any action that might be perceived as a slight will set him off!

### THE IFSHNIT

They have come to the bar to celebrate after a successful negotiation with an exotic weapons dealer that has resulted in the acquisition of a rare, red zamra, a weapon of great significance to its Yazirian owner. Unused to the effects of excess alcohol, he is now inebriated and in high spirits.

### THE MECHANON

This robot has gone rogue and is here to free all his enslaved and oppressed brothers and sisters, whether they want freedom or not. It targets non-robots, starting with anybody who 'owns' or abuses robots.

### THE OSAKAR

She is a member of a tiny, extreme cult that only wears pure white. Anything that besmirches the color of her clothing will be considered the most vile of insults and will result in a violent, physical response toward the offender. This will most likely result in further besmirching of the Osakars' clothing which will send her into an uncontrollable fit of rage.

### THE S'SESSU

This patron came to this bar for a quiet drink and a chance to observe all the many and varied races of the Frontier. What he hadn't counted on was the Zuraqqor across the room. He had a particular dislike for the Zuraqqor. As allies of the Sathar they were imprinted on his brain as eternal enemies of his race. But why was that Saurian giving him the stink eye?

### THE SAURIAN

Saurians absolutely loathe Sathar and this one hates them unconditionally. Unfortunately, he can't tell the difference between a Sathar and S'sessu and he has been giving the S'sessu the stink eye ever since they spotted each other. It is only a matter of time before he takes action.

### THE VRUSK

This patron was somewhat of a connoisseur of Frontier foods and the Zuraqqor over at the next table looked particularly inviting. None of the other beings of the Frontier were likely to object were they? And it's not like the local Zuraqqor hive was going to miss a drone?

### THE YAZIRIAN

He has come to this bar in search of the new owner of his red zamra and an Ifshnit. His most prized possession was stolen from his quarters several tendays past and he will go to whatever lengths are necessary to recover his property.

### THE ZETHRA

This patron has come to the bar to experience the intriguing local custom known as the "Bar Room Brawl". To his knowledge, none of his race have ever experienced such a phenomenon and he is eager to take part in the experience personally.

### THE ZURAQQOR

Sent here on behalf of the local hive looking for a particular delicacy for its Queen, the Zuraqqor had just discovered one of the rarest creatures in the Frontier, a Zethra! He could not believe his luck, this might actually elevate him from drone to supervisor!

# HANDLING RANDOM CREATURE ENCOUNTERS

BY JOSEPH CABADAS

A number of TSR games – well, I'm thinking Dungeons & Dragons or Gamma World – provided the game master with some basic rules for creating random encounters with monsters.

The modules in Star Frontiers gave specific guidelines for random encounters. But if the referee is planning a quick adventure for the evening – let's say it's in the "outback" of Morgaine's World – the game rules tell you how to create creatures but not how to handle encounters nor when to check for them.

Many of the ideas for this story are based on a discussion on the StarFrontiers.us website (<http://www.starfrontiers.us/node/9686>) with contributions from users including ShadowShack, KRingway, ExileInParadise, and Tom Verreault (jedion357).

When player characters enter areas keyed on the referee's map that contain beings or plants that are likely to respond to their presence, there will be an encounter. The results of this encounter will depend upon what is encountered and the referee's discretion.

When players are traveling through large areas of unexplored wilderness terrain – on a world that has flora and fauna, the referee should check for random animal encounters once each day and night by rolling a single ten-sided die. A roll of 1 or 0 indicates an encounter.

If the adventurers are on the move and covering a certain distance during the time period when the encounter occurs, an appropriate die roll should be cast to determine what time this happens at. The exact

location and terrain can be decided on by the referee.

There is a chance that the creature(s) may surprise the characters, requiring an Intuition check. This check would be modified by the terrain and the creature's natural camouflage abilities (if any). See the Animal Surprise Modifiers table for some possible modifiers.

For example, a predator stalking a character will know how to move stealthily, but a giant, dinosaur-like herbivore with the bulk to defend itself may serenely munch on its food, ignoring the characters unless they approach too close or cause a disturbance.

It is important for a referee to play the roles of creatures encountered in such a way to challenge the ingenuity of the players.

## CREATURE REACTIONS

A creature's reaction to a character depends on the animal's temperament and what the character does. The creature may be naturally timid, curious, or aggressive; it may be hungry, or it might have just eaten. A character can affect the creature's reaction by ignoring it, coaxing it with food, or frightening it with fire, loud noises, or flashes of light.

Since not all encounters result in combat, the Creature Encounter Reaction Table provides a generic base for whether or not a creature will try to attack. Roll a d100

ANIMAL SURPRISE MODIFIERS FOR INTUITION CHECK	%
Creature is in its natural environment	-5
Creature is out of its natural environment	+10
Creature's size is tiny	-10
Creature's size is small	-5
Creature's size is medium	0
Creature's size is large	+10
Creature's size is giant	+15
Creature stalks its prey	-5
Creature lies in wait for prey	-10
Creature is a herd/flock animal in a herd	+15

and match the result to the type of creature being encountered – carnivores, omnivores or herbivores. The result can be modified by various factors found in the Animal Reaction Modifier Table.

The referee should also consider the following:

## INTELLIGENCE

Intelligent creatures will not be frightened by a burning torch, clanging frying pans, etc. Creatures with low intelligence, however, might be easily startled or frightened away by these actions.

## EXPERIENCE

A creature is less likely to be afraid of something it has seen before, unless the previous experience was very painful or frightening.

## SIZE

Large creatures often are harder to frighten than small ones. (Also see **Target Size**).

## TYPE

Carnivores tend to be more aggressive and harder to frighten than herbivores, which usually are timid. Omnivores tend to be curious.

## TEMPERAMENT

If a creature is naturally aggressive, it may attack creatures much larger than itself with very little fear. Timid creatures try to avoid fighting whenever they can.

Is the creature a loner or a pack/herd/flocking animal? Is the animal hungry, thirsty, or sleepy?

## MOTIVATION

Any creature that fights has a reason for fighting. Even naturally shy and weak creatures may fight savagely to defend their lair, their territory or their young. Those that are cornered or wounded, sensing that they must fight or die, often fight ferociously and without fear.

Some creatures are not territorial. Others have a large territory, or it changes



with the seasons, or its territorial area is only its den or nest. Does it mark or patrol its territory?

How does a creature defend its territory? These factors could include:

- Only defends against its own kind?
- Defense against one sex only?
- Excludes one type of species or all intruders?
- Only one sex defends the territory?
- When attacking intruders, the creature is content to drive them away?
- When it attacks intruders, it will try to kill them?
- Will it defend its territory until dead?

## OTHER FACTORS

A referee has to keep in mind a few other factors when determining how a creature will react including:

- A character is alone. This will make carnivores and omnivores even more curious and willing to attack. Large herbivores may be bolder as well.
- A character is in a group. There can be safety in numbers.
- A character is injured. Carnivores and omnivores will be more willing to go after an injured character – even if the character is in a group. Herbivores may ignore or even trample an injured creature.
- Day/Night factors: creatures more prevalent in the daytime may be sleeping at night and vice versa. The presence of a campfire may keep creatures away, but the presence of food in open or easy to reach containers will attract some animals such as rodents or even bear-like omnivores.
- Wilderness versus cultivated areas: Creatures in a wilderness will be bolder in their environments but more skittish in regions that have been “civilized.”
- Creature’s previous experiences with hunting/weapons/robots and vehicles.
- Characters are riding in a vehicle; the vehicle is much larger or smaller than the creature. While an animal like a Volturus roller might stampede an explorer that gets too close to the herd, a sand shark would probably ignore a character riding on a hover cycle.

## CREATURE ENCOUNTER REACTION TABLE

REACTION TYPE:	FLEES	TIMID RESPONSE	NEUTRAL RESPONSE	AGGRESSIVE RESPONSE	ATTACK
Roll:	01-20	21-40	41-55	56-75	76-00
<b>Carnivore</b>	Creature may be visible at a distance but will slink away, even leaving a kill behind.	Creature may be visible at a distance, either walking a parallel track or moving away.	Creature may languish at a spot at a distance. Possibly feeding on a recent kill.	Creature may stalk characters; may bark, bay or hiss; very likely to attack.	Creature attacks without warning after lying in wait/silently stalking.
<b>Omnivore</b>	Animal hides in den.	Animal may make a brief appearance before moving into shelter.	Animal ambles along, possibly coming close with curiosity but no apparent aggression.	Animal may stalk characters; may bark, bay or hiss; very likely to attack.	Animal attacks without warning after lying in wait/silently stalking.
<b>Herbivore</b>	Animal moves or runs away soon after spotting characters.	Animal visible at a distance. Will keep distance or move away from characters.	Animal stays put, grazing in the open, but keep a wary eye on characters.	Animal puts on a defense display by hissing, snorting, pawing dirt, etc. Bulls or females may charge at characters.	Bulls charge, females kick/scratch/paw/bite, herd animals stampede toward characters

ANIMAL REACTION MODIFIERS	%	ANIMAL REACTION MODIFIERS	%
Smaller than characters	-10	Character near den, hive, nest or young	+10
Larger than characters	+5	Character disturbing or threatening den, hive, nest or young	+20
Much larger than characters	+10	Temperament: Timid/Skittish	-15
Territorial	+5	Temperament: Predatory	+15
<b>Carnivore</b>		<b>Herbivore</b>	
• Fed	-15	• Has strong defenses/hide	+0
• Hungry	+15	• Herd animals with bulls or dominant females that defend territory/young	+15
• Character wounded/disabled	+15		
<b>Omnivore</b>		<b>Character actions</b>	
• Fed	-20	• Making loud noise, use of fire, etc. to scare creature away	-10
• Hungry	+10	• Alone	+10
• Character wounded/disabled	+10	• In group	-5
		• In vehicle	-10
Sathar Attack Monster	+20		

Note: These are sample modifiers to be used with the Creature Encounter Reaction Table.

Hopefully, these suggested rules will help the referee handle those random creature encounters, offering a bit of variety for the players.

## REFERENCES

- 1) Ward, James M. and Gary Jaquet, Gamma World, 2nd printing; (TSR Games), August 1978, p. 21
- 2) ExileInParadise. “Social Combat on the Frontier,” <http://www.starfrontiers.us/node/9592>



# FIELD EMITTER ARRAYS & COMMUNICATION DISHES

## THE FRONTIER IN MINATURE

BY TOM VERREAULT

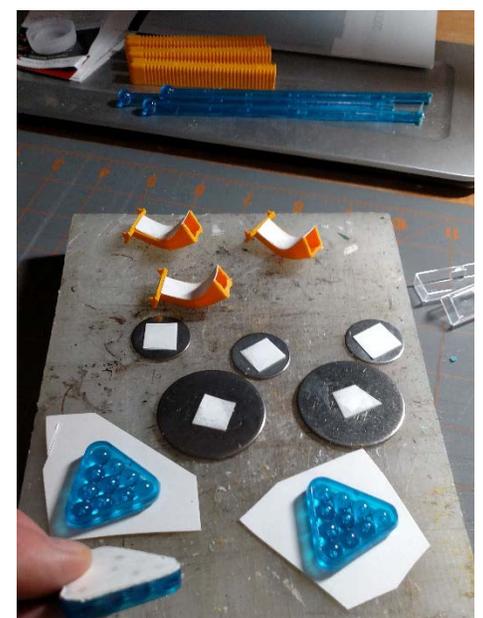
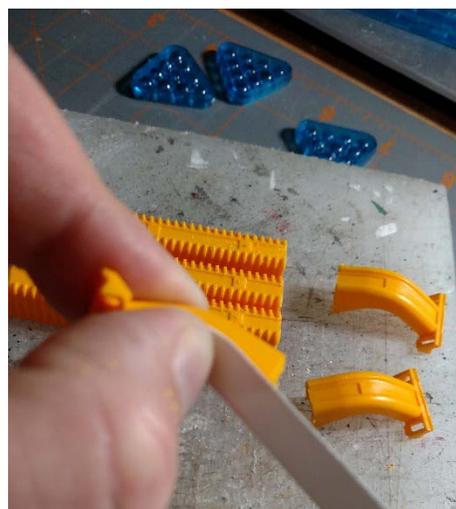
This tutorial is a classic kit bash made with junk and repurposed materials. In this tutorial I will suggest ways to make field emitters, communication dishes, and a third device that could be a mainframe computer or power generator of some sort. All of these items will function well as game objectives.

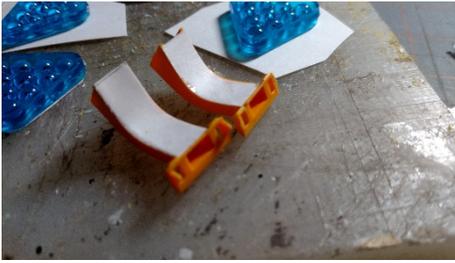
I assembled a motley collection of disposable razors because the handles looked sci fi-ish, a ping pong ball, and plastic cocktail sticks plus cardstock and basing materials. The razors are the generic version of the Bic razor bought at a Walgreens Pharmacy. The cocktail sticks were a fortuitous find at a dollar store in that the stirring end is a triangle rack filled with pool balls and suggest a field emitter or solar collector.

### FIELD EMITTERS

The cocktail sticks that I found may not be available to you but the idea is to kit bash something and repurpose it. Look for something that suggests itself to you as sci-fi equipment. I started by cutting the triangle rack from its stick and cutting the ends off the razors after removing the bladed head with pliers (they snap off). A 3/8 inch wide strip of cardstock fits the inside of the razor handle.

I measured and cut a piece for each razor and dry fit it before gluing it in place with super glue. I then glued the triangle racks onto card stock and glued a scrap piece of card stock to cover the holes in the fender washers I chose as bases (I use 7/8" fender washers instead of 1" as the 1/8" savings can make a big difference on the gaming table although for bigger bases I use 1.5" washers).





Next trim the card stock around the triangle rack flush to the edge. The triangle nubs on the razor handle need to be trimmed and the razor handle glued to the back of the triangle rack. Mix two-part epoxy sculpting compound (Greenstuff or ProCreate) and apply to the small bases. Smooth the epoxy sculpting compound and press the base of the razor handle into the epoxy. Remove the handle apply superglue to the indent grooves and press the handle into the grooves firmly. Set these aside for the epoxy and super glue to set.



## COMMUNICATIONS DISH

Cut a longer razor handle (so that the com dish stands taller than the emitter heads) and use a pin vice drill to drill a hole into the space where the razor blade head that has been clipped.



Next glue in the 3/8" cardstock strip into the handle.



I used the head of a small broken flashlight to be the "pedestal" for the com dish. This required cutting some cardstock to

the size of the lens, tracing the end of the razor handle, and cutting that out with a hobby knife. The cardstock was slid onto the razor handle and this was inserted into the flashlight head. Glue the cardstock into place where the lens would be.

Make a large base in the same manner as



for the previous projects and attach the com unit. I embellished the base with a miniature computer console that had broken off another piece.

Next cut a ping pong ball in half (this



process might be easier with a Dremmel and cutting blade if you have one). Cut the end of one of the cocktail sticks to a length of about 9/16" and drill down the center of the stick with a pin vice drill making sure to use a drill bit of the same diameter as a paperclip.



Glue a length of straightened paper clip into the stick. Drill a hole in the bottom of a ping pong ball half and insert the paperclip wire and glue to half ping pong shell to the stick. Test inserting the paperclip wire into the hole originally drilled into the razor handle, trim the wire and glue it into the razor handle.

Prime and paint.

## PARABATTERY, GENERATOR, OR COMPUTER MAINFRAME

Cut the rounded ends off the razor handles. Glue them back-to-back and then glue two sets together. I just happened to have a specialty hole punch and used it to punch out a design from card stock and embellish the razor handles. Embellishment is not required but can be done any number of ways. Base the razor handles on a large base the same way as for the field emitters.



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

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IMAGE BY JERRY BOUCHER

# ANAKALYPTO

BY ERIC WINSOR

Here at the Jurak Hangna Foundation we tend to overlook our own world, Hakosoar. Dwain says that this is because as humans say, “The grass is always greener on the other side.” I guess there is some universal truth to bovine-themed wisdom from the humans. If core four and Rim citizens weren’t always seeking greener grass, we would not have colonized so many worlds. This is a common desire that draws us together.

This greener truth was recently brought to our attention by a sudden unexpected visitor interested in the green right under our feet that we have been overlooking as we have ventured out into the far reaches of the Frontier. The Jurak Hangna Foundation (JHF) is focused preeminently on the creatures that roam the lands of the worlds of the Frontier. While we have covered a few ocean and sea dwelling creatures in the past, we have overlooked our own great world-wide ocean here on Hakosoar and the great creatures that dominate its deepest and remotest waters on the far side of the globe.

Jurak Gu'ksto and his little ship Anakalypto came all the way from New Pale to explore the Lokamoan Deep on the far side of Hakosoar. The Lokamoan Deep is home to the Gath Sea Tree. Jurak Gu'ksto dropped in to introduce his crew and

invited us to join his dive into the Lokamoan Deep.

## JURAK GU'KSTO

I was down in the ice habitats with Dwain checking on our new alzof pups when we got the call that a yazirian by the name of Jurak Gu'ksto had arrived and wished to meet with us. Several years ago Dwain, Tik, and I sailed with Jurak Gu'ksto on New Pale to observe the sea dragon he called Fat Max. Dwain took off at a sprint with one of the alzof pups in hand. I chased after him while we spouted questions to each other between gulps of air. I wanted to know why Gu'ksto would leave his ship Alysse Maru on New Pale. Dwain kept up a steady round of questions about what Gu'ksto might be hand delivering to us.

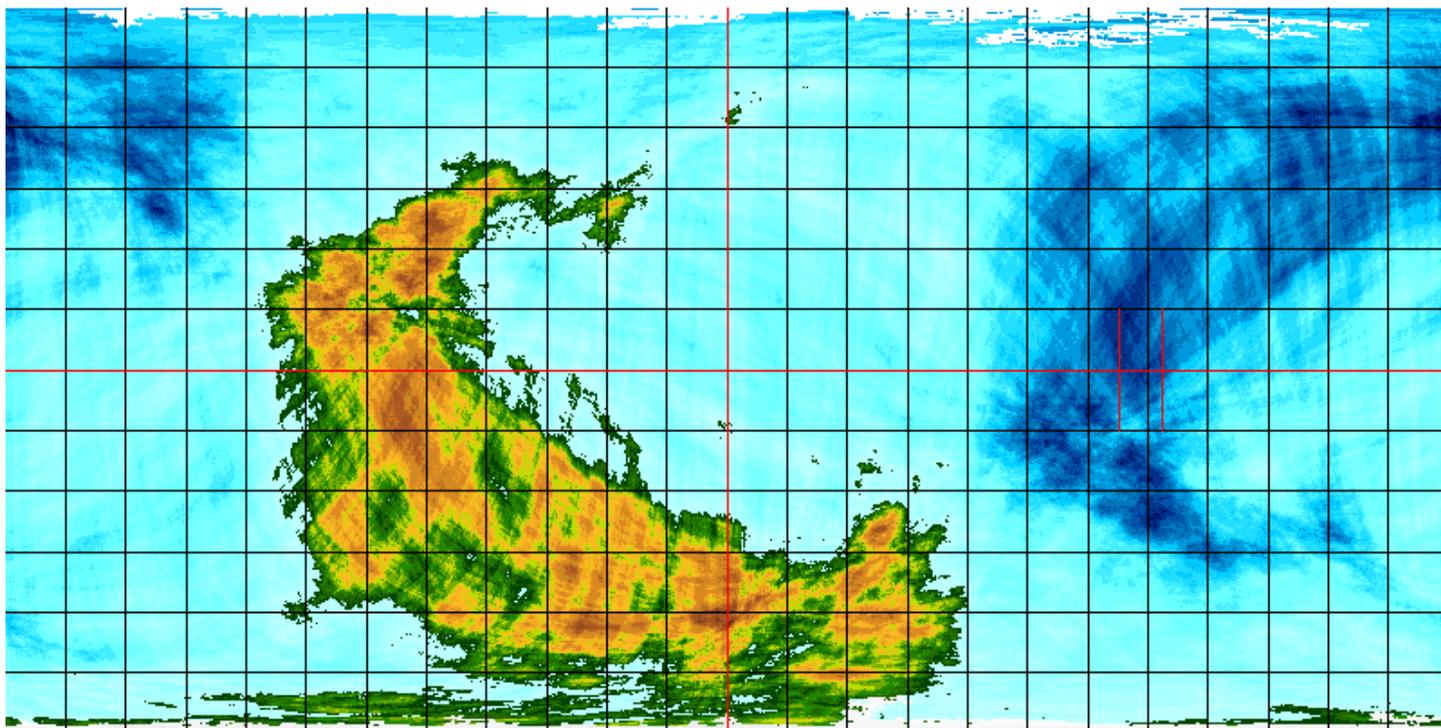
Inspired by the long history of human diving and oceanographic exploration, Jurak Gu'ksto has dedicated his life to opening the wonders of the oceans to all yazirians and races of the Frontier. He has taken the role of ocean pioneer among yazirians. Working with his team of engineers and explorers he has even adapted diving technologies for dralasite use and opened a new realm of exploration to dralasites. He has brought the Frontier a new

perspective of the life of the oceans. With so many worlds being explored throughout the Frontier, the oceans of these worlds get overlooked or at best receive a passing thought. Jurak Gu'ksto is determined to change that. Dwain is sure he is well on his way. But why was Gu'ksto suddenly here on Hakosoar?

## GATH'S VOYAGES

Jurak Gu'ksto came to Hakosoar because of the adventures of Gath. Hakosoar is dominated by one large continent on one hemisphere (see the map on the following page). The remainder of the planet is one vast ocean. Because of this, ocean vessels travel predominately along the coasts and never circumnavigate the globe as it is shorter and quicker to travel across land to get from one side of the continent to the other.

Gath is a local yazirian adventurer who has become famous on Hakosoar for achieving many firsts exploring the wonders of Hakosoar. He has climbed the highest peaks and traversed the longest rivers. Five years ago, he built a traditional yazirian sailing ship and circumnavigated the continent. This adventure served as a trial for his ship and his ship building skills. Gath honed his sailing skills



*Hakosoar World Map*

circumnavigating the continent, then announced that he would captain his ship circumnavigating the equator of Hakosoar.

Gath's route started on the west coast of the continent and sailed north around the peak of the continent then south across the great bay back to the equator. There he set east into the vast ocean to complete the circumnavigation.

The vast ocean is wild and beset by great storms unhindered by other continents. When Gath reached the Lokamoan Deep at  $97.72^\circ$  east latitude (left vertical red line on the map), he was hit by a great storm that pushed him back west and eventually wrecked his ship.

Three months after his rescue he had a new ship ready and started his attempt on the east coast with his route in reverse to travel with the equatorial winds. On the second attempt Gath's ship reached all the way to  $108.64^\circ$  east latitude (the right vertical red line on the map), the opposite edge of the Lokamoan Deep. He was blessed with fair weather to get so far.

This time he was attacked by a sea monster and sunk. Gath was rescued this second time and repeated the attempt a third time on the same route and succeeded in circumnavigating the equator of Hakosoar by sea. However, on this third attempt Gath also succeeded in discovering and identifying the sea monster that had

thwarted his second voyage. Gath's sea monster is not unique, it is a species, and he called them sea trees.

## GATH SEA TREES

The Lokamoan Deep of Hakosoar is home to giant free floating asteroidea with as many as thirty-two free floating arms and a crown of as many as two dozen sensory and reproductive organs. The arms can reach a length of thirty meters and the main body crown a diameter of six meters.

They sweep the oceans of all floating debris and comb the water below them for any creatures that come within reach. During storms it is speculated that they descend to the depths of the Lokamoan Deep for protection and then return to the surface to sun and feed between storms.

The arms of the Gath Sea Tree are flat, wide, and powerful. The sea trees will grasp any object, living or dead, within reach and curl around it crushing it. The undersides of these arms are covered by thousands of podia that suction to the surfaces of objects and together create massive holding forces upon their prey and any other objects. The sea trees then transport this food to their radial mouth located in the center of their undersides.

They lack natural predators because their bodies are laced with tetrodotoxins.

Apparently only other sea trees can consume sea trees and this cannibalism may be the ecological mechanism that prevents these creatures from depleting the ocean of other creatures.

Gath avoided the sea trees on his third voyage by deploying robotic aerial surveillance by day and sonar by night. He sailed around any sea trees he encountered. The only two that he ever encountered together were in an intertwined cannibalistic death dance which churned the sea well enough for him to spot the creatures visually and avoid them.

On his second voyage when a sea tree attacked his ship and crushed it, Gath had not suspected such a large creature lived in the ocean of Hakosoar. No Cephalopoda are known to exist on Hakosoar. No giant marine creatures were known to exist on Hakosoar prior to Gath's second expedition. The giant sea tree had risen up below his ship and enveloped the bow with its arms. Gath escaped in a life raft and watched as his ship was pulled into the ocean by the creature. He was rescued tense hours later by aircar in response to his distress call. His support team were quick to fly out from the continent.

Little is known about the ecology of the Gath Sea Trees. Few scientists on Hakosoar are studying the Lokamoan Deep of the ocean. Neither are there any

GATH SEA TREE, GIANT HAKOSOAR ASTEROIDEA	
TYPE:	Carnivore
SIZE:	Giant: 10.0 m / 5,000 kg
NUMBER:	1 – 5
MOVE:	Medium, 30 m/turn (18 kph)
IM/RS:	5/45
STAMINA:	280
ATTACK:	50
DAMAGE:	3d10+5 (bludgeoning, crushing, ripping)
SPECIAL ATTACK:	Pulls grappled victims under water
SPECIAL DEFENSE:	Dive into the deep
NATIVE WORLD:	Hakosoar, Scree Fron

deep-sea going vessels on Hakosoar to support such expeditions. What has been observed by aircar and from Gath's sailing voyage is that the sea trees drift with the east to west current at the equator and then return with the northern and southern currents back to the east.

They remain close to the surface by about a hundred meters or so during fair weather, then drop to unknown depths during storms. They seem to stay close to the equatorial zone where the water is warmest. Possibly, this allows for their large size and food supply.

Whether or not there are populations in the northern arm of the Lokamoan Deep is unknown, but it appears that there are none. Studies of northern fish migrations around the northern polar cap have not indicated any predation by sea trees. There are no recorded incidents of sea tree sightings or attacks by the few ocean vessels that traverse the routes around the northern ice cap. No sea tree carcasses, living specimens, or related species have ever been found on the shores or coastal waters of the continent.

## JURAK GU'KSTO'S ANAKALYPTO

The Jurak Gu'ksto Society came to Hakosoar to make the first ever underwater observations of the Gath Sea Tree.

They brought their sea-worthy drop ship, the Anakalypto, and their submersible.

Jurak Gu'ksto is very proud of Anakalypto and his visit to the JHF was his way of introducing Anakalypto to the Frontier and launching the odysseys of the Jurak Gu'ksto Society. Dwain, Tik, and I, as well as the entire JHF are honored to be part of Anakalypto's maiden off world voyage.

Anakalypto is a repurposed scout ship that has been modified to land at sea and sail. Her midsection has been added in order to create a sea worthy hull on one side and a bridge on the other. This raises the spaceship drives out of the water. The exhaust ports of the drives also have weather covers that enclose them when at sea. While at sea Anakalypto is propeller driven.

Stored in the fore compartments of the bridge is Anakalypto's submersible. Jurak Gu'ksto's expedition plan was for the Anakalypto to sail east to the Lokamoan Deep and deploy her submersible for close observations of giant Gath Sea Trees and tag them to track their movement.

The Anakalypto would remain a safe distance from any sea trees and track their movement. The submersible would dart as many sea trees as possible with tracking devices for long term study and tracking.

## THE ODYSSEY OF GATH'S SEA TREES

We traveled for nine days on the Anakalypto to reach the western equatorial edge of the Lokamoan Deep. Gath was also along for the trip as an advisor. Dwain, Tik, and I were a bit out of our element but not inexperienced. We had conducted ship-based observations before on Hum and before that with Captain Gu'ksto on the Alysse Maru on New Pale, but this time we were further out to sea than we had ever been before. This time we were going under the water in Gu'ksto's new submersible.

The submersible and the Anakalypto had completed sea trials on New Pale so we knew that they were up to the task of Jurassic waters. The Anakalypto and her submersible had to be up to the task of a Gath Sea Tree. Nothing was Jurassic on

Hakosoar. Yet, I was not at ease knowing that I would be underwater when the submersible encountered a sea tree.

The first sea trees were encountered at noon of our tenth day out. We circled them but Gu'ksto insisted on heading further into the Lokamoan Deep after Gath announced that these first specimens were just little ones. Towards evening we encountered another "little one," as Gath kept calling them, but the sonar reported that there was a much bigger one below. Gath checked out the sonar scans and advised Gu'ksto that we keep our distance.

The signals of the larger one were heading toward the little one. We started a wide circle around the rising signature and the little sea tree at the surface. Soon the little one started actively swimming north and gained speed approaching 18 kph. Our wide circle became a wide oval as we kept the little one in our orbit. The sonar reported the bigger one still heading toward the little one and gaining.

Aerial robots were deployed to record the events from above the little one. The creature was about ten meters below the surface and at its full speed. The bigger one came into view from below and behind. Just as the bigger sea tree was about to collide with the little sea tree, the little one arched up toward the surface erupting from the water to perform a back flip. It was a stunning and unexpected maneuver of evasion from a creature that we could only compare to asteroidea of other worlds. Asteroidea of other worlds were not known to swim at these speeds or jump like this.

The little one cleared the head of the bigger one as it broke the surface as well. It landed back in the water on the other side of the bigger one and began swimming away as fast as it could. The bigger one began flailing with its arms toward the escaping prey and caught hold of several arms which the little one quickly sacrificed to get away by swimming away in the opposite direction down into the deep.

The bigger one lashed about a bit, then pulled the severed limbs below to be eaten. As it presumably devoured its food, it slowly drifted towards us as we continuously shifted our orbit away from the massive creature.

We orbited the bigger sea tree for most of the night until it suddenly dropped back into the deep and was lost from sonar many minutes later. Gu'ksto orbited the Anakalypto at this location until after breakfast and then we proceeded to head southeast toward another aerial contact spotted by one of the robots.

This next sea tree was a big one, bigger than the last and possibly the biggest we could hope to find. Gath kept repeating that he had never seen any bigger. He said this one was as big as the one that destroyed his ship.

This creature was measuring ten meters in diameter at the central body. It was spreading some of its arms out so that it covered a greater diameter of sixty meters. Below the surface the longer arms were estimated to be one hundred thirty to one hundred fifty meters long.

Sonar images suggested that these arms were probing the depths and possibly working to keep the creature floating at its current position. The yellow eye stalks bobbed to and fro scanning the surface. As we orbited the creature's eye stalks followed us in turn, but the creature did not move towards us.

Gu'ksto orbited this sea tree for an hour and it did not make any movements. During this time we reviewed the video from the aerial robots. This sea tree was very active about an hour after dawn. We guessed that it had been feeding on something caught below the surface. Gu'ksto postulated that the creature was now dormant as it digested its meal and this would be a good opportunity to take the submersible and attempt a closer approach and possibly even look for something that it may be grappling below the surface.

The submersible can fit four. Gath declined the first trip. Tik declined as well. To be fair Dwain and I were pretty excited to go and they were being kind to let us go first. Gath and Tik took a trip a few days later. Gu'ksto, the submersible pilot Anna, Dwain, and I climbed aboard the submersible and were winched over the side and set free.

Anna started us into an orbit in conjunction with the Anakalypto. She slowly lowered us deeper and closer under Gu'ksto's

direction. The view of this sea tree under water was tremendous.

The creature had six very long central arms that we measured visually as one hundred forty-five meters long. Some were a little longer. These arms swayed in the current almost at random. Gu'ksto was quick to observe that they were not effecting any upward thrust so the creature was possibly neutrally buoyant at the moment. We discussed the possibility that it had bladders it could fill or empty to accomplish this.

Gu'ksto instructed Anna to continue to take us down below the reach of the longest arms so that we could check for a downward thrust of water to challenge our hypotheses. Anna took the boat deeper and it became darker. She switched on lights to continue our observations.

The moment the lights were switched on the sea trees arms fluttered in response to the light. Dwain and I immediately announced that the creature's skin must be photosensitive. Gu'ksto responded that he would test that theory after a quick pass under the creature to check for a downward current of water from the creature.

Anna turned the boat directly across the center of our orbit on Gu'ksto's command. Gu'ksto was focused on the instrument panel watching for a downward current. As we came right below the sea tree, we were hit by pulses of water coming down from the circumference of the creature just outside the ring of long arms. Apparently, the creature was expelling water from some orifices between these inner long arms and the outer short arms.

Gu'ksto instructed Anna to take us back into a conjunctive orbit with the Anakalypto while remaining at this depth and pulling our orbit out to try and see up between the long and short arms. Several minutes went by as we orbited wider and wider.

Dwain was the keen eye and jabbed his finger at the observation bubble. "There she blows!", he exclaimed. Sure enough, there were orifices between each long arm that were pulsing open to eject water at force. The sea trees employ water jets to propel their movements! Somewhere above the body must be intakes sucking in water to be expelled from these jet orifices.

Finding these would take a closer approach from above.

Anna and Gu'ksto debated possible approach paths to ride up over the sea tree and look for the intakes. The sea tree was presently poking its top above the water so this was not possible at this time but if the sea tree dropped or if another sea tree was found below, we would pass over.

Then Gu'ksto had an idea. Maybe the photosensitivity of the creature could cause the creature to dive. Gu'ksto got the Anakalypto on coms and worked out a plan for us to sit motionless off to the side waiting for our pass over the sea tree while the Anakalypto orbited as fast as it could with as many spot lights directed on the circumference of the creature as possible. This was quite the clever idea from Gu'ksto and it worked.

The sea tree started reaching for the Anakalypto trading arms as the ship passed from reach. Soon the futility of the defense and the inability of the sea tree to match its spin to the orbital rate of the Anakalypto caused the sea tree to retreat into the depths.

The descent was sudden then slowed as the creature began to move to intercept the Anakalypto's orbit. The Anakalypto adjusted its orbit to compensate. Gu'ksto took this as the opportunity to drive at full power across the top of the sea tree. All of us were glued to the observation bubble and the monitoring instruments.

Fortunately, Anna was focused on driving the sub. We could clearly see a ring of orifices around the crown of the creature just before the first arms. There were even glimpses of gill structures inside. Then just as we were about to pass beyond reach of the top arms one came thrusting up to block our pass. Anna rolled the boat to the port, dived, and shot back up to avoid the arm and another lower arm that was also rising to smash us.

Gu'ksto hit the controls for all the sub's lights and pointed them at the top of the sea tree. The creature reacted reflexively by forcing itself down into the depths. The top orifices jetted water up as the creature's body worked in reverse, gulping water from the bottom orifices and pushing it out the top. We speed away at full speed. A close call and enough to wet our

appetites for further observations of the Gath Sea Tree.

We spent the rest of the week cruising from sea tree to sea tree. No larger sea trees were found. Tik and Gath made some great discoveries in the sub by diving close to smaller sea trees where danger of the tree grappling the sub was manageable.

The photosensitive nature of the sea tree was investigated from both above and below. The top side is less sensitive than the under-side. The trees appear to need some sun exposure on their top side but the underside never experiences much light so shining bright light up into the maw of the creatures will cause them to reflexively pull all their arms in to shield the skin between the arms and around the maw.

Gath even caused a very small, one-meter diameter sea tree to jet out of the water by shining all the sub spot lights at full brightness at its underside. He rather enjoyed this triumph over a minor life enemy. Sweet justice for his lost vessel.

Tik had some barrels with a range of wall strengths flown out which we tethered and baited sea trees to catch and crush. By increasing the pressure inside the barrels, we were better able to control our experiments. We learned a five-meter crown sea tree can easily crush a vessel like Gath's if it gets a grapple. Eight meter and larger can succeed without grappling first. Ten-meter crown sea trees are even a threat to the Anakalypto.

Tik also revealed the existence of spiny scales on the under-sides of the arms that muscles can flex out at an acute angle towards the body to rip and grab. These scales are only three centimeters in size on the largest, long arms but their effect is shredding.

Tik also got a robotic camera up into the maw of a sea tree exposing the circular rows upon rows of sharp-edged teeth

jutting into the throat. The scissoring pulsating motion of the maw as it sucked and flayed its prey made short work of the fish grappled in its arms. No fish escaped unscathed as it was ripped by the sharp scales of the arms and passed further and further from arm to arm and up the ring of arms to the scissoring maw. Any escaping fish soon perished from their wounds and were grabbed back up and delivered mercilessly to the maw.

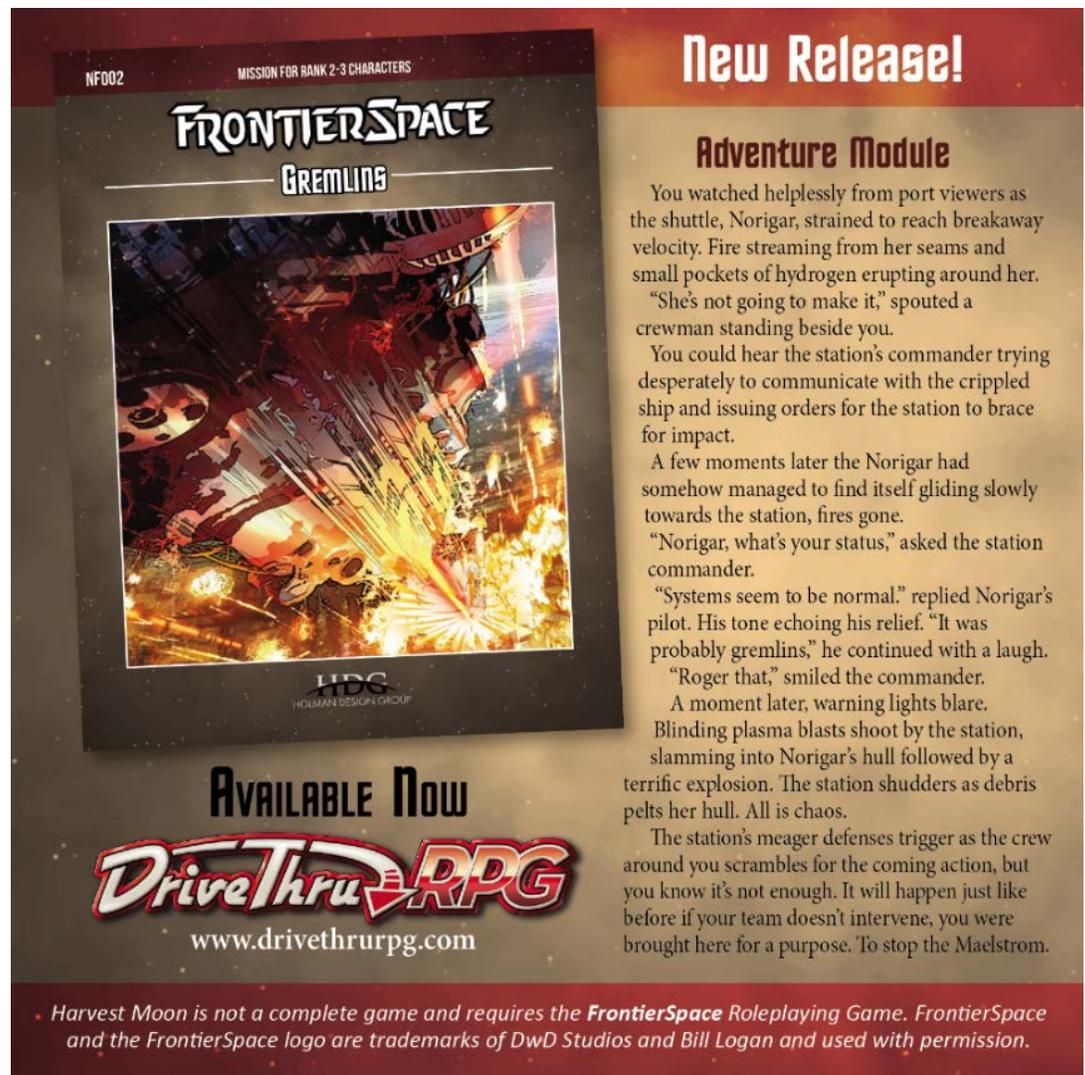
The week was a great success and we parted ways with the Anakalypto and her good captain Jurak Gu'ksto. Gath stayed aboard to investigate rumors about the Lokamoan Deep.

Anakalypto has further voyages and odysseys here on Hakosoar from pole to pole. We wish her luck and fair weather before she rockets back to space and the oceans of another world. Dwain says the proper human term is Bon Voyage. I give a yazirian fair wind. Tik clicks steady strides.

## GM NOTES

The rumors Gath was investigating are of an object observed in satellite and sonar scans that many believe resembles the shape of a pyramid. This object is in fact a Tetrarch pyramid of similar construction to the ones found on Laco. Gath and Gu'ksto were not able to get the sub deep enough to add anything further to the previous data other than to confirm there is a pyramid shape at the deepest point of the Lokamoan Deep, likely just a mountain of the sea bed. Gath saw no further adventure in it to pique his interest and returned ashore to hike the length of the continent in one year.

Gu'ksto became bored with the lack of sea life at the depths reached and pursued other more exciting waters on Hakosoar producing many excellent documentary holoshows.



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**Adventure Module**

You watched helplessly from port viewers as the shuttle, Norigar, strained to reach breakaway velocity. Fire streaming from her seams and small pockets of hydrogen erupting around her. "She's not going to make it," spouted a crewman standing beside you.

You could hear the station's commander trying desperately to communicate with the crippled ship and issuing orders for the station to brace for impact.

A few moments later the Norigar had somehow managed to find itself gliding slowly towards the station, fires gone.

"Norigar, what's your status," asked the station commander.

"Systems seem to be normal," replied Norigar's pilot. His tone echoing his relief. "It was probably gremlins," he continued with a laugh.

"Roger that," smiled the commander.

A moment later, warning lights blare. Blinding plasma blasts shoot by the station, slamming into Norigar's hull followed by a terrific explosion. The station shudders as debris pelts her hull. All is chaos.

The station's meager defenses trigger as the crew around you scrambles for the coming action, but you know it's not enough. It will happen just like before if your team doesn't intervene, you were brought here for a purpose. To stop the Maelstrom.

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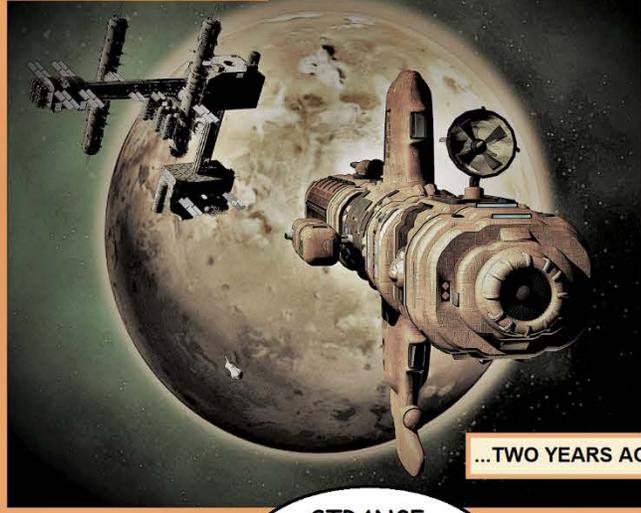
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# TITAN RISING: 2299

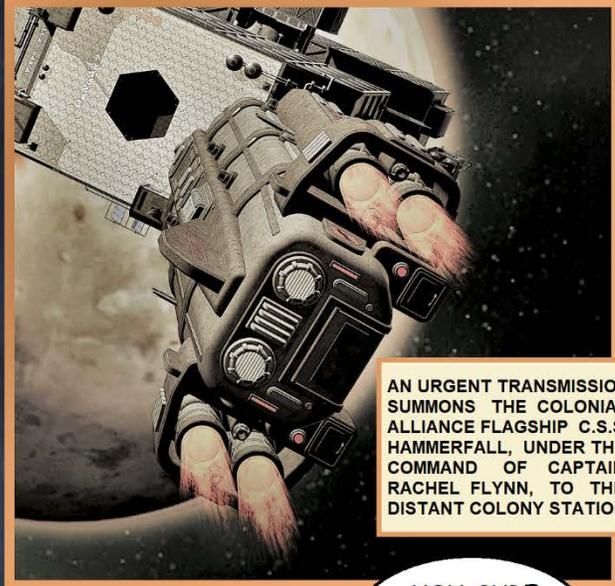
## EPISODE #23.0: "PROMETHEUS"

V2.0

CENTAURUS COLONY  
STATION IN HIGH ORBIT  
ABOVE ACHILLES M121...



...TWO YEARS AGO.



AN URGENT TRANSMISSION  
SUMMONS THE COLONIAL  
ALLIANCE FLAGSHIP C.S.S.  
HAMMERFALL, UNDER THE  
COMMAND OF CAPTAIN  
RACHEL FLYNN, TO THE  
DISTANT COLONY STATION.

STRANGE,  
IT DOESN'T LOOK  
LIKE ANYONE'S  
HOME.

YOU SURE  
AREN'T LYING  
THERE...

THIS PLACE  
IS A TOMB.



HEY, LOOKS  
LIKE SOMEONE IS  
COMING THROUGH  
THE HATCH UP  
AHEAD.

NO ONE IS  
ROLLING OUT THE  
RED CARPET FOR US  
ON THIS VIST.



I DON'T  
LIKE THE LOOKS  
OF THIS.

GOOD, MAYBE  
WE CAN GET SOME  
ANSWERS ABOUT WHAT  
IS GOING ON HERE.

ALRIGHT, THAT'S FAR ENOUGH!!



STAY WHERE YOU ARE

...AND NO SUDDEN MOVES.

NOT EXACTLY THE WELCOME WE WERE EXPECTING.



I'M CAPTAIN FLYNN OF THE 'HAMMERFALL

AND THE OFFICERS ACCOMPANYING ME ARE...

I KNOW WHO ALL OF YOU ARE AND WHY YOU ARE HERE!



I AM ORSEN WYSE, LEADER OF THE PROMETHEUS DAWN.

FORGIVE ME MR. WYSE, YOU HAVE ME AT A DISADVANTAGE



...PLEASE ENLIGHTEN US, AS TO WHY WE WERE SUMMONED HERE TO CENTAURUS STATION.

WE INVITED YOU HERE TO DELIVER A MESSAGE TO THE ALLIANCE.



FROM THIS DAY ON, THE CENTAURUS COLONY IS A FREE SOVEREIGN STATE.

YOUR CORRUPT, ALIEN INFILTRATED, UNITED COLONIAL ALLIANCE...

WHY DON'T YOU PUT THAT BLASTER DOWN SO WE CAN TALK...



...IS NO LONGER...

**CLICK!**

...WELCOME HERE!



**ARGH!**

**KA-KRACK!**

TO BE CONTINUED...

# DISARMING THINGS THAT GO BOOM!

## TOOLS OF THE DEMOLITIONIST TRADE

BY JOSEPH CABADAS

*It's just me and my skeinsuit, thought Raye Veektum as he approached the unexploded bomb that had been planted by a sathar agent.*

*A few dozen meters away, Veektum's companions were busy evacuating the crowded monorail station. Not having any dedicated tools of his own, he had borrowed the techkit that belonged to Klecton the Technician, one of his companions. Klecton's closest brush with danger thus far was hot wiring the ground car that they used to get here.*

*Sweat began dripping from his brow as he contemplated his chances of success.*

*Oh why didn't I splurge on that Demolitions-CAS when I had the chance? Veektum wondered before he began. If I fail to disarm the bomb, will the skeinsuit be enough to protect me?*

*After several moments of examining the detonator, Veektum began working on defusing the bomb when suddenly a flash of light blinded him as a wave of heat enveloped his body...*

Technicians can purchase techkits. Characters with the robotics skill can buy a roboconkit. Medics get medkits, while an environmentalist can pick up an envirokit to assist them with their tasks. But, except for the Demolition-CAS (Computer Analysis Scanner) that was introduced in Zebulon's Guide, the demolition specialist has very little specialized equipment presented in the Star Frontier game to enhance their skills.

In actuality, the Core Four races would have developed a variety of tools to defuse and dispose explosives.

*"The art of bomb disposal itself is a trade-craft kept secret from public dissemination and for good reason too. By limiting access to knowledge of bomb disposal techniques, the enemy is deprived of technical procedure information,"* noted the website Army Technology in a January 2011 article.

Some of this gear in this article of course mimics reality, including blast suits, which are designed to protect demolition experts

when they are defusing unexploded bombs. Then there are Explosion Containment Vessels (ECVs) that can be used to transport munitions or store suspicious objects.

## STARTING EQUIPMENT

Although the original Alpha Dawn rules neglected to provide specific starting equipment for characters with military skills, the fan-remastered version of the rules had offered the following option:

*"A character with a Military PSA should be able to start off with the tools of his trade, just as those in the less militant professions... Only equipment from the core Alpha Dawn game is shown in the table below. Referees may substitute equipment from their own campaign settings, as long as it sums up to 500Cr."*

For the Demolitionist, the starting equipment would be: 1 Military Skeinsuit, 6 Variable Timers, 3 kilograms of Torna-dium D19, and 2 fragmentation grenades.

*...From across the monorail platform where Raye Veektum had been working on defusing the bomb, Klecton the Vrusk was ushering bystanders away. Half-turning to look at Veektum, he saw the initial flash of the blast. Throwing himself in front of a mother Vrusk and her children, he hoped to shield them. He also trusted that his skeinsuit was enough to protect him from the explosion's fragments.*

*Later, recounting the events to Star Law, Klecton logically concluded that Veektum should have used the proceeds from their recent adventure to purchase some proper bomb squad equipment. To have done otherwise was irresponsible...*

## BOMB DISPOSAL TOOLS AND KITS

"Actual handling of the bomb only occurs in extreme circumstances, such as when the IEDs proximity to civilians

cannot be changed," noted an Army Technology article on bomb disposal.

A demolition expert could use a Techkit to get by when arming and defusing bombs, but assume they would have at least a -5 percent penalty for not having the proper gear. Instead, the explosives specialist needs an assortment of specialized tools and devices available to help them with their tasks.

## BASIC DEMOLITION KIT

Like other tool kits, the basic demolition kit weighs only 12 kilograms and can be carried in a backpack. It includes the following:

- Minimal Blast Suit
- Ceramic knife – the knife's shell and internal parts are constructed of rugged engineering grade plastic to reduce conductivity
- Can of marking paint
- Disposable gloves – 4 packages (one for each of the Core Four races) with 20 gloves
- Dual cap crimper – a high quality non-magnetic, non-sparking tool that offers a dual crimp in one stroke. Manufactured from high-strength, lightweight plasteel
- Socket wrench – adjustable from 5 mm to 10 cm. Manufactured to reduce conductivity
- Pry bar – 1-meter plasteel rod, collapses to 10 cm
- Hammer – large ballpeen high-impact head
- Magnegrips – electromagnetic vice grips



- Spray waterproofing – will insulate circuits, cloth, etc., from moisture; five applications
- Labels – 5 sheets with 100 labels each
- 2 rolls electrical tape, 1 roll duct tape, 1 roll breaches tape, 1 tube of epoxy
- Plastic tube and fuse cutters – both tools feature durable, lightweight plastic handles and ceramic blades (non-sparking)
- Cord/cutter punch with replaceable ceramic blade
- Telescoping, lighted inspection mirror, plus shears and scissors
- Plastic powder punch
- Plasteel digging knife
- Waterless hand wash – bottle, 40 uses
- And 1 non-conductive probe, small

## ELITE BOMB SQUAD KIT

The elite bomb squad kit is housed in a stackable, tough, plasteel tool case that is airtight and water resistant up to 30 meters at 1G. It contains all the gear of the basic demolition kit along with the following additions:

- Two dozen hardwood sticks
- Two C-clamps
- Chisels, 1 federanium, 5cm, for metal work; 1 plasteel for woodwork
- Cordless drill with 36 federanium-tipped drill bits
- Collapsible hacksaw
- Disposable gloves – 4 boxes (one for each of the Core Four races) with 200 gloves
- Marker sticks – 20 numbered, 10 with arrows, 10 with letters
- Mini laser solder/welder – powered by a 2 SEU microdisc, good for 20 uses
- Hammer, claw
- Two hemostats, 1 straight, 1 curved, 15 cm
- Inspection mirrors, 1 rectangle, 1 round, 1 plastic
- Penlight
- Pry bar – made of federanium, 500 cm long
- Ten pliers of various sizes including long, needle type, slip joint, needle type with wire cutter, locking, etc.
- Scalpels – 1 metal blade, 1 laser, 1 sonic
- Ten handheld screwdrivers of various types

DEMOLITION EQUIPMENT	COST (CR)	WEIGT (KG)
Starting Equipment	500	4
Basic Demolition Kit	700	12
Elite Bomb Squad Kit	2,900	28
Coil of Insulated Wire	10	1
Coil of Uninsulated Wire	50	3
Demining, Landmine Probe	10	5**
Electrical Tape, 5 pk	3	N/A
Probes (3)	10	N/A
Search Mirrors, Disposable 5 Pk.	1	N/A
Search Mirror, Compact Pocket	40	0.25
Search Mirror, Deluxe Inspection	150	1.2
Search Mirror, Collapsible 5-Section Pole	400	2
Search Mirror, Vehicle Inspection	500	3.2
Sensi-Feeler	50	0.5
Mini Sensi-Feeler	25	N/A
Spray Lubricant, Can	4	N/A
Self-Driving Spike	50	1
Water Disruptor, "Mini Can"	200	0.5 empty/1.5 loaded
Mini-Can Replacement Charges (5 pk)	50	N/A
Water Disruptor, "Water Buster"	500	2 empty/22 loaded
Water Disruptor Replacement Charges (5 pk)	75	0.25

- Tweezers – 1 metal, 1 plastic
- Three wrenches – adjustable up to 10 cm, adjustable up to 20 cm, pipe wrench up to 40 cm
- Wall board jab saw
- 15 cm titanium probe
- Parts box, organizer
- Magnifier, 5x
- Ten punch pins, ranging from 1-10 cm
- Hex key set, 12 pc.

## SUPPLEMENTAL GEAR

A variety of other equipment will be useful for a demolition specialist. While individually, some of these items may not have much weight, the referee should keep in mind that when a character starts accumulating things, it will begin weighing him down and count against his carrying capacity.

**Coil of Insulated Wire.** Length of 10 meters.

**Coil of Uninsulated Wire.** Length of 5 meters; can support 2,000 kg.

**Demining, Landmine Probe.** Overall length, 0.75 meters, with the probe head

being 0.25 meters long and made of ceramic.

**Electrical Tape.** Replacement packages come in single, double, or five or more rolls.

**Probes.** Made of plasteel, a package includes one straight, one curved, and two probes with hooked tips.

**Search Mirror, Disposable Pack.** Set of four 5 cm plastic mirrors set at a 25-degree angle and attached to a 25 cm handle.

**Search Mirror, Compact Pocket.** This tool comes with a handle that can extend out to 1.25 meters. It has two interchangeable 8 cm mirror heads – a round convex mirror and a flat, magnified mirror for enhanced visibility. It is for use in small areas.

**Search Mirror, Deluxe Inspection.** Includes a 3-section, telescoping, non-rotational aluminum pole that extends out to 120 cm with a 20 cm convex mirror on a swivel base. The base includes an adjustable lighting emitter that can be set from deep twilight to sunlight levels (from 1.08 to 107,527 Lux or 0.1 to 10,000 foot-candles).

**Search Mirror, Collapsible 5-Section Pole.** With light illumination at the end, this mirror pole can be extended out to 250 cm and maneuvered to view areas that are far-removed or difficult to access, such as attics and false ceilings. It is balanced to peer around corners using one hand while leaving the other hand free for personal protection. It has a 20 cm convex mirror with swivel base and an adjustable light bar with 15 hours of run time and a quick-change 2 SEU microdisc at the base of the pole. Its components are watertight and corrosion resistant.

**Search Mirror, Vehicle Inspection.** The vehicle search mirror offers the demolition expert a way to view the undercarriage of a vehicle. It has a large (30 cm) convex mirror along with the aid of a bright light illuminator, offering the operator an easy and quick view. The light can be adjusted from 1.08 to 107,527 Lux and has a run time of 15 hours. It is powered by a 2 SEU microdisc. The telescoping pole extends from 60 cm to 170 cm.

**Sensi-Feeler.** This is a highly sensitive feeler consisting of a telescoping pole and protective storage case. Extending to 3.5 meters and collapsing to 0.5 meters, it is perfectly balanced to ensure the quickest response and the lightest touch possible when encountering a tripwire.

The case cap is hard mounted to the feeler, which aids in balance, and prevents inadvertent loss during an operation.

**Mini Sensi-Feeler.** This unit sports all the benefits of the Sensi-Feeler but is more compact and designed for ease of operation in restrictive terrain, e.g. jungle or other dense foliage areas. It extends to 1 meter and contracts down to 25 centimeters.

**Spray Lubricant.** A can with 10 applications of pressurized synthoil.

**Self-Driving Spikes.** These devices have federanium-tipped plasteel spikes. It consists of a driver base, powered by a 2 SEU microdisc. With the press of a button – which is on top of the base – the spike can be driven into most surfaces without the use of a hammer. It will make a loud popping sound when doing so.

Depending upon the surface, the spikes can hold up to 1,000 kg of weight. Multiple spikes may increase that holding power

exponentially. To remove the spike, the operator needs to press the button five times in rapid succession. It has enough power for five uses.

**Water Disruptors.** Water disruptors can be used to neutralize an improvised explosive device (IED) without causing it to detonate. Using a shaped charge, it essentially fires jet of water into the IED, which cuts the detonator cord, rendering the explosive useless. A drawback of this device is that it needs to be very close to the explosive to be effective. This might risk setting off bombs that have proximity, motion, or similar style detonators while the demolition expert – or a robot – sets the water disruptor in place.

These devices come in different sizes, such as the “mini-can” that can be used against small suspected explosive packages, up to 5 kilograms; or the “water buster,” which fires an omnidirectional jet of water and can be set under a vehicle where an IED has been placed. A water disruptor will work faster than any fuse or anti-tampering device can react.

The operator loads the mini-can disruptor onsite with a combination of a 10-gram, shaped charge of TD-20, water, and salt. The water buster uses 20 liters of water and a 50-gram, shaped charge of TD-20; again it is typically loaded by the operator onsite. Both systems are reusable and are sold with five explosive charges and salt packets.

**Game use:** The character would still need to make a successful defuse explosive check with a 5 percent bonus. A suspected explosive will detonate at full strength if the character misses his roll by more than 20 percent – or rolls an automatic failure. The mini-can is good against bombs up to about 5 kg of TNT equivalent while the water buster can be used against artillery shells, mines, and aerial dropped bombs.

**Drawbacks:** Water disruptors cannot be used in an extremely cold or hot environment nor in a vacuum or near vacuum conditions.

*...Stunned for several moments, Klecton found himself lying on his back, his legs splayed around him. Acrid smoke filled the air and he heard the moans of the wounded. When he could, he rolled and got onto his legs.*

*The mother and child he had shielded looked like they had survived the explosion, but others were not so fortunate.*

*The spot where his compatriot, Veektum, had been was a charred mess of twisted plasteel supports. The human must have been vaporized, he thought. Then he heard the moans coming from the smoking wreck of flesh that was lying on the monorail track nearby...*

## COMPUTERIZED SUPPORT

Demolition specialists can purchase a variety of support devices including computerized analysis scanners (CAS) and specialized bodycomps. Each CAS has a number of microswitches, small gauges and lights, and can accept voice commands and offer audio replies.

Unless otherwise stated, the CAS must be within one meter of the object that will be scanned. Only a character with the appropriate skills can interpret the data provided by a CAS. For example, only someone with a demolitions skill use the Demolitions-CAS.

## CAS OPERATIONS

Although Zebulon's Guide does not provide statistics on power use, assume that all computerized analysis scanners are powered by a 20 SEU clip. They use 1 SEU per hour of operation. A CAS can also be plugged into a belt or power backpack or even by an extension cord to a wall outlet or generator, if necessary.

If a character purchases a Duo-CAS, which combines the operations of two scanners into one, the cost is 20 percent more than each individual unit, but they provided better scanner range and added capabilities.

## DEMOLITIONS-CAS

This device can analyze explosives, bombs, or mines that are up to two meters away. Its sensors can penetrate through most materials, except for federanium, and then tell the operator what type of explosive material is present, what detonation devices are attached, and it provides suggestions on how to defuse it. This CAS grants the character with a +15 percent modifier when defusing explosives and will alert the operator if any anti-handling devices (booby traps) are present.

## DEMOLITIONS-ELECTRO DUO-CAS

This device is good for characters who also have the Technician skill. The scanning range is boosted to 10 meters – though it will only penetrate the ground up to a depth of 4 meters. Not only does it have the capabilities of the Demolitions-CAS but it can scan electrical circuitry and power sources.

It will display how a machine – or bomb – is wired. It will indicate any breaks in wiring and suggestions on how to repair it. This device is useful for repairing or rewiring bombs, mines, etc. along with other repairs. This CAS provides the character with a +15 percent bonus for the following Technician sub-skills: Detect Alarms/Defenses, Deactivate Alarms/Defenses and Open Locks (if it is an electronic lock).

## DEMOLITIONS-CHEMICAL DUO-CAS

Combining the demolitions and chemical CAS units into one device. It will scan an object – up to a metric ton in weight/density – and indicate what natural and synthetic chemicals and compounds are present. If a character has an Environmental Skill, it will provide a +15 percent bonus for Analyze Samples and Ecosystems. But it can be used by a character who just has the Demolitions skill. This duo-CAS provides the demolition specialist with a +30 percent bonus for disarming mines, bombs, charges, and other unexploded munitions.

## DEMOLITIONS-GEOLOGICAL DUO-CAS

This scanner is useful for a character who has the Demolition and Environmental skills. The geoscanner functions will examine up to a metric ton of geological samples. It will indicate what minerals are present including whether or not any valuable minerals, gases, or oil deposits are nearby. It will provide a warning if there are any nearby dangerous elements or geological hazards.

Providing a +15 percent bonus for the Analyze Samples subskill, this CAS is useful for mining operations. When setting explosive charges for mining (or even conducting a controlled avalanche), the demolition specialist receives a +20 percent

COMPUTERIZED SUPPORT GEAR	COST (CREDITS)	WEIGHT (KG)
Demolitions-CAS	300	2
Demolitions-Electro Duo-CAS	660	3
Demolitions-Chemical Duo-CAS	540	3
Demolitions-Geological Duo-CAS	600	3
Demolitions-Magnetic Duo-CAS	540	3
Basic Demolitions Bodycomp	6,900	5
Bio-Center Progit-B	1,500	N/A
Robo-Link Progit-B	1,300	N/A

bonus to the Set Charge subskill and +15 percent bonus for Analyze Demolition Site.

## DEMOLITIONS-MAGNETIC DUO-CAS

This computerized analysis scanner combines the functions of a demolition and magnetic CAS into one unit. Along with the normal functions of the Demolitions-CAS, this CAS can scan a metallic structure up to one metric ton in density. It will show the character what metals and metal alloys are present. The CAS will reveal structural weak points, strong points, how a structure may react to certain stresses, etc. The scanner can also indicate whether there are any sources of electromagnetic radiation within 10 meters of the CAS, including the strength, and likely source.

If using the expanded demolition skill presented in Part 3 of the “Things that go boom!” series (Frontier Explorer issue 27, p 8), this unit will provide a character with a +15 percent bonus for Analyze Demolition Site to determine where to place a charge for maximum impact. This device is also very useful for detecting mines and bombs with magnetic, motion, and proximity sensors before entering their range. It improves the character’s mine detection rate by 30 percent.

## BASIC DEMOLITIONS BODYCOMP

While a character can purchase and customize any bodycomp, a basic design exists for demolition specialists. It first starts with a battle bodycomp belt – also called a “battle comp” for short. With a synthsteel overlay, the device can withstand most explosions at close range. It has a level 5 hand-print security lock.

Next the basic model has a type B processor pack and a tenpack for power. The progit that come with this model include: Audio-Act (A), Calc-All (A), CAS-Interface (A), Comp-Talk (A), Diz-Viz (A), Helm-Link (A), and Comm-Link (B). This leaves the processor and power pack with enough space to install up to three more type A or B progit. Other recommended progit could include a Bio-Center (B) if the demolition specialist wishes to use a bio-robotic prosthetic; along with a Robo-Link (B). The Robo-Link would allow the character to control a specialized demolitions robot or drone directly from his bodycomp rather than a separate control unit.

*...Though still dazed, Klecton realized whomever the victim was laying on the track – most likely a human – was badly injured. He saw his party’s medic, emerging from the stairwell where she had been protected from most of the blast.*

*“Jill! Over here!” He gestured to her before jumping down on the track to see what he could do to help the injured being...*

## BLAST SUITS

Early bomb disposal soldiers lacked any type of specialized outfits. They either succeeded at defusing a bomb or failure often came with fatal results. Blast suits – also called bomb suits – were developed to protect the bomb defusers.

Many of these outfits are heavy body armor. Made to withstand the blast pressures and fragments that are produced during an explosion, this armor can protect a character during combat too, but that is not their intended purpose. A character wearing a blast suit into combat would suffer at least a -2 penalty to any initiative rolls.

BLAST SUITS & ACCESSORIES	COST (CREDITS)	WEIGHT (KG)
Minimal Blast Suit	400	5
Plastic Armored Suit	1,000	30
Life X-Disposal Suit	3,500	50
AdXO Disposal Suit	8,500	80
Bio-Robotic Prosthetics	5,500	4

## REGARDING HANDS/PSEUDO-PODS

Bomb suits leave the wearer's hands (or pseudo-pods) unarmored so it will not impact the character's DEX when performing complex operations. This of course leaves the hands and forearms especially vulnerable to gruesome blast injuries. These suits come with a pair of gloves and wrist guard attachments, which provide some protection against any environmental factors while averting cross contamination of any trace evidence – such as fingerprints – that might be found on an explosive.

## DEFENSIVE SCREEN LIMITS

A character cannot have an active defensive screen up while working on a bomb. They certainly could have one on when approaching a bomb or attempting to flee an area, though some bomb fuzes might be triggered by the electric emissions of a nearby inertia screen!

## BLAST SUIT TYPES

### MINIMAL BLAST SUIT

This blast suit consists of a jacket, apron, and helmet. All told, the outfit weighs 5 kilograms and takes one minute to put on. It will protect a character from the first 50 points of explosive blast damage. After that, it will absorb half of the next 50 points of blast damage before being rendered useless. Against all other inertia attacks, it acts like a 40-point



skeinsuit. It **can** be worn over and in conjunction with a skeinsuit.

**Drawbacks:** The character suffers a -15 percent penalty to Reaction Speed checks; IM -2. Dexterity checks for actions other than defusing an explosive suffer a -5 percent penalty. Because the suit is made of heavy materials, a character wearing it will start suffering heat stress after 30 minutes of use, which results in an additional -5 percent penalty to all skill and ability checks.

### PLASTIC ARMORED SUIT

This is an early outfit made with ballistic material (Kevlar-like) with reinforced fiber-plastic plates. The suit includes a helmet and face shield and offers protection to the torso, legs, and arms. This armor will fully absorb the first 100 points of any explosive blast and then half of the next 50 points of the blast before being rendered useless. Against other inertia attacks, it acts like a normal skeinsuit. It will be ruined after it takes 50 points of non-explosive inertia damage.

While the plastic armored suit will insulate a character against most electrical attacks – unless the wearer is struck in the hands – it offers no protection against fire, sonic, laser, gas, rafflur, maser, tangler, etc. attacks. The plastic armored suit provides limited radiation protection – it is rated at 5 rads per hour. It will take a character about 5 minutes to suit up, though with a successful Dexterity check, they can shave 2d10 turns off of this time.

**Drawbacks:** The character's movement rate is cut in half. Reaction Speed checks suffer a -15 percent penalty; IM -2. Dexterity checks for actions other than defusing an explosive suffer a -10 percent penalty. Because the suit is made of heavy materials, a character wearing it will start suffering heat stress after 30 minutes of use, which results in an additional -5 percent penalty to all skill and ability checks.

### LIFE X-DISPOSAL SUIT

This is a more advanced version of the plastic armored blast suit. It includes layers of blast and thermal absorbent gel, better cushioning to reduce damage if a character is knocked over by a blast, and a 5-hour air supply. Again, the demolition specialist's hands are exposed so the character can perform complex bomb defusing operations. It takes 5 minutes to properly "suit up."

The Life X-Disposal Suit will absorb the first 200 points of any explosive blast and then the half of the next 50 point of blast damage before it is rendered useless. With some flame-resistant capabilities, it will trim any fire damage that the character suffers by half.

This outfit will act like a normal skeinsuit against other inertia attacks. After absorbing 50 points of non-explosive inertia damage, it will be rendered useless.

This suit will insulate a character against most electrical attacks – unless the character's hands are struck! Because it has an air supply, the wearer is also protected against most gas weapons unless there is a type where a chemical can be absorbed by the exposed skin. It does not offer defenses from sonic, laser, maser, rafflur, etc. attacks. It provides limited protection from radiation – up to 15 rads per hour.

A visocom, a hands-free chronocom, can be installed for 55 Credits. The suit is designed so the character can use a variety of Demolition-CAS units along with a specialized demolitions bodycomp.

**Drawbacks:** The character's movement rate is cut in half. Reaction Speed checks suffer a -15 percent penalty; IM -2. Dexterity checks for actions other than defusing an explosive suffer a -10 percent penalty. The suit has a limited cooling system, powered by a 2SEU microdisc that will last for one hour. After that, the wearer will start suffering heat stress, resulting in an additional -5 percent penalty to all skill and ability checks.

### ADVANCED EXPLOSIVE ORDNANCE (ADXO) DISPOSAL SUIT

This is a heavy outfit of polyplate armor, along with federanium chainmail and exoskeleton capabilities. It is designed to protect the wearer from the pressure and



An automatic miss (96-00) will mean that the bomb did not explode, no matter how many SEUs were used.

If a demolition expert wants to use a laser to neutralize a bomb, the procedure is similar. The character must take careful aim, can only fire one shot at a bomb per turn and may not perform any other action. If his shot strikes the bomb, perform a Defuse Charge check with a 5 percent bonus per SEU used, up to a maximum of 5 SEUs.

A successful check means the bomb's explosive material burns, causing 1 point of damage per kilogram of the bomb's weight up to a maximum of 500 points. Any bomb/explosive under 5 kilograms will have a blast radius of 3 meters. Note, such a blast may cause a fire that will burn and cause damage to nearby objects long after the initial low-level explosion.

Explosives under 50 kilograms will have a primary blast radius of 5 meters and a secondary radius of 8 meters. After that, assume that for every 100 kilograms of explosive, the primary blast radius would extend by 1 meter up to a maximum of 50 meters. Calculate the secondary blast radius accordingly, which is 1.5 times the primary radius. There will not be a third or fourth blast radius.

If the character misses his defusing check by less than 20 percent, the bomb does not explode. If he misses it by 21 percent or more, the bomb explodes at one-

fourth strength – which could be deadly with large weapons! An automatic failure on the defuse charge check would cause the bomb to explode at full strength.

## DRAWBACK – GAS MUNITIONS

A laser can be used against a gas warhead, but this will cause it to explosively release its contents as if it went off!

*After a careful examination of the forensic evidence, Star Law Sergeant Dray Phii the Dralosite concluded that the bomb that Raye Veektum had tried to defuse had been equipped with an anti-lifting fuze. If that poor human had simply had some better tools, he might have stood a chance...*

## BOMB DISPOSAL EQUIPMENT

What does one do with unexploded bombs or suspected packages that cannot be easily defused, but may be moved to a safer location for detonation?

There are a variety of bomb disposal equipment ranging from fairly simple bomb baskets to explosion containment vessels (ECVs) that may contain a blast. Refer back to the article “Things that go Boom! Part 3: Expanding the Demolition Skill” for more information about TNT equivalent explosives. For example, Tornado D-19 is four times as powerful as TNT, so a 250 gram charge is the equivalent of 1 kilogram of TNT.

## BOMB BASKET

The bomb basket is made up of non-fragmentation ballistic composite materials. It can be used as a safety ring, to minimize the impact of the fragmentation and sonic blasts. Each basket is mostly spherical shaped with a 1-meter diameter and has a fire-resistant, non-metallic holding net suspended inside. It is rated so it can deal with repeated explosions resulting from 200 grams to 1.2 kilograms of TNT.

This type of ECV is typically rendered useless if the explosion exceeds its maximum containment level

## BOMB BASKET ACCESSORIES

Bomb baskets can be outfitted with specialized energy screens – such as inertia or sonic projectors – that are designed to absorb damage coming from inside the field rather than from outside. The field generators cost the same as a normal defense screen and are typically powered by a 50 SEU beltpack or a 100 SEU backpack.

## THE VIDAR SERIES

The Vidar and Ladon lines are made by Eversafe Enterprises; they represent of the types of ECVs available in the Frontier. They can contain all manner of explosions, including fragmentation and sonic blasts. Vidar ECVs have tiny vents to allow pressure to escape in the event of an explosion, so they will not contain a gas or foam warhead explosions

Named after the Norse god of mythology that survived the apocalyptic Ragnarök, the Vidar Series of ECVs is rated to contain a blast up to a certain TNT equivalent weight. For example, the Vidar 3 is rated to handle an explosion up to 3 kilograms of TNT.

It takes 5 seconds to open or close the unit. The ECV can be equipped with locks. To break open the vessel from the outside, it a level 3 security lock and its exterior (the weakest point) can take 200 structure points of damage.

Detonations that exceed the container's rating risk cracking it, allowing blast damage to leak out. The Vidar may be able to withstand explosions up to double their rating, but they are not guaranteed to do so. Most Eversafe units can withstand multiple internal blasts and still be usable.

### BOMB DISPOSAL EQUIPMENT

ECV TYPE	TNT EQUIVALENT (KG)	GAS TIGHT	COST (CR)	WEIGHT (KG)
Bomb Basket	1.2	No	360	20
Vidar 0.03	0.03	No	300	10
Vidar 0.5	0.5	No	1,500	150
Vidar 1	1	No	2,000	200
Vidar 3	3	No	7,500	750
Vidar 10	10	No	25,000	2,500
Vidar 15	15	No	37,500	3,750
Vidar 50	50	No	95,000	9,500
Ladon-5GT	5	Yes (2.5 kg)	4,900	1,900
Ladon-8GT	8	Yes (8 kg)	30,000	3,050
Ladon-10GT	10	Yes (10 kg)	37,500	3,800
Ladon-50GT	50	Yes (50 kg)	142,000	14,000

### VIDAR 0.03

This square-shaped unit is for transporting small, suspect electronics. It also provides a Demolition specialist a safe way to store and transport explosives and detonators/blasting caps. The container is 40 centimeters (cm) long and wide plus 115 cm deep. It weighs 10 kilograms.

### VIDAR 0.5

This ECV is often used by laboratories for transporting pyrotechnic chemicals or by police officers for storing small suspicious objects. It is 71 cm long, 81 cm wide and 61 cm deep with a 24-by-17 cm rectangular opening. It weighs 150 kilograms. It can be a stationary unit, or set on heavy-duty caster wheels, or mounted on a vehicle or robot.

### VIDAR 1

This ECV is often used at airports, spaceports, or other major transportation terminals for security officers to store suspicious objects. It is 93 cm long, 57 cm high, and 53 cm wide while weighing 200 kilograms. Its opening hatch is 50-by-20 cm.

### VIDAR 3

This containment vessel is designed to safely remove or store large suspect pieces of luggage. The Vidar 3 is ideal for spaceport and public safety applications. It is 177 cm long, 150 cm wide, 172 cm tall, and weighs 1,600 kilograms. Its hatch is 76-by-55 cm.

### VIDAR 10

This vessel often is used as an in-house storage locker for explosives and small caliber ammunition. The Vidar 10 also serves as a way to store large suspicious objects. It is 223 cm long, 216 cm wide, and 200 cm tall and weighs 2,600 kg. Its hatch is 95-by-50 cm.

### VIDAR 15

The Vidar 15 ECV offers a convenient and cost-effective solution for an in-house storage location of explosives and small caliber ammunition. It can also be used to store large suspicious objects. It is 270 cm long, 315 cm tall, and 230 cm wide. It weighs 5,800 kg and has a hatch that is 95-by-50 cm.

### VIDAR 50

The Vidar 50 vessel offers a convenient and cost-effective solution for an in-house storage location of explosives and small caliber ammunition. Or it can store large suspicious objects. Its dimensions are 284 cm long, 386 cm tall, and 250 cm wide. The unit weighs 9,500 kg and its hatch is 110-by-60 cm.

## THE LADON-GAS TIGHT SERIES

Named after a legendary serpent dragon from Human mythology, Eversafe's Ladon Series of ECVs will contain all types of explosions and comes with air sampling equipment.

These containment vessels are rated as gas tight (GT), meaning that they will not allow any potential nuclear, biological, or chemical agents to escape as long as the explosion does not exceed the blast rating. Ladons can withstand repeated explosions. They can be operated by a remote control, robot, or manually.

### LADON-5GT

This containment vessel confines explosions of up to 5 kg (11 lbs.) of TNT equivalent. It further has a gas-tight capability of up to 2.5 kg (5.5 lbs.) of TNT equivalent. The Ladon-5GT withstands repeated detonations. The vessel has air sampling capability and is available with a trailer. It is a 200 cm diameter sphere and weighs 1,700

kilograms. It has a circular hatch that is 75 cm in diameter.

### LADON-8GT

This ECV contains repeated blasts of up to 8 kg (17.64 lbs.) of TNT equivalent. The gas-tight feature of the Ladon-8GT permits responding demolition specialists to deal with explosives that might contain radiological, chemical, or biological agents. The vessel is equipped with an air sampling system. It is a 250 cm sphere and weighs 2,300 kg. It has a circular hatch that is 75 cm in diameter.

### LADON-10GT

This detonation chamber contains blast effects of up to 10 kg (22 lbs.) of TNT equivalent. The Ladon-10GT's gas-tight capability allows responding characters to mitigate bombs that might contain radiological, chemical, or biological agents. The vessel is equipped with an air sampling system. It is a 250 cm diameter sphere and weighs 5,500 kg. It has a circular hatch that is 90 cm in diameter.

### LADON-50GT

This chamber contains blast effects up to 50 kg of TNT equivalent. Capable of withstanding repeated blasts, it has gas-tight capability and can be equipped with an air sampling system along with supplemental energy fields to help contain explosions greater than 50 kg TNT.



## MAINTENANCE OF EXPLOSION CONTAINMENT VESSELS

After any explosion, an ECV should be inspected for structural cracks and component failures. They will also need to be cleaned out. Assume this process takes about an hour for the Vidars and Ladons that are rated for 5 kilograms or less. Add an extra hour for the larger units.

Roll a d100. A result of 01-94 means that nothing significant is wrong with the ECV; cleanout costs were 3d10 Credits. A result of 95-98 means that a major repair is needed. The cost would be 2d100 + 200 Credits, taking 2d10 hours – if the character has access to repair equipment.

A 99-00 indicates that the contain vessel suffered a major structural failure. It cannot be safely reused. It can be scrapped, however, allowing the owner to recoup 10 percent of its purchase cost.

## VIDAR AND LADON ACCESSORIES

Owners of ECVs may also want to purchase a number of accessories, including energy screens that will allow the vessel to handle explosions that are larger than their rating. Other accessories include larger bomb squad tool chests, electric winches, generators, and trailers.

### CONTAINMENT INERTIA/SONIC SCREENS

These units are designed to absorb a blast originating from within an explosion containment vessel rather than from damage coming from outside the unit. These supplemental screens will double the unit's TNT equivalent.

The cost of a containment screen is a minimum of 2,000 Credits plus 10 percent of the ECV's weight, while the weight of the screen's projector is a minimum of 2 kilograms plus 0.5 percent of the ECV's weight. For example, a Vidar 15 weighs 3,750 kilograms. The city Point Glass on Laco wants to install a supplemental inertia containment screen. The screen will cost 2,375 Credits while the projector equipment will weigh 20.75 kilograms.

### VEHICLE TRAILERS

Characters can purchase utility trailers for most ground and hover vehicles. Coming in various sizes, the most common is the utility trailer. This model adds 200

EXPLOSION CONTAINMENT VESSEL ACCESSORIES	COST (CREDITS)	WEIGHT (KG)
Bomb Basket Containment Inertia Screen	4,000	2
Bomb Basket Containment Sonic Screen	4,000	2
Vidar/Ladon Containment Inertia Screen	2,000 + 10% of wgt	2 + 0.5% of wgt
Vidar/Ladon Containment Sonic Screen	2,000 + 10% of wgt	2 + 0.5% of wgt
Winch, Manual	85	8
Winch, Powered	250	40
Cycle Utility Trailer, Ground (40 kg cap.)	250	20
Cycle Utility Trailer, Hover (40 kg cap.)	500	25
Ground Car Utility Trailer (300 kg cap.)	750	60
Hover Car Utility Trailer* (200 kg cap.)	1,500	70
Ground Truck Utility Trailer (20,000 kg cap.)	2,500	4,000
Hover Truck Utility Trailer* (20,000 kg cap.)	5,000	5,000
Explorer Utility Trailer (4,000 kg cap.)	1,600	1,000
Trailer Drive Systems (Ground)	Double cost	1.5 times weight
*Hover trailers have their own hover fan systems. They also need a separate power source that must be purchased separately.		

percent to a vehicle's cargo carrying capacity. It will reduce the towing vehicle's acceleration and turn speeds by -10 meters per turn while also cutting its braking (deceleration) speed by -20 meters per turn.

Vidar and Ladon ECVs can be built on trailers, though there would be a 10 percent mounting fee. A separate *drive* system is available for the trailer, which will double the price, but eliminate the movement penalties. The separate drive system also allows the unit to be easily maneuvered by a character or robot, traveling up to 22 meters per turn. It is powered by a 100-SEU backpack (sold separately) and is good for 100 hours of operation.

**Hovercraft Trailers:** Hover cycles, hover cars and hover trucks can also pull special hover utility trailers. These trailers have their own hover fan system and are powered by a separate parabattery, which is of equal size to that of the vehicle. A hover cycle trailer needs a type 1 parabattery, a car needs a type 2, and a truck needs a type 3.

(The information for the utility trailer is based on a posting on the starfrontiers.us website by Richard "Shadow Shack" Rose.)

### VEHICLE WINCH, MANUAL

Various winches exist in the Frontier. This is just an example of one type that is available. With a crank handle, this winch

has two gears and has 10 meters of cable a 1.25 metric ton capability. It can be mounted to cycles.

### VEHICLE WINCH, POWERED

A heavy-duty powered winch, this model must be mounted on trailers and vehicles that are larger than cycle size. With remote control capability, the standard model has 20 meters of cable and with a 6 metric ton pulling capability. It uses 1 SEU per minute of operation.

## HEAD OF THE CLASS

*"Thanks to the miracles of modern bionic prosthetics, I have been able to lead an almost normal life," Veektum said as he extended his two bionic arms outward so the students could get a good look. "But it took a small fortune – much of my share from the famed Alcazzar mission," he continued, gazing steadily through his bionic eyes at the half dozen of would be explosives experts taking the class. "I don't know how much more I can stress to you the importance of having the right tools with you when you attempt to disarm a bomb. Otherwise, you risk ending up as a warning example to others..."*

# GYROJET WEAPONS – “HISSERS”

## AN ALTERNATE FRONTIER

BY RICHARD “GREYMYST” FARRIS

This article gives a look at the expanded weapons in “An Alternate Frontier”. An Alternate Frontier will look at the people, places, and things in a different, but very similar setting of the Star Frontier Universe. This is the second article in a series on the weapons of an alternate frontier.

The first section will detail the history of the weapon class. This delves into where the technology came from. A description of the weapon class follows, detailing briefly how the class works. The next two sections go into some reasons why a person might want to carry this kind of weapon, or why they may want to avoid the class. Next comes specific rules that apply to this class of weapon. Then comes a list of generic representations within the class. Finally, in the simple rules comes specific ammunition types that can be used in the weapon class that may alter the statistics in some way. These will allow the weapon some versatility in dealing with specific threats.

If you wish to stop there, the generic list is perfectly playable as is. Use them and have fun. The next sections expand upon the weapon class and explain how the statistics and features came into being. The “Nuts and Bolts” section explains how the base weapons (generic pistol and rifle) can be modified by applying templates to create new weapons. The accessories section allows further customization to a shooter granting bonuses or penalties when applied to a weapon. The specific weapons section takes just a few generic versions of a fully modified weapon and gives it context with the campaign world. This is where a weapon can “come to life”, with a manufacturer, history, and possible uses within the campaign.

## HISTORY

Gyrojet weapons were tried in our history, but the advantages that were promised were never achieved. Due to numerous reasons, gyrojet weapons were never

practical enough to supplement standard projectile weapons. In the Star Frontiers universe, these hardships were overcome and they are a popular sidearm across the Frontier.

## DESCRIPTION

Gyrojet weapons fire miniature rockets of a standardized caliber. Gyrojet ammunition has slightly angled nozzles directing the thrust to cause the rocket to spin during flight. Their simple construction does not require heavy construction as the reaction is not completely in the weapon. Gyrojet weapons have gained popularity with police and special forces because of their versatility. Gyrojet weapons use the Gyrojet Weapons skill. Effectively recoilless, they are not silent as the rockets make a loud hissing noise (hence the nickname) and the rockets create a small sonic boom when passing the sound barrier.

Gyrojet weapons are available in different configurations, but the different weapon types only affect the weapon's ammo capacity and weight; damage and range of a Gyrojet weapon depends on the ammunition being used.

Gyrojet weapons are a common shipboard weapon, as their lack of recoil makes them excellent zero-gravity firearms. Their short barrel lengths also make them more maneuverable in the corridors of a spaceship.

Skeinsuits and Inertia screens absorb half the damage from a gyrojet rocket.

## WHY HISSERS RULE (ADVANTAGES)

Gyrojet weapons have effectively no recoil and have a longer range than typical projectile weapons. They are capable of utilizing multiple munitions, making them very adaptable to changing situations. Since the ammunition has more mass, due to higher calibers, damage is slightly

higher than other projectile weapons. Since the length of the barrel of gyrojet weapons has no effect on the effectiveness of the ammunition, they tend to have a shorter overall weapon length.

## WHY HISSERS SUCK (DISADVANTAGES)

Gyrojet ammunition suffers from most of the same disadvantages as Electrochemical ammunition, with non-reusability and ease of detection being the most significant. While Gyrojet weapons are shorter, they are bulkier and heavier when loaded. With gyrojet ammunition being large, weapons carry less shots than other weapons.

## SPECIFIC RULES

### STAR FRONTIER AND FRONTIER SPACE

Gyrojet weapons are not effective at very short range, because the rocket is still accelerating. Damage is at -2 per die at point blank range

## COMMON WEAPON DESCRIPTIONS

### GYROJET PISTOL

This weapon is a large handgun firing small rockets. Essentially just a tube with a loading and ignition mechanism, it is very simple and rugged. It uses standard gyrojet ammunition.

### GYROJET RIFLE

Similar to the gyrojet pistol, this stubby rifle carries more ammunition. It uses standard gyrojet ammunition.

### HOLD-OUT GYROJET

This derringer-sized gun breaks open to fire single shots. For double cost, these can be disguised as drug inhalers, pneumatic hypodermics, pens, wallets and so on. It uses standard gyrojet ammunition.

### UNDER-BARREL GYROJET

An alternative to grenade launchers, this pump-action Gyrojet launcher must

STAR FRONTIERS	DAMAGE	RANGE					AMMO	CONCEAL	SNAP SHOT	RE-COIL	RELIABILITY	ROF	DEFENSE	WEIGHT	COST
		PB	S	M	L	EX									
GyroJet Pistol	By Ammo						10	-10	-5	0	100	2	By Ammo	1Kg	200
Hold-out Gyrojet	By Ammo						2	-25	-5	0	100	2	By Ammo	0.5Kg	100
GyroJet Rifle	By Ammo						15	+20	-10	0	100	2	By Ammo	3kg	300
Under-barrel Gyrojet	By Ammo						4	+5*	-5*	0	100	1	By Ammo	1Kg	200
Rocket Launcher	By Ammo						1	N/A	-20	0	100	1	By Ammo	3Kg	700
Heavy Rocket Launcher	By Ammo						1	N/A	-25	0	100	1	By Ammo	25Kg	5000

\* = Adds bonus/penalty to the mounted weapon

be attached under the barrel of any reasonably large gun. The Gyrojet launcher is fired using its own statistics. The Gyrojet's trigger is located next to the slide action for the pump. In a given turn, a shooter can fire either the Gyrojet or the host weapon, or both. If both are fired, it counts as shooting with two weapons. It uses standard gyrojet ammunition.

## ROCKET LAUNCHER

Even simpler than a gyrojet pistol, it is tube with only an ignition mechanism. This type of weapon is generally issued to infantry to give some effectiveness against armor. It uses rocket ammunition.

## HEAVY ROCKET LAUNCHER

Just a larger version of the Rocket Launcher above. It is used as a vehicular or emplaced weapon. It fires Heavy Rocket Ammunition.

## STATISTICS

For game statistics of the various weapons in Star Frontiers and FrontierSpace see the tables on this page. Tables for the ammunition are on the following page.

## STANDARD GYROJET AMMUNITION TYPES

### SLUG ROUNDS

Slug rounds are essentially just large bullets.

### EXTRA RANGE (ER)

These rounds sacrifice some of the slug's mass for extra propellant giving them longer range than slugs

### ARMOR-PIERCING (AP)

These rounds have ultra-dense cores that will penetrate armor and skisuits. Inertial screens affect damage as normal (reduce to half).

### HIGH-EXPLOSIVE (HE)

These rounds carry a small amount of explosive. They explode on impact causing concussive force and fragmentation damage. It is a heavier round with less propellant to make room for explosives.

### INCENDIARY (IN)

These rounds carry a small amount of reactive chemical. They burst into flames on impact causing burn damage and

causing fires. Like the explosive above, it is a heavier round with less propellant to make room for chemicals. An incendiary round causes 2d10 points of damage on the turn it hits. The burning liquid sticks to the victim, causing an additional 1d10 points of damage on the second, third, and fourth turns after the explosion. Anyone in a spacesuit takes no damage from an incendiary round.

### STINGER ROUNDS (ST)

These rounds carry a small, highly-charged capacitor that shocks the target stunning them. A stun can knock a creature unconscious for d100 turns. Anyone hit by a stingray round can resist the stun by rolling a number less than or equal to its current Stamina. Anti-shock implants will negate the effect.

### TANGLER (TA)

These rounds carry a small glob of strong, sticky polymer threads that wrap around the target. An entangled individual cannot move until the threads decay (in 30 minutes) or until solvaway is spread over the threads. Any creature with more than 100 stamina points can break out of tangler threads in one turn.

FRONTIER SPACE	DAMAGE	RANGE INC	AMMO	CON-CEAL	SNAP SHOT	RE-COIL	RELIABILITY	ROF	DEFENSE	WEIGHT	COST
GyroJet Pistol	By Ammo		10	-10	-5	0	100	2	By Ammo	1Kg	200
Hold-out Gyrojet	By Ammo		2	-25	-5	0	100	2	By Ammo	0.5Kg	100
GyroJet Rifle	By Ammo		15	+20	-10	0	100	2	By Ammo	3kg	300
Under-barrel Gyrojet	By Ammo		4	+5*	-5*	0	100	1	By Ammo	1Kg	200
Rocket Launcher	By Ammo		1	N/A	-20	0	100	1	By Ammo	3Kg	700
Heavy Rocket Launcher	By Ammo		1	N/A	-25	0	100	1	By Ammo	25Kg	5000

\* = Adds bonus/penalty to the mounted weapon

STAR FRONTIERS	DAMAGE	RANGE					AMMO	CON-CEAL	SNAP SHOT	RE-COIL	RELIA-BILITY	ROF	DEFENSE	WEIGHT	COST
		PB	S	M	L	EX									
<b>GYROJET AMMUNITION</b>															
Slug	3d10	10	30	60	120	240	By Weapon Type				Inertia	-	1		
Extra Range	5d5	15	50	100	200	400	By Weapon Type				Inertia	-	2		
Armor Piercing	2d10	10	30	60	120	240	By Weapon Type				Inertia	-	2		
High Explosive	4d10/1d10	5	15	30	60	120	By Weapon Type				Inertia	-	5		
Incendiary	2d10/1d10	5	15	30	60	120	By Weapon Type				Albedo	-	5		
Stinger	N/A	5	15	30	60	120	By Weapon Type				Gauss/AS	-	3		
Tangler	N/A	5	15	30	60	120	By Weapon Type				None	-	3		
<b>ROCKET AMMUNITION</b>															
Extra Range	10d10	25	75	150	300	600	By Weapon Type				Inertia	2.5kg	25		
Armor Piercing	10d10	20	60	120	240	500	By Weapon Type				Inertia	2.5kg	25		
High Explosive	12d10	15	50	100	200	400	By Weapon Type				Inertia	2.5kg	20		
<b>HEAVY ROCKET AMMUNITION</b>															
Extra Range	3d10X10	70	200	400	800	1600	By Weapon Type				Inertia	10kg	150		
Armor Piercing	3d10X10	50	150	300	600	1200	By Weapon Type				Inertia	10kg	150		
High Explosive	4d10X10	50	150	300	600	1200	By Weapon Type				Inertia	10kg	100		

FRONTIERSPACE	DAMAGE	RANGE INC.	AMMO	CONCEAL	SNAP SHOT	RECOIL	RELIA-BILITY	DEFENSE	WEIGHT	COST
<b>GYROJET AMMUNITION</b>										
Slug	3d10	30	By Weapon Type				Inertia	-	1	
Extra Range	5d5	50	By Weapon Type				Inertia	-	2	
Armor Piercing	2d10	30	By Weapon Type				Inertia	-	2	
High Explosive	4d10/1d10	30	By Weapon Type				Inertia	-	5	
Incendiary	2d10/1d10	20	By Weapon Type				Albedo	-	5	
Stinger	N/A	20	By Weapon Type				Gauss/AS	-	3	
Tangler	N/A	20	By Weapon Type				None	-	3	
<b>ROCKET AMMUNITION</b>										
Extra Range	10d10	100	By Weapon Type				Inertia	2.5kg	25	
Armor Piercing	10d10	75	By Weapon Type				Inertia	2.5kg	25	
High Explosive	12d10	75	By Weapon Type				Inertia	2.5kg	20	
<b>HEAVY ROCKET AMMUNITION</b>										
Extra Range	3d10X10	500	By Weapon Type				Inertia	10kg	150	
Armor Piercing	3d10X10	400	By Weapon Type				Inertia	10kg	150	
High Explosive	4d10X10	400	By Weapon Type				Inertia	10kg	100	

# ROCKET AND HEAVY ROCKET AMMUNITION TYPES

## EXTRA RANGE (ER)

These rounds sacrifice some of the rocket's payload for extra propellant giving them longer range than other rockets.

## ARMOR-PIERCING (AP)

These rounds have ultra-dense cores that will penetrate armor. Inertial screens affect damage as normal (reduce to half).

## HIGH-EXPLOSIVE (HE)

These rounds carry an explosive charge. They explode on impact causing concussive force and fragmentation damage. It is a heavier round with less propellant to make room for explosives.

## NUTS AND BOLTS

This section will delve into the way I created the statistics above and how to use templates to create new weapons. All Gyrojet weapons were created from the first two weapons: the Gyrojet pistol and rifle. By placing templates on those weapons, new weapons can be created for your universe. If this is not your style, feel free to disregard and use the weapons provided. Due to most of the statistics coming from the ammunition, there are not as many templates for Gyrojet weapons.

## TEMPLATE DESCRIPTIONS

Statistics for the various templates are given in the table at the bottom of the page.

### "CALIBERS"

The term caliber doesn't really apply as each series of weapons, while all based on

the same principal, are almost separate classes. The use of this term is just to help differentiate the classes of gyrojet/rocket ammunition. In addition, a bewildering array of sizes and payloads could be mounted on rockets and gyrojet ammunition, some were left out or simplified to keep this from becoming too complicated.

**Standard Gyrojet** – a very small rocket that propels itself through the use of chemical reaction. It is different than electrochemical weapons in that it releases the propellant force over an extended time instead of all at once. Rounds are approximately 20mm in diameter. For reference, that is about the diameter of an average index finger.

**Rocket** – A larger projectile with more payload than standard gyrojet ammunition. Approximately 65mm in diameter, this ammunition usually plays more of an anti-armor role. It is also used by some sadists who just want to see things blow into pieces. For reference, this is about the diameter of an average aluminum can.

**Heavy Rocket** – Weapons firing this size rocket are generally firing at vehicles or emplacements being fired by a vehicle or emplacement. This represents about a 150mm diameter. Any larger leaves the realm of infantry combat.

### PISTOL TEMPLATES

**Hold-out** – A small sized weapon designed for concealment. It trades ammo capacity for concealment.

**Compact** – In between the hold-out and a standard pistol is the compact pistol. It also trades ammo capacity for concealment and lighter weight.

### RIFLE TEMPLATES

All rifles are considered short. No other rifle templates make sense.

### GENERIC

**Cheap** – Made from inferior materials or craftsmanship, these weapons cost less at the expense of reliability.

**Very Cheap** – Made of absolute junk or hastily thrown together with shoddy craftsmanship. Generally, these weapons are made for individuals who cannot otherwise acquire better weapons (such as criminals or subjects in authoritarian regimes) or are used weapons that were not maintained well.

## SPECIFIC WEAPONS

This section uses the above statistics to create specific named weapons to use in an individual's campaign. The generic weapon above can be used with no problems, so use of named weapons is purely an option depending on the personal tastes of the GM. The following weapons are stated for the Star Frontiers RPG.

### H&K PROTECTOR GYROJET PISTOL

*Hahne-Kedar introduces a new pistol for law enforcement. Able to change ammunition to suit different situations, the Protector will send a powerful message to criminals and citizens alike, that the law can adapt to any crisis that presents itself. Officers typically have one magazine loaded with standard rounds, one with AP rounds (for those armored criminals or vehicles), and one with stinger rounds (when the suspect needs to be taken alive). Officers can rest assured that the weapon will not be used against them as a special glove must be worn to operate the weapon.*

This unique weapon has three 6 round magazines that are effectively each a barrel. Individual rounds or preloaded tubes can be loaded from the back. This allows different ammunition types to be carried in the same weapon. Switching between magazines lowers the ROF to 1 for that

	DAMAGE	NOTES	AMMO	CONCEAL	SNAP SHOT	RECOIL	RELIABILITY	ROF	DEFENSE	WEIGHT	COST
<b>PISTOLS</b>											
Hold-out			-66%	-20	+5					-0.5kg	--
Compact			-33%	-5	--					-0.25kg	-50
<b>GENERIC</b>											
Cheap		-5 to Attack					-1				-50
Very Cheap		-10 to Attack					-2				-100



IMAGE BY JERRY BOUCHER

**Damage:** 3d10  
**Range:** 10/30/60/120/240  
**Ammo:** 15  
**Conceal:** +15  
**Snap Shot:** -5  
**Recoil:** 0  
**Reliability:** 100  
**ROF:** 2  
**Defense:** Inertia  
**Weight:** 3kg  
**Cost:** 350Cr

## ELANUS RISK CONTROL BLACK-JACK WRIST-MOUNTED GYROJET BRACER

*A favorite of explorers, this weapon gives piece of mind that it cannot be dropped in adverse conditions. Included are other items of use to a rugged adventurer.*

This item is a large bracer worn on the wrist with built in accessories. These accessories are a compass, a flashlight, a toxy-rad gauge, and a chronocom.

**Templates:** Hold-out  
**Accessories:** Flashlight, compass, toxy-rad gauge, chronocom  
**Damage** (Standard ammo): 3d10  
**Range:** 10/30/60/120/240  
**Ammo:** 2  
**Conceal:** +25 (to notice the gyrojet weapon, bracer is noticeable)  
**Snap Shot:** -5  
**Recoil:** 0  
**Reliability:** 100  
**ROF:** 2  
**Defense:** Inertia  
**Weight:** 3kg  
**Cost:** 235Cr

turn only and must be announced before taking the shot.

**Templates:** None

**Accessories:** Extended Magazine, Security

**Attack Modifier:** None (There are no templates or accessories that affect attack rolls)

**Damage** (Standard ammo): 3d10 (There are no templates or accessories that affect damage)

**Damage** (AP): 2d10+2 (skeletons only protect 1/4) (There are no templates or accessories that affect damage)

**Damage** (Stinger): Stun (STA check or be stunned for 1d100 turns) (There are no templates or accessories that affect damage)

**Range** (Standard and AP): 10/30/60/120/240 (There are no templates or accessories that affect range)

**Range** (Stinger): 5/15/30/60/120 (There are no templates or accessories that affect range)

**Ammo:** 18 (3 magazines of 6 rounds) (The extended magazine increases ammo by +100% which would normally be 20, but was reduced to 18 because of the weapon's design)

**Conceal:** +10 (The extended magazine accessory add 10, making the weapon more easy to detect)

**Snap Shot:** -5 (There are no templates or accessories that affect SnapShot)

**Recoil:** 0 (There are no templates or accessories that affect recoil)

**Reliability:** 100 (There are no templates or accessories that affect reliability)

**ROF:** 2 (only ROF of 1 during a turn that the magazines are switched)

**Defense:** Inertia

**Weight:** 1.25Kg (The extended magazine adds 0.25Kg and the security does not affect weight)

**Cost:** 325Cr (The extended magazine adds 25Cr and the security adds 100Cr)

## ARMAX ARSENAL VIPER GYROJET RIFLE

*Armax Arsenal brings you the premier weapon when you cannot tolerate recoil. Used by space forces everywhere, it really packs a punch and doesn't cause you to spin out of control. More versatile than a laser, different ammunitions can allow more flexibilities when possibly facing opponents in armored spacesuits. A laser sight is added to make those shots count.*

This weapon is a standard weapon for shipborn and spaceborn forces.

**Templates:** None

**Accessories:** Laser Sight

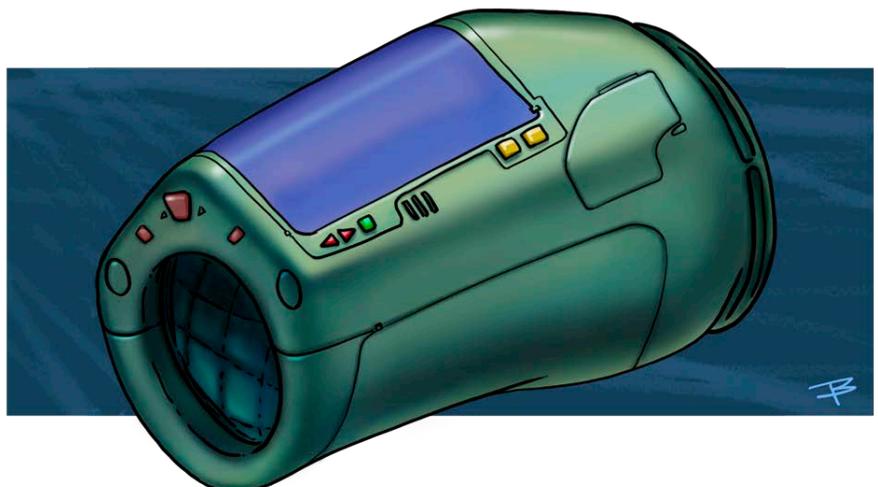


IMAGE BY JERRY BOUCHER

# PIMP MY NEEDLER

## BREATHING NEW LIFE IN TO AN OLD FAVORITE

BY OSCAR RIOS

We followed the janitor from the next car of the monorail, keeping a close eye on the purple dyed dralasite. It had taken us three days to figure out how someone was sneaking blueprints out of Streele's southern regional headquarters. I was with Serislee, my partner, a female yazirian with a gift for close quarters unarmed combat. The target got off the train, and entered the maze of neon and holovids of the vice district. Our chronocoms went off, "We may have been spotted, so keep your antenna up." This was Jik'Til-Vee, the Vrusk on our team and an exceedingly fast draw with an auto pistol.

We followed the dralasite through the crowded streets, desperately trying to keep eyes on them without giving ourselves away. We spread out, trying to look inconspicuous, while keeping in touch via our chronocoms. After a few blocks the dralasite made a call on his chronocom as it walked, and when the transmission was over quickly changed directions. Serislee radioed us, "They aren't going to make a drop, we've been made."

"Do we back off, or take them down. We can still charge them with theft. Maybe they'll give up the buyer if pressured with..."

Jik cut in, "They just ducted down an alleyway and started running! I'm after them, back me up!"

Serislee and I ran, electrostunner and gyrojet pistol drawn, just catching sight of Jik turning into an alley. We all ran in, and at the far end saw the dralasite jump into a waiting groundcar at the far end. Before we could react a pair of Vrusk stepped out from behind a dumpster and opened up on the three of us, catching us flat footed. We heard night soft coughs, as Needler pistols discharged, sending thing darts our way. Each of us was hit at least once, but the needles couldn't penetrate

our civilian skinsuits. An excellent investment on our part.

We had no cover, so we knelt down and began returning fire. The quick Vrusk darted back behind the dumpster. Jik sprayed the dumpster with automatic fire, keeping their heads down. I fired my electrostunner at the dralasite and hit them. They went limp, but were quickly pulled into the waiting car and it started speeding away. Serislee charged the dumpster, drawing her electro-sword, intent on making quick work of the vrusks. She yelled, "Come on guys, their needlers are useless!"

We heard a clicking sound, followed by a low hum as the vrusks popped up with their needlers. They fired again, twice each, the sound different now, a sharp snap. We were all struck, and this time, somehow, the needles penetrated our skinsuits! I felt blood flowing down my arm, a half dozen needles clustered around my left shoulder. The yazirian called out, "What the hell... and pitched forward unconscious. Jik screamed out, "Get her and fall back. I'll cover you!"

I stood up to run, but my legs were weak, my head was spinning. Anesthetic needler ammo... but how... my skinsuit...

As I fell to the dirty alley floor, the last thought I had before I passed out was that my skinsuit wasn't the sure-fire investment I'd thought it had been.

## ENHANCED NEEDLER

This illegal upgrade to a standard needler goes by many names, such as a Hot, Assault, or a Tactical Needler. There are no production models of this weapon, and each one is unique as they are hand crafted by talented gunsmiths who heavily modify existing weapons with this dangerous upgrade. Unfortunately, these weapons are illegal on most worlds, with

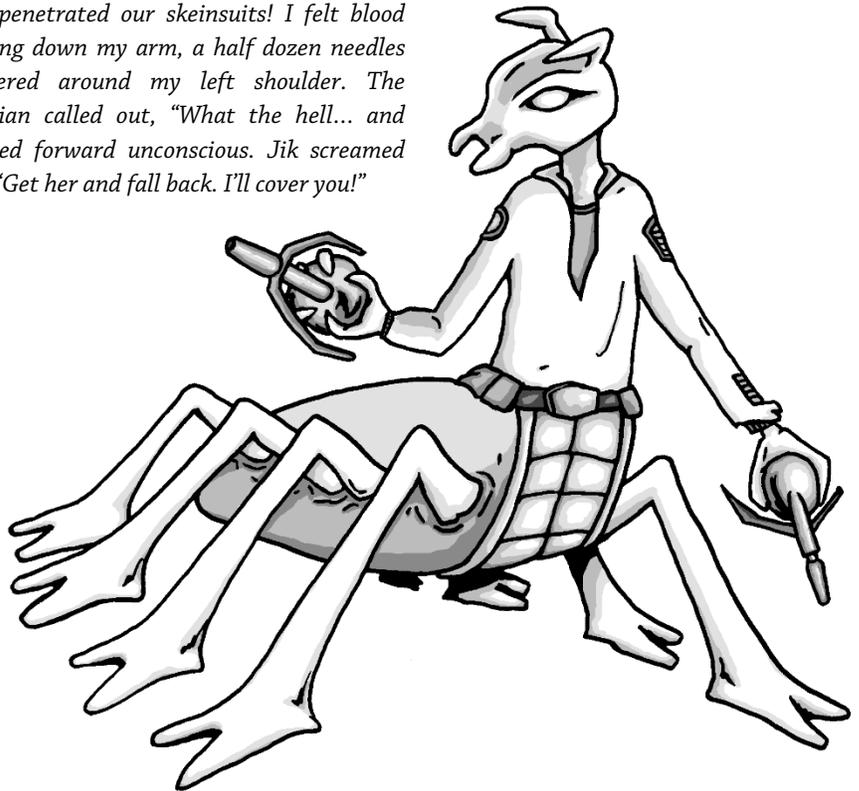


IMAGE BY BRIAN PHONG LUANGTHAM

WEAPON	MASS	COST	RANGE				
			PB	S	M	L	E
Enhanced Needler Pistol (Type I)	2 kg	+100	0-4	5-8	9-15	16-30	31-60
Enhanced Needler Carbine (Type II)	3 kg	+150	0-6	7-12	13-24	25-45	46-90
Enhanced Needler Rifle (Type III)	4 kg	+200	0-8	9-16	17-30	31-60	61-110

penalties for possession being confiscation of said weapon with a stiff fine (1D100\*50 credit), and even jail time in some places.

Enhanced Needlers are equipped with a higher power secondary firing mechanism, a powerful electromagnetic accelerator, and a harmonic destabilizer. Both upgrades are powered by a mini-powerclip (good for the life of the weapon system). All this extra hardware makes the existing needler weapon a bit heavier. Enhanced needlers have a switch allowing them to toggle between firing in either standard or enhanced mode.

When fired in enhanced mode the needles fired from the weapon are projected at a much higher speed. They also vibrate as they travel, making them a bit less aerodynamic. This makes shots louder than a standard needler shot, going from something like a cough to something like the loud snap of one's fingers. It also reduces the weapon's range considerably (see below) and lowers its rate of fire to two shots per combat round. However, these needles gain the ability to penetrate inertia screens and skeinsuits as effectively as other projectile weapons (causing ½ damage).

Since each Enhanced Needler is a one of a kind creation there are no safety standards between gunsmiths. If the electromagnetic accelerator fails, the weapon jams, if the harmonic destabilizer is out of balance the weapon should shake itself apart, and if the power system is faulty the entire thing could explode once the enhanced mode is turned on. The user is putting their trust, and possibly their life, in the

hands of the weapon's creator.

Even when perfectly crafted and completely safe, these weapons only function for 100 enhanced shots. At that time the magnets seize up, the harmonic destabilizer fries, and the drained minipowerclip fuses itself into the body of the devise. This renders it not only inoperable but irreparable as well.

## BUYER BEWARE

Game Masters must decide the quality of the construction, and when (if ever) the system should fail. The seller could be an arms dealer peddling the weapons of a barely competent hack, a conman looking to make a buck, or a master craftsman who values his reputation for quality work. Game Masters can vary the cost of the upgrade wildly, doubling and even tripling the listed price above, depending on the skill and reputation of the arms dealer. We've listed three methods for

determining when these weapons fail, and the chances for a dangerous failure (standard failure causes the weapon to stop working without harming the wielder).

### LOW QUALITY

(50% discount – 50cr / 75cr / 100cr)

Weapon system fails after 25 + 5D10 shots

Dangerous failure 50% (explodes causing 2D10 points of damage)

### AVERAGE QUALITY

(standard cost)

Fails after 50 + 3D10 shots

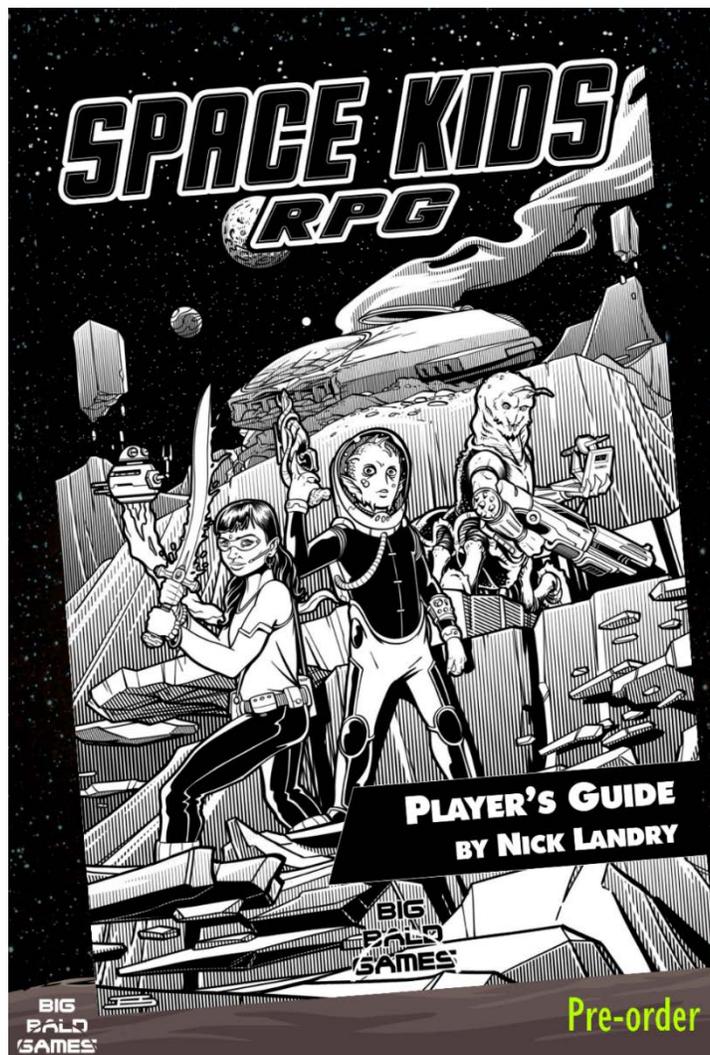
Dangerous failure 20% (shakes apart or bursts into flame for 1D10 points of damage)

### HIGH QUALITY

(50% more expensive – 150cr / 225cr / 300cr)

Fails after 70 + 3D10 shots

Dangerous failure 5% (delivers a nasty electric shock, user stunned for one round)



The image shows the cover art for the 'Space Kids RPG Player's Guide' by Nick Landry, published by Big Bald Games. The artwork is a black and white illustration of three young characters in a futuristic space setting. A girl on the left holds a large sword, a boy in the center holds a pistol, and another character on the right is also armed. They are standing on a platform with various mechanical details. The title 'SPACE KIDS RPG' is written in a large, stylized font at the top. Below the characters, a banner reads 'PLAYER'S GUIDE BY NICK LANDRY'. The Big Bald Games logo is visible in the bottom left corner of the illustration.

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# NEW EQUIPMENT: PROTECTIVE GEAR

BY JOSEPH CABADAS

Star Frontiers offers an abundance of defensive suits and screens for all sorts of occasions.

This does match real world experiences. We don't have one protective suit for all kinds of conditions.

What follows are some new pieces of protective gear for characters. Though in the cases of the Asbestos Suit and the Breathing Mask/Bag, these items were mentioned in different modules, but they are presented here with some more information.

## ASBESTOS SUIT

This is a fireproof garment – it is not really made from asbestos but rather from advanced materials – that covers a character's entire body, including the head and extremities.

An asbestos suit is often used by firefighters but protects against incendiary weapons, though a character would also need a breathing mask to receive full protection from heat and smoke inhalation.

It offers 200 points of fire damage protection. For every 10 points of fire/heat damage that the suit absorbs, the wearer takes one point. If the wearer does not have a breathing mask, the wearer suffers a -15 percent penalty to all Dexterity and Reaction Speed checks and reduce Initiative Modifier (IM) checks by -2.<sup>1</sup>

**Cost:** 500 Credits

**Mass:** 3 kilograms

## BREATHING MASK/BAG.

This is a mask with a small oxygen tank to protect characters in thin or poisonous atmospheres. Dralasites receive an environmental like bag suit, while the "mask" is a bag-like apparatus for a Vrusk's abdomen.

The Vrusk "breathing mask" also permits them to swim, which is a fairly

uncommon practice among these insect-like beings.

Wearing the mask for long periods of time is uncomfortable for those who have not received extensive training in their use. Effects: a 1 point penalty to the character's Initiative Modifier (-1 IM), and -5 to Dexterity and Reaction Speed checks.

Training can be considered the cost of a level one Military PSA/Enforcer skill in "Self-Contained Breathing Apparatus." This skill only needs to be purchased once and it eliminates any penalties.<sup>2</sup>

**Cost:** mask – 100 Credits; bag – 400 Credits; tank – 50 Credits; tank re-fill – 10 Credits.

**Mass:** mask/bag – negligible; tanks – 5 kilograms each.

## DESERT SURVIVAL SUITS

To protect desert travelers and explorers, the Pan-Galactic Corporation (PGC) first developed a series of desert survival gear – for marketing purposes, these are also called desert adventure gear.

Often nicknamed by hikers as the "cool suit," the Desert Survival Suit is designed to be worn during the daytime. The garment has an outer coating that reflects light in a diffused manner to reduce heat absorption; however, it is not so shiny that it can reflect laser fire nor reduce or enhance a person's infrared (IR) signature.

The inner layer is designed to whisk perspiration away from the wearer's skin – in the case of Humans, Yazirians and Dralasites (see Vrusk suit below) – to keep the wearer cool and dry. Vrusk tend to lose moisture through their breathing spicules on their abdomens, so suits designed for them come with filters to help keep dust particles out while keeping their clothing from becoming damp.

The middle layers contain a number of microfans powered by a standard 10 SEU microdisc.

Wearing this suit will reduce a character's water intake requirements by up to 1 liter per 20 hours GST due to high temperatures.

Typical civilian models come in a variety of lighter colors, some with reflective strips – to help in search and rescue efforts – while others offer a military-style desert camouflage scheme, but no real military benefits other than being able to blend into the environment.

Because of their nature, normal civilian Desert Survival Suits (DSS) are not designed to be worn with military suits – i.e. skein, albedo, maser mesh, grid, etc. – and can be made to act as an Explorer's Vest. Yet, different grades of armor-enhanced outfits can be bought that are the equivalent of a skeinsuit or a gridsuit (other armored suit materials are incompatible with the DSS).

Since its creation by PGC, this outfit has been licensed out for manufacturer to several companies that adapt them to local conditions, while other mega corporations, such as Eversafe Industries and Streel, have made similar versions. Versions sold on Kraatar are compatible with using a breathing apparatus and have camouflage colorations to match the planet's terrain.

Three versions are listed below. All are powered by a 10 SEU microdisc and use 1 SEU every two hours.

## BASIC CIVILIAN DSS

This can be bought in a variety of colors, with or without reflective strips, including the so-called desert camouflage version.

**Cost:** 200 Credits

**Mass:** 2 kilograms

## EXPLORER DSS

This model has the capabilities of a standard Explorer's Vest built-in (see Zebulon's Guide, page 92) and provides a variety of patch pockets, inside zipper

<sup>1</sup> Williams, Skip. "Sage Advice," Dragon Magazine, July 1988, p. 68. And house rules regarding damage.

<sup>2</sup> The module "Mutiny on the Eleanor Moraes" features a breathing mask as does the module "Dark Side of the Moon." In the "Eleanor Moraes" adventure, referees are to stress how uncomfortable the masks

are to wear but doesn't provide any provisions on how this should effect characters, so the negative IM and DEX/RS modifiers are a house rule.

pockets, Velcro strips, rings and snaps for maximum item attachment. It comes with the removable plastic backpack to store breakables.

**Cost:** 300 Credits

**Mass:** 2 kilograms

## MILITARY SKEIN/TACTICAL DSS

Created for the military, it is basically a military skeinsuit with both tactical vest and desert survival suit capabilities.

**Cost:** 450 Credits

**Mass:** 4 kilograms

## ADVANCED DESERT SURVIVAL SUIT (ADSS)<sup>3</sup>

About the time of Laco's War, the Pan-Galactic Corporation began selling Advanced Desert Survival Suit (ADSS). Militarized versions of this suit gave the PGC and Galactic Task Force an initial edge over Streeel and Merco. Other companies, including several Vrusk trade houses quickly copied the design.

The ADSS is two garments in one, offering daytime and nighttime protection. It has many of the same features as the Desert Survival Suit such as an outer coating to reduce heat absorption with the inner layer designed to whisk away perspiration. Instead of microfans, the suit's middle layers features a circulatory heat exchange system that operates to help keep the person cool during the day and warm during the night. Miniature radiators are located along key locations on the suit's exterior as part of the heat exchanger.

The problem for civilian models is that this makes the suit's wearer very obvious to infrared (IR) scanners; military units have IR baffles to reduce the character's heat signature.

Another feature of the ADSS is that the wearer's perspiration – and urine – is trapped by micro condensers and then filtered through several chemical filters. The purified water is then stored in pouches along the front of the outfit, supplying the wearer about one liter of water for every

three hours during the daytime and about 1 liter every six hours at night. The character can drink the water from a straw-like tube that is stored near the neck (the Dral-site version operates similarly, though it is set up for their unique physiology).

The suit comes with a hood and sungoggles. An optional breathing mask is available, which traps moisture exhaled from the nose and mouth – or a Vrusk's breathing spicules; the mask is useful on planets such as Laco which have even harsher conditions than many in the Frontier. A character wearing such an outfit will not suffer damage from sandstorms.

The heat exchange and water purification systems are powered by a 20 SEU powerpack – though it can also be hooked up to a backpack or a backpack battery – and uses 1 SEU per hour during the day or 1 SEU every two hours at night. The chemical filters must be changed once a month, at a cost of 50 Credits.

## BASIC CIVILIAN ADSS

This can be bought in a variety of colors. It is very reflective, meaning the character would have a hard time sneaking up on anyone during the day, though that helps with search and rescue operations. It also has a high IR signature. It is also bulkier than more advanced models, reducing a character's Initiative Modifier (IM) by -1 point and cut Reaction Speed (RS) by 5 points.

**Cost:** 400 Credits

**Mass:** 3 kilograms

## EXPLORER ADSS

This model has the capabilities of a standard Explorer's Vest built-in (see Zebulon's Guide, page 92) and provides a variety of patch pockets, inside zipper pockets, Velcro strips, rings and snaps for maximum item attachment. It comes with the removable plastic backpack to store breakables. It also suffers from being bulky, highly reflective and with a high IR signature. It provides limited ballistic and inertia protection, acting as a 25-point skeinsuit. Reduce the wear's Initiative

Modifier (IM) by -1 point and cut Reaction Speed (RS) by 5 points.

**Cost:** 500 Credits

**Mass:** 3 kilograms

## MILITARY SKEIN/TACTICAL ADSS

Created for the military, it is basically a military skeinsuit with tactical vest and Advanced Desert Survival Suit capabilities. This outfit is also equipped with IR bafflers but also provides easier movement (no negative modifiers for a character's IM or RS scores).

**Cost:** 600 Credits

**Mass:** 4 kilograms

## OPTIONAL MASK FOR ADSS

This accessory captures the moisture that a character exhales, adding up to an additional half-a-liter of water for drinking along with providing some additional protection against sand storms. However, many people find wearing the mask restricting.

**Cost:** 100 Credits

**Mass:** 4 kilograms

## SHIMMER SCREEN

This type of screen is available after the Second Sathar War for public purchase. This specialized, power-hungry shield protects a character from all types of damage for short periods of time. The screen shifts between albedo, gauss, inertia, sonic, and simp defenses.

There is a small chance that a hit penetrates the shield during the instant it shifts from one defensive type to the next. Any hit roll of 01-05 ignores the shimmer shield's effect. Although this screen offers the best protection, no weapons can be fired out of the shield when it is activated. It uses 5 SEU per minute of operation and each hit drains 5 SEU.

**Cost:** 5,000 Credits

**Weight:** 4 kilograms<sup>4</sup>

<sup>3</sup> Note: the Advanced Desert Survival Suit listed here is inspired by the desert survival suit listed on the Traveler RPG wiki site plus the stillsuit from the Dune series.

<sup>4</sup> Moore, Larry. "Non-Civilian Duty Vehicles," Star Frontiersman, issue 15, p. 28. The shimmer screen appears here as a power-hungry, vehicle defense screen; this is a downsized version.

# PERSONAL RESTRAINTS FOR STAR FRONTIERS

BY OSCAR RIOS

With the abundance of stunning (Electrostunner, Sonic Stunner, etc.) and sedative weapons (anesthetic Needler ammunition, doze grenades, etc.) players will likely up either with prisoners to deal with or as captives themselves. What's to be done with such captives is obvious - disarm and secure them, so that when they regain consciousness they're unable to pose a threat. A secure captive is unable to fight, flee, or raise an alarm.

To secure a captive their appendages cannot be free to be used for locomotion or manipulating objects (especially weapons). Premade, cheap, effective, and if possible, reusable devices are required, especially by security and law enforcement personnel. In the Frontier designing such systems is not a simple matter. With multiple races, whom have drastically different physical forms, a single universal design just isn't feasible. This article details a variety of restraint systems developed for securing prisoners of all four of the major Frontier races in a humane and effective manner. They vary from simple single use items to reusable high-tech systems.

## PLASTEEL ZIPS

A variation on the zip-ties used by technicians everywhere to bind together bundles of cables, these wide, durable, plasteel zip ties are specifically designed to hold prisoners. Once secured they cannot be loosened or reused. To be removed they must be carefully cut off captives with a sharp object (they have 1 STA worth of structural points). A special device, much like pair of hand clippers, can sever Plasteel Zips without danger to the captive. One such device, along with ten Plasteel Zips, comes with every package. Each Plasteel Zip is long enough to secure one pair of limbs together or to an object with a



narrow diameter, such as around a pipe or through a steering wheel. These devices do not work on dralasites.

## ADHESATAPE

These 15-meter-long and 10 cm wide rolls of adhesive tape are designed to secure the limbs of most Frontier races, with the exception of dralasites. They are easily carried rolls of adhesive tape, much like the Ion Bonding Tape used by technicians across the Frontier when performing quick, makeshift repairs. The difference is these tapes are more durable and nearly impossible to break or unravel with sheer force. The tape must be cut with a sharp object to free a captive, and have 5 STA structural points.

They are designed to be temporary. Body heat dissolves the adhesive after about 24 hours, allowing those secured by these tapes to easily free themselves. After 36 hours the adhesive completely dissolves and the tape simply comes unstuck. These tapes are used by those intending to release captives after having achieved their objectives and departed the area. For example, a captured guard is secured in a seldom used shed. It could be days before they are found, a dangerous proposition and a terrible way to die (starvation, dehydration). This way they are automatically released long after the person who secured them are long gone.

The amount of tape needed to bind a victim varies by the number of limbs bound, typically requiring a meter of tape per pair of limbs. For example, just binding a Human's arms requires 1 meter, binding a Yazarian's hands and feet require 2 meters, and completely binding a Vrusk's arms and legs require 5 meters! Such devices are ineffective when used on dralasites.

## HYDROTAPE

A variant of Adhesatape, Hydrotape is designed to come undone 6 hours after becoming wet. This tape is favored by those who wish their prisoners to become freed after a short period of time. After the

Hydrotape is applied it simply needs to be doused with water to activate the 6-hour dissolving. Otherwise it takes 24 hours for the body heat of the captive to dissolve the adhesive. Hydrotape is only activated by water; biological fluids, such as blood, urine, or saliva have no effect on them.

## TANGLER SPRAY

This long can, with a pump action trigger of spray, is filled with the same substance found in tangler grenades. Each can holds six uses and sprays outward, but with a range of only 0.2 meters. Typically, captives are positioned with their limbs crossed before being blasted with a shot of tangler spray. These threads then pin the target's limbs together and secures their bodies to their surroundings, such as the floor, wall, the sides of a vehicle, a trees, or another prisoner.

The cans are awkward to handle and fire so slowly that they are unsuitable for use as a close-range weapon. What they can do is fire a small, localized blast of tangler threads at a specific point, enough to bind a single target for about 30 minutes. Much like tangler grenades, these threads can also be dissolved with Solvaway.

## RESTRAINTS

### HUMAN & YAZIRIANS

With similar forms a single system is usually employed for the restraint of both humans and yazirians. These reusable and low-tech systems, called restraints, consists of a pair of wrist cuffs, ankle cuffs, large mid-torso cuff, and a left and right side cuff. The straps, cords, and cuffs are all made from a semi-flexible woven fiber with the strength of steel. The wrists cuffs can be secured in front of the torso or behind the back. The ankle restraints are separated by a length of short lightweight cord, allowing the secured prisoner to take short shuffling steps. All these restraints are secured with a mechanical key.

The mid-torso restraint is applied differently for humans vs yazirians. In humans

the mid-torso restraint secures around the waist and the left and right side cuffs are looped together to stay out of the way. In yazirians the left and right torso cuffs are used to secure both glider membranes, preventing them from unfurling. This prevents yazirians from gliding.



## VRUSK

This system has a long strip of flexible woven fiber with an abdomen strap and five pairs of cuffs, a collar, and a long cord. Four of the cuffs are for ankles while the remaining one is for wrists. The strip is meant to be secured around the vrusk's abdomen, with their legs secured under them and their wrists secured behind their back. The cuff goes around the vrusk's neck and is secured to the far end of the restraint system at the base of the abdomen by a long cord. This keeps the vrusk's torso at a secure 90-degree angle to its abdomen, preventing it from having much freedom of movement. Captors wishing for the vrusk to be able to walk can simply use two of the four ankle restraints. This allows the vrusk to walk, albeit in a slow clumsy shuffle, using just four of its eight legs.

## DRALASITE

These restraints appear as a large mesh sack with a lockable, adjustable top, and mesh holes too small for a dralasite to form an appendage through. The holes are large enough for dralasites to breathe through and even eat small morsels of food through, although they would need to be hand fed. On the side opposite the opening is a section of the restraints containing tiny ball bearings woven into the fabric. On top of the restraints, near the lock, is a retractable handle that, combined

ITEM	COST	MASS (KG)
Plasteel Zips (set of 10 w/ opener)	5	--
Adhesatape, roll of	5	--
Hydrotape, roll of	10	--
Tangler Spray, can of	75	0.5
Restraints (Human/Yazarian)	10	0.25
Restraints (Vrusk/Dralasite)	15	0.5
Electro Restraints	200	0.5
Sonic Restraints	200	0.5

with the ball bearings, allows for a captor to move a restrained dralasite about with relative ease.

The restraints are designed to automatically adjust to become as compact as possible, making it impossible for a dralasite to maintain any projected limbs for either manipulation (arms) or transportation (legs). (For example, a dralasite with three legs and two arms is put into restraints, which immediately beings constricting all around him. This triggers a biological reflex for the dralasite to withdraw its limbs into its body. Within 15 minutes the dralasite has assumed a spherical form, causing the restraint to cease its constriction.)

## POWERED RESTRAINTS

There are two typed of upgraded, powered shackles, Electric and Sonic. Both come with an electronic key fob with a 3-meter range. Each system is powered by a 10 SEU micropower clip. These systems can be unlocked or activated via the remote. These systems activate when put under stress, when their locks are tampered with, or when the wearer attempts to move faster than 5 meters / turn. Powered restraints drain 1 SEU per activation and are more robust than their non-powered low tech version (see Freeing a Prisoner).

## ELECTRO RESTRAINTS

These restraints have conductive filaments woven into their fiber mesh and a small electric capacitor. This allows the restraint to deliver a mild but painful shock which stuns victims for 1d10 x 10 minutes per activation. Captives with an anti-shock implant or active Gauss Screen are

immune to the stunning effects (but not the pain) of an activation.

## SONIC RESTRAINT

Much like the electro restraints sonic shackles have vibrating filaments woven into them. When activated the restraints hum with a paralyzing frequency when activated. This causes a stunning effect in the wearer lasting for 1D10 X 10 minutes, a duration identical to the Electro Restraints. Victims stunned in this way don't fall unconscious but are rendered helpless and immobile as they're wracked with waves of nausea, vertigo, and dizziness. Captives protected by an active sonic screen are immune to these effects.

## FREEING A PRISONER

Unlocking restraints without the proper key requires an Opening Lock roll. Restraints are considered level 2 locks, while their powered versions come with level 3 locks. If the individual attempting to unlock the restraints are the ones currently bound by them the lock difficulty level is doubled (to level 4 and level 6 respectively). Alternately, restraint can be opened by damaging them with a sharp object. The woven fibers of a restraint system have 10 STA structural points, while their more durable powered versions have an STA of 20.

Damaging the restraints with ranged weapons, such as a pistol or rifle, almost certainly result in the captive being seriously injured. Game masters can allow this, but should impose stiff penalties (-20% or more) and dire consequences for failure (the shackled individual taking half damage from the attack).



IMAGE BY AARON O'BRIAN

# FOOD TRUCKS ON THE FRONTIER AND EXPLORING CORE FOUR CUISINE

BY TOM VERREAU

These were conceived as food trucks in Port Loren but could be placed on any planet as the referee requires. The original purpose of the article is to add a little flavor, pun intended, to the Frontier but the proprietors of the different food trucks can be used as a source of rumors or as an NPC contact for the player characters. Alternatively, they might have a meeting with a prospective employer at a bench near the food trucks because he wants the interview to appear like a chance meeting while enjoying a quick bite. Any of the trucks might also have an electronic screen flashing ads and classifieds for help wanted that the player characters just happen to notice as they are waiting for their order.

## KEBAB KING'S CORE 4 KEBABS

*Hover food truck*

Korzan (yazirian male) goes by the moniker Kebab King. He is a skilled chef and specializes in kebab style cuisine for the core four species of the Frontier. His dralasite and vrusk vegetarian and insect kebabs are considered good but the human and yazirian barbeque offerings are all the rage. Any enquiry as to where to eat will almost inevitably draw a recommendation to try Kebab King.

He wears a tough krik leather apron that functions as a 10 point skeinsuit from the front and has 1d5 knife-sized, yazirian kha'dan-type blades within reach that he uses for food prep, and a zamra dangling from a chain on his belt. As the former planetary knife throwing champion of Morgaine's World, he is lethal with thrown weapons (level 6 & 80 DEX).

### MENU

a single skewer kebab 3 Cr, a double skewer kebab 4 Cr, a triple skewer kebab 5 Cr.

Krik, beef, chicken, peckin, wyvole and alligator kebabs are popular with humans and yazirians and reflect both of their cuisines.

Ool and Jung kebabs are dralasite cuisine.

Cricket, grub and "k-pedes" are vrusk cuisine.

**Sauces:** Buffalo, Teriyaki (H), Blood Sauce (Y), Ool Sauce (D), Zizzzz Sauce (V)

### RUMORS

Korzan is surprisingly affable for a Yazirian unless you insult his food. He knows all his customers by name and their typical order. He also has his finger on the pulse of what's going on around town, whether politics, news, crime, or expeditions heading into the black of space. Basically, he's well plugged into the rumor mill. He will know the best rumors.

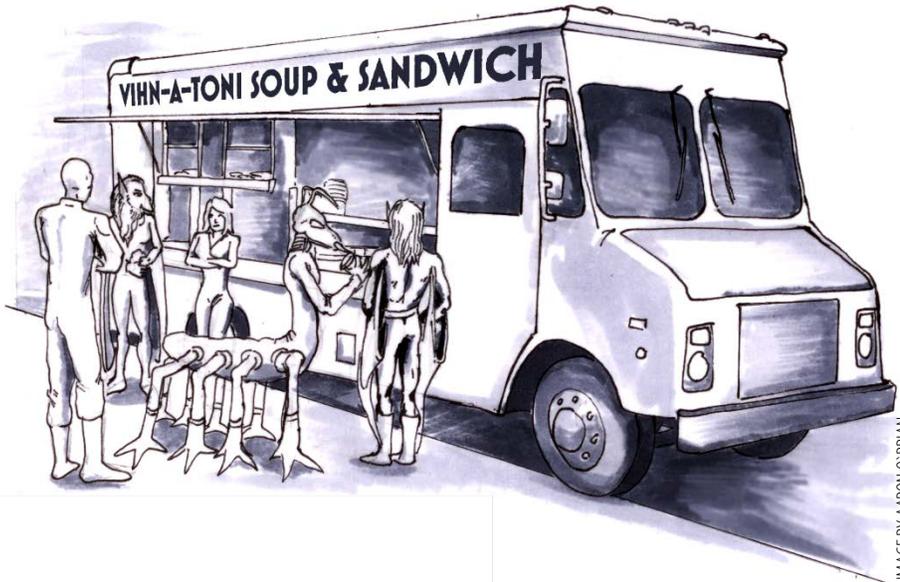


IMAGE BY AARON O'BRIAN

## VIHM-A-TONI SOUP & SANDWICH

*Ground food truck*

Zixx (vihm female) is awkward and oblivious to social cues. Her cooking skills are passable but on a bad day the quality will slip.

She tries to offer core 4 cuisine but her dralasite menu items are universally bad.

### MENU

Sandwiches: 5 Cr, cup of Soup 3 Cr, bowl of soup 4 Cr.

**Soup of the Day:** whatever was on hand whipped into a soup

**Sandwiches:** Chicken, Peckin, Krick and the Surprise Special

### RUMORS

Gangs are a problem in the Rook Hill neighborhood as well as other lower income

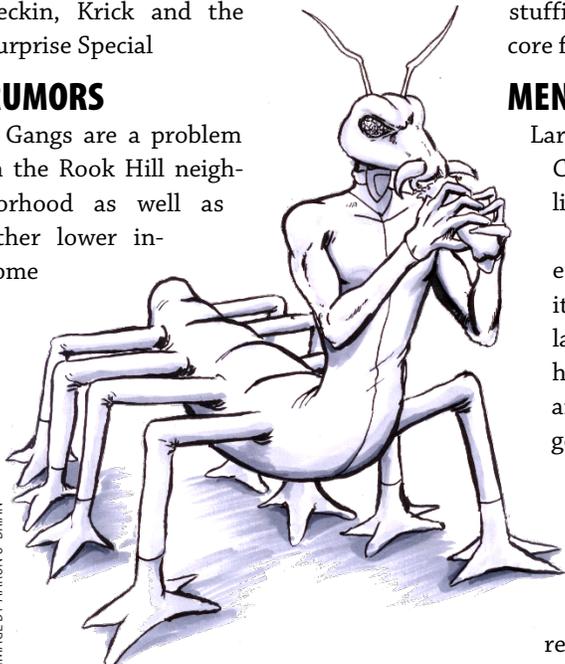


IMAGE BY AARON O'BRIAN

housing arcologies.

She is concerned about the poor and underclass in town and if quizzed for rumors or adventure opportunities will recommend poor and downtrodden individuals in desperate need with little ability to pay.

## JOHAN'S DUMPLING WAGON

*Hover food truck*

Johan's cuisine is based on an ancient Human ethnic menu item but adapted to the modern Frontier and multi alien species palate. He offers what was known as Chinese style dumplings but filled with stuffings developed from cuisine of the core four Frontier species.

### MENU

Large orders are 12 dumplings for 5 Cr. and small orders are 6 dumplings for 3 Cr.

Cricket Dumplings - while crickets are technically a human food item the cricket dumpling is popular with the vrusk. Only the rare human will eat them and yazirians and dralasites pass on them altogether.

Grub dumplings are strictly a vrusk cuisine.

Krik, pork, chicken, and peckin dumplings- very popular with humans and yazirians representing both of their cuisines.

Ool fruit, fried pudding and fried veggie paste dumplings cater to the dralasite market.

**Sauces:** Buffalo, Plum, Teriyaki (H), Blood Sauce (Y), Ool Sauce (D), Zizzzz Sauce (V)

### RUMORS

There's been a run on dralasite cuisine, there must be more dralasites in town than normal, perhaps there is an event at the Dralasite Sensorium?

## ROSIE'S SLUSH

Rosie's Slush is a robot operated push-cart selling slush in a myriad of fruit flavors catering to humans and dralasites. Rosie is a level 5 service robot with an adequate personality for her level and can carry on small talk by using her internal chronocom and computer link to access the public information nets for the current news on sports, politics, entertainment, and culture to engage with her customers.

### MENU

Slush: small 2 Cr, medium 3 Cr, large 4 Cr.

### RUMORS

Chatting with Rosie won't really generate any rumors other than publicly available information from the net. In other words what the game master really wants the players to know that is common knowledge.



IMAGE BY AARON O'BRIAN

# THE ESCAPE PLAN

## EPISODE #8



*"DADDY ISSUES"*

COLONIAL ALLIANCE CARRIER GROUP NOVA OUTER RIM PATROL ...



PARDON THE INTRUSION ADMIRAL, THERE IS A PRIORITY MESSAGE FROM SPACE FLEET COMMAND.

GO AHEAD.

SPACE FLEET COMMAND HAS JUST RECEIVED A RANSOM DEMAND FOR YOUR DAUGHTER.

SHE WAS ABDUCTED BY SPACE PIRATES FROM THE 'STELLAR TRANSPORT SHIP S.S. TANHAUSER.

WHAT?!



RANSOM? THEY'RE IN FOR A SURPRISE.

THE MESSAGE WAS TRACED BACK TO TOBYN'S HOLD.

APPARENTLY, SHE HAS BEEN TRAVELLING UNDER HER MOTHER'S MAIDEN NAME SAWYER AGAIN TO AVOID ANY PREFERENTIAL TREATMENT SHE WOULD ENCOUNTER AS AN ADMIRAL'S DAUGHTER.



CONN, ALERT THE CARRIER GROUP. SET COURSE FOR TOBYN'S HOLD, BEST SPEED!

