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CREDITS:

DISCLAIMER NOTICE:

Since the release of FULL THRUST (the Second Edition) in April 1992, the response we have been getting from the SF gaming world has been, to say the least, overwhelming! The game seems to have really struck a chord with many gamers tired of ultra-complicated systems that take a week of evenings to play, and above all it has achieved at least one of its major goals: it has given gamers a simple basis to tinker with, without spoon-feeding them with huge volumes of "official" rules that leave little room for the individual imagination. If we have managed to do just a little to help restore gamers' creativity and imagination to its rightful place in the hobby, then that is reward enough (mind you, the money helps as well....).

What all this moralistic rambling is getting round to is that this wonderful all-singing, all-dancing product that you hold in your hands has been very largely written by the USERS of Full Thrust over the last 18 months or so. While we at GZG have injected a number of ideas, background bits, things that were left out of the original book etc., the vast majority of the actual rules in this volume have come directly from the massive amount of feedback we have been sent by YOU, the people who were willing to risk your hard-earned cash on a little-known system from a minor publisher!

We have been sent all kinds of new ideas, house rules, scenarios and criticisms (mostly constructive, happily), in fact everything from pages-long computer printouts to odd ideas scribbled on the back of old envelopes. Added to this is the hours of time at shows and conventions spent talking about the rules to customers, who vary from those wanting long discussions on the physics of space combat to the type who sidles up to the stand with the immortal opening line of "I've designed a Spaceship...". The point is that ALL the ideas, however good, bad or downright silly, have been lodged somewhere in the dark recesses of the author's memory and have in some way contributed towards the publication of MORE THRUST (yes, even the guy at a recent show who spent half an hour blocking up the front of our trade stand while reading his way through our browsing copy, then put it down and proceeded to tell us what was wrong with it...).

Our thanks to you all – Happy Thrusting!

DESIGNER'S NOTES:

This book is a SUPPLEMENT to our FULL THRUST Starship Combat Rules; it provides a large selection of new rules and ideas, extensions to the (optional) background supplied in the original game, new and revised ship designs and much more.

It must be stressed that (with the exception of clearing up a few errors/omissions in the basic set) very few of the rules herein are the dreaded "OFFICIAL RULE AMENDMENTS" – this is a compendium of IDEAS, for players to use (or not) as they see fit. While certain sections are updates, amendments and clarifications of parts of the original rules, they should only be used to supersede the originals IF you like them better!

As with the basic rulebook, players should feel free to go through this supplement and to pick and choose which parts they wish to incorporate in their own games (if any); even the COMPETITIVE AND TOURNAMENT GAME rules included here are merely suggestions on how FULL THRUST may be run as a competitive game – clubs and organisers may use these as guidelines if they wish, or use a totally different system if they prefer.

DESIGN CREDITS:

A lot of people have contributed towards this book – my deepest thanks to them all. I have deliberately avoided crediting specific parts of the text to specific authors, because most of the ideas have been rewritten in different forms and indeed many are compilations of several contributors' input. This aside, special thanks must go to Mike Elliott for the DIRTSIDE II Interface rules, Jim Webster for the HELLFIRE Interface and scenario (and the permission to use it), Phillip Gray for several of the photos and new ship designs, Steve Blease for the "Liberté" scenario and Garry Milton for the "Assault on Starbase 13" scenario. As usual, a VERY big thankyou goes also to Barrie Quin for his amazing artwork throughout the book!

In addition to the above, all the following have contributed rules, concepts, inspiration etc. towards this publication (whether as actual submissions or just discussions of ideas), and made it all possible:

Paul Allcock, Paul Birkett, Chris Brann, Alex Stewart, Chris Bowen, Phillip Gray, Greg Mann, Bruce Miller, Andrew Finch, Ben Rogers, James Clay, Simon Evans, Martin Kay, Tim Parnell, Simon Parnell, David Garnham, Simon Burroughs, Jed Docherty, Gary Guy, Nigel Phillips, Jim Langer, Paul Lewis, Karen Blease, Steve Tee, Mike McKown, John Treadaway, Kevin Dallimore, Alan Marques and many, many others.

FULL THRUST ERRATA:

(or: SOMEWHURE IN THIS BOK YOU WILL FIND A DELIFERATE MASTIKE....)

Considering the frantic rush in which the final typesetting was done to get the FULL THRUST rulebook to the printer on time, we are pleased (or frankly, amazed) to say there are surprisingly few typos and errors in it! To set the record straight, the important ones that we HAVE found are as follows:

1) In the photo on page 16, the letters identifying the two major ships are transposed – the one marked "A" is the Battleship referred to as "B" in the caption, and vice versa with the Heavy Cruiser.

2) The shaded boxes on pages 17 and 18 (right hand column) both have the SAME error – namely that page 18 reads "...5,6 = 1 damage point, 6 = 2 damage points." It should, of course, read "...**4,5** = 1 damage point, 6 = 2 damage points." (the page 17 box refers to fighters, but has exactly the same error.) It is remarkable how few people seem to have actually noticed this – we certainly didn't at first – probably because by the time they have read this far they have already seen the same mechanism a couple of times under other rules and know what it SHOULD say!

There are a couple of other very minor typos, but I'm not telling you where – see if you can spot them! Suffice to say that we are not aware of any others that actually affect the rules in any way.
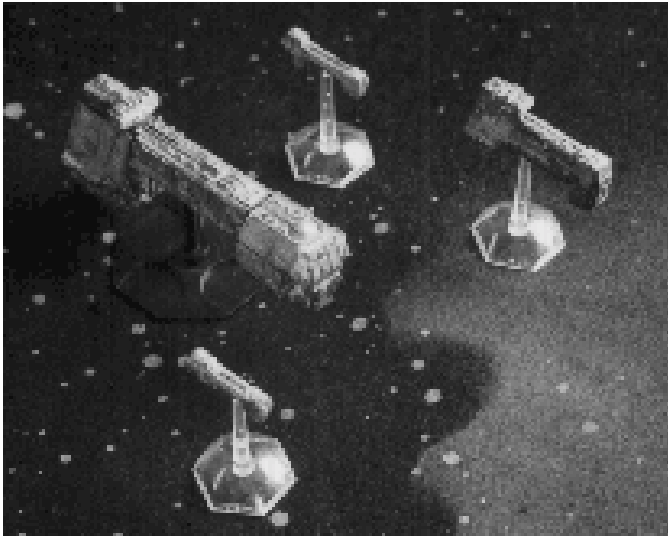
A task force of Neu Swabian League ships: the Superdreadnought "Von Tegetthoff" with escorting units. (Models from CMD.)

MISSILES:

Unlike the Pulse Torpedoes given in FULL THRUST (which are assumed to be high-power plasma bursts rather than actual "projectiles"), MISSILES are small, unmanned craft in their own right. A typical space combat missile is, in effect, a small ship, guided by an onboard AI (Artificial Intelligence). Missiles are one-shot weapons, which are crossed off the ship diagram when fired.

MISSILE FIRE:
Missiles are launched in a special MISSILE PHASE which takes place AFTER both players have written their orders for the turn, but BEFORE any ships are moved in accordance with those orders. Missiles must be launched directly forward, ie: along the current course of the firing ship, but may manoeuvre (as below) in the firing turn. Missiles can move anything up to 18" per turn, and have an "life" of 3 turns in which to attack a target (after this they run out of power and become inert, being removed from the table). All missiles are moved ONLY during the Missile Phase of each turn, and each missile must be indicated by a small counter (or model) with some means of showing its direction of flight. Each turn, a missile may move up to its maximum 18" and may make up to a 2 POINT (60 degree) course change in any direction AT THE MID POINT OF ITS MOVEMENT. If both players have missiles in flight at the same time, it is suggested that they alternate movement of them until all missiles have moved.

After all missile movement is completed, play proceeds as normal with all ships moving in accordance with their orders; any ships that FINISH their movement within 6" of an active missile (and NOT in the missile's REAR arc) may be attacked by that missile during the firing phase of the turn.

One ship may launch any number of missiles in one turn, subject only to the number it is carrying; each missile may have a different target, as they are guided by their onboard AIs and their own Fire Controls.

Using the sequence above gives players the freedom to move missiles without tedious order writing for them, but also means that they must try an anticipate their opponent's orders to place the missile in the optimum position for attack after all ships have been moved.

MISSILE ATTACKS:
When a ship ENDS its plotted movement within 6" of an active enemy missile, the missile may attack the ship. This is carried out at the same point in the turn as Fighter group attacks, ie: when the ship itself fires, or if it does not then after all other firing is completed. Before the missile attacks, the ship has a chance to try and intercept it using any PDAF systems it has, in a similar way to firing on fighter groups; as missiles are smaller and more agile than fighters, however, it needs a roll of 6 by the PDAF to kill the

missile. Each PDAF (or ADAF, using the same proximity rules as for fighter defence) can attempt to kill only one missile per turn, and may not also be used in an anti-fighter role on that same turn.

If the missile survives any defensive fire against it, it may then attack the target ship.

"NORMAL" MISSILES are assumed to carry nuclear detonation warheads, and roll 2 dice when attacking – the total score rolled is the number of damage points inflicted on the target, and is NOT reduced by screens.

There are many other possible ideas for alternative missile warheads, including the following:

EMP MISSILES: These release an enhanced Electro-Magnetic Pulse (EMP) on detonation, and are intended to "scramble" a ship's electronics and systems without causing structural damage. Roll one die, and subtract 1 for each level of screens the ship has in use: the final score gives results as follows:

1-2 = No effect

3-4 = Roll for EVERY system on ship, as if for Threshold Roll; systems knocked-out on rolls of **5** or **6**.

5-6 = Roll as for Threshold Roll, but systems knocked-out on scores of **4**, **5** or **6**.

NEEDLE MISSILES: Like the Needle Beam, this type of missile can seek and destroy one specific system on the target ship (eg: Fire Control, Drives etc.); on attacking, the missile's owner picks its target system and rolls a die: on a score of **1-3** the missile misses its intended target system, but does **ONE** die-score worth of normal damage (ie: 1-6 points); on **4-6**, the missile finds its target and knocks-out that specific system IN ADDITION to doing 1 die of normal damage.

SYSTEM: **MISSILE**

MASS: **2 (PER MISSILE)**   POINTS COST: **6**

SYMBOL:

NORMAL TYPE   EMP TYPE   NEEDLE TYPE

"AA" MEGABATTERIES:

The MegaBattery is an experimental super-powered Beam system with extended range and damage potential. At a range of **0-18"** the "AA" Battery rolls **FOUR** dice, at **18-36" THREE** dice and at **36-54" TWO** dice; all hits are scored as normal, with usual deductions for Screens etc.

There is a disadvantage to the AA Battery, before you all rush out to stick them on your Dreadnoughts: on any single shot with the one battery, if you roll TWO (or more) ONES the Battery overloads and burns out – this causes no damage to the carrying ship, but the weapon is out of action for the rest of the game. [OK, so all you mathematicians out there have just worked out that there is more chance of a burnout with short range shots than long range. Correct. Tough!]

AA Batteries can only be fitted to CAPITAL classes (and of course, Superships and stationary installations); additionally they may only be fitted to bear through a SINGLE fire arc.

SYSTEM: **AA MEGABATTERY**

MASS: **5**   POINTS COST: **15**

SYMBOL:

WAVE GUN:

The Wave Gun is a smaller and slightly less over-the-top variant on the Nova Cannon given in the Full Thrust rulebook. The system fires a Plasma charge that expands as it travels along its line of flight, causing damage to any vessels in its path.

As with the Nova Cannon, the Wave Gun may fire only along the main axis of the carrying ship, ie: in a straight line bearing directly

forward along the ship's current course. The ship may not fire ANY other weaponry in the turn that it fires the Wave Gun, and also counts as UNSHIELDED through its entire frontal arc while the weapon is being fired.

Unlike the Nova Cannon, the Wave Gun burst has a "life" of only one turn. Its full range is 36"; over the first 12" move a 2" diameter template along the line of fire, at 12" to 24" the template expands to 3" diameter, and then from 24" to 36" it expands again to 4" diameter. This all happens in the one turn,. after which the template is removed. Any ship touched by the template during its flight suffers damage: **4D6 at 0-12" range, 3D6 at 12-24" and 2D6 at 24-36".** Note that this damage is equal to the actual score rolled, eg: in the middle part of its flight (with a 3" template) it might roll 4, 1 and 5 for a total of TEN damage. There are NO defences against Wave Gun fire - neither Screens nor Armour reduce the damage inflicted.

The Wave Gun needs to be charged prior to firing: each turn that the player notes the weapon is charging, he rolls one die and notes the result down; when the accumulated rolls reach **SIX** or more the weapon is fully charged and may then be fired at any time. Firing the Wave Gun totally discharges the capacitors, which must then recharge from zero again.

If the Wave Gun is knocked-out by a threshold roll (or a needle beam hit) while it is charging or charged, the carrying ship suffers damage equal to the current charge in the weapon's capacitors.

Note that a ship fitted with a Wave Gun MAY apply thrust or change course in the same turn that it fires the weapon, unlike the Nova Cannon rules.

SYSTEM: **WAVE GUN**

MASS: **10**   POINTS COST: **30**

SYMBOL:

PLANETARY BOMBARDMENT SYSTEM (ORTILLERY):

This is a system used for ground support fire from orbiting Starships or Monitors. It has no function in Space Combat, and cannot be used as an anti-ship weapon.

The use of this system is fully described in the section on Ortillery Fire in the "DIRTSIDE II" INTERFACE rules given on P.17; if you are using FULL THRUST with a different Ground Combat rules system then the rules given should allow you to relate this weapon to your chosen game with a little thought.

SYSTEM: **PLANETARY BOMBARDMENT SYSTEM (ORTILLERY)**

MASS: **3**   POINTS COST: **10**

SYMBOL:

REFLEX FIELD:

The Reflex Field is a variation on conventional Screen technology, in that it protects its carrying ship (partially) against attack from energy weapons such as standard Beam Batteries. The interesting aspect of the Reflex Field, however, is that it has the capability to actually "return" some or all of the attacking Beam's energy back to its source, causing damage to the firing vessel! This nasty little device may be activated in any desired turn, but it MUST be written in the carrying ship's movement orders that the Field device is to be activated in that turn (any turn that the player does not note the Field to be in use, it is assumed turned off). The opposing player is NOT told of the Field's status until he fires at the ship, by which time it may be too late for him.....

If the Reflex Field is activated, the carrying ship may NOT use any weaponry of its own that turn, though it may move and manoeuvre

normally. Other specialised actions (eg: launching or recovering Fighters) are also prohibited while the Field is active.

When a ship with an operating Reflex Field is fired on by beam weapons, roll for hits and damage in the normal way. Now the player owning the target ship tells his attacker that he has an active Field, and rolls one die:

On a roll of **1** the Field has no effect: full damage is applied to Target ship as normal.

On **2**, the Field stops some damage – the target receives only HALF the normal damage (rounded up).

On rolls of **3 or 4**, the Field absorbs all the damage, and none is applied to the target.

On a **5**, no damage is applied to the TARGET, but HALF (rounded up) is reflected back to the FIRING ship.

On a **6**, the Field reflects the FULL damage back to the firer!

SYSTEM: **REFLEX FIELD**

MASS: **6**   POINTS COST: **40**

SYMBOL:

CLOAKING FIELD:

Cloaking Fields are systems that render ships totally invisible and undetectable to all forms of sensors and visual scanning. They are thus very useful under certain circumstances, but they have one big disadvantage as well: though the "cloaked" ship cannot be seen, it also cannot "see out" – while the Cloak is active it is isolated in its own little world, with no interface to outside reality (bit like some gamers I know....).

The cloaked ship is thus reduced to navigating inertially, based on the data it had when entering cloaking mode – it has no idea what is going on around it until it decloaks again.

The suggested way of simulating this in game terms is that when a ship wishes to "cloak", the player must note this in his orders for that turn; he must ALSO note the number of turns the ship is to remain cloaked (eg: 3 turns). At the start of its movement for that turn, the ship model is removed from the table and a marker of some kind is placed to mark its location on entering cloaked mode. This marker then remains stationary until the ship decloaks, when it can be removed. For each turn the ship is in cloaked mode, the player writes movement orders for it exactly as normal, although of course nothing is placed on the table to indicate its movement. After the required number of turns in cloak have elapsed, the player returns to the cloaking marker and proceeds to plot out all the moves he has written for the ship while cloaked, finally placing the ship wherever it actually ends up – if he has planned his moves well it will still be on the table, if not it may well be halfway into the next room.....

Of course, the player has an advantage over the imagined captain of the cloaked ship, in that he can see the flow of the battle and write his moves accordingly – however this is balanced somewhat by having to specify in advance the number of turns in cloak, to prevent ships choosing to decloak just because a juicy target has wandered into range.

This is just a rough idea for the system, and it may be tinkered with as much as you like – in multi-player games where each participant has only one ship, it may be interesting to try sending a player out of the room for the turns his ship is cloaked so he REALLY has no idea what is going on!

SYSTEM: **CLOAKING FIELD**

MASS: **1 PER 10 MASS OF SHIP**

POINTS COST: **2 x MASS OF SHIP**

SYMBOL:

BASIC RULES REVISIONS:

INCONSISTENCIES IN THE ORIGINAL RULES:

As with virtually any game rules systems, there are a few points at which the FULL THRUST rules either break down or throw up somewhat anomalous results. One such area is concerning the artificial "split" between the three major types of ship – Escorts, Cruisers and Capital ships. As we wanted to make a clear-cut division between the types rather than have a more open "sliding scale", we had to put the breaks somewhere, and the figures given seemed as good as any! What this gives rise to is that when designing your own ship classes, it is actually possible to build a ship at the very top end of one mass classification that has a better performance and armament than a more expensive ship only a couple of mass factors heavier (which falls into the lower end of the next major group). A related problem occurs when the relative performance and cost factors of the basic beam weapons are analysed, from which it is quite easily deduced that one "A" battery is much more cost-effective than the equivalent mass in "C" batteries (which cost more in total while having a shorter range).

Taking the former case of the ship sizes, this is a problem that will occur wherever the break points are set; my personal preference is to leave the system as it stands, after all in reality there are certain real (wet-navy) warship types that ARE significantly better than others, though all will have their advantages and disadvantages for particular missions. In any case, the problem only really arises when you try to "play the numbers" and build the "perfect" ship – if you want to do that and have a whole fleet of nothing but a particular optimum class then go ahead, but do not be surprised if a better tactician with a more balanced force beats you!

Moving on to the second problem, that of the different cost-effectiveness of the Beam Batteries, this can (if desired) be dealt with by fiddling the cost points a bit – simply make the "A" and "B" batteries a little more expensive than they are in the basic rules. Once again, however, I feel that such adjustment is not strictly necessary to most "normal" games; as with the classification problem above, the point only occurs when you are trying to get every last little bit of advantage over your opponent by stretching the design rules to their limits. All the ship classes given in the basic rules (and most of them in this volume as well) were arrived at by considering the ships being designed as a whole and treating them as analogues of historical naval practice (which is of course what most SF authors do anyway), rather than trying to cram the most powerful of everything into every hull size. Sure, you can fit a Carrier with a few "A" batteries rather than lots of "C" batteries, and yes, there are precedents for this in "real" naval design (the Kiev class carriers, for instance, with their large arrays of heavy anti-surface missiles); on the other hand you can look at

a huge carrier like the Nimitz class and see it fitted with only a couple of close-in defence systems and SAM batteries. The whole point I am trying to make is that you should not get too carried away by the mathematics of the points system; it is there as a means to an end, for getting a rough balance of forces where that is required – isn't it much more satisfying to know that you have beaten the enemy because of your superior tactical ability, rather than because you managed to squeeze an extra "A" battery on to your Cruiser?

All the above notwithstanding, there are some suggestions in the COMPETITION GAMES section of this book on how to limit the effect of loophole-hunters, and also given below is one idea on how to make the much-maligned "C" battery a little more appealing to all you naval architects out there.

USING "C" BATTERIES AS ANTI-FIGHTER/ ANTI-MISSILE WEAPONS:

While the bigger Beam Batteries are too heavy to be of use against small agile targets such as fighters (and the missiles introduced in this book), the little "C" beams MAY, if desired, be permitted to fire in such a defensive role. When used in this way, a "C" Battery fires as if it were a PDAF system, using the same rules and restrictions (and the same 6" range); the only difference is that when engaging fighters the "C" battery is somewhat less effective than the dedicated PDAF and thus scores only **1 kill** on rolls of **5 or 6** (none on 4 or less). Against MISSILES, a **6** is required exactly as for PDAFs.

On a turn in which it is used in its defensive mode, a "C" battery may NOT also fire in its normal anti-ship role.

Unlike PDAFs, using "C" batteries in a defensive role DOES require the use of an operating FireCon (they do not have the built-in systems that the dedicated defences use); however any number of batteries may fire at ANY NUMBER of different fighter or missile targets (up to 1 per battery firing) using just the ONE FireCon. Thus a ship with 3 "C" batteries may actually engage up to 3 separate fighter groups or missiles per turn using just a single FireCon.

SENSORS – EXPANDED RULES:

In the FULL THRUST rulebook, Sensor systems are treated in a very simple and abstract manner. All ships are assumed to carry PASSIVE sensors, while all MILITARY ships also carry ACTIVE sensor suites with a longer range; the only real effect (in game terms) of either of these sensors is that the actual model of the scanned ship is placed on the table in place of the "bogey" marker. This is fine
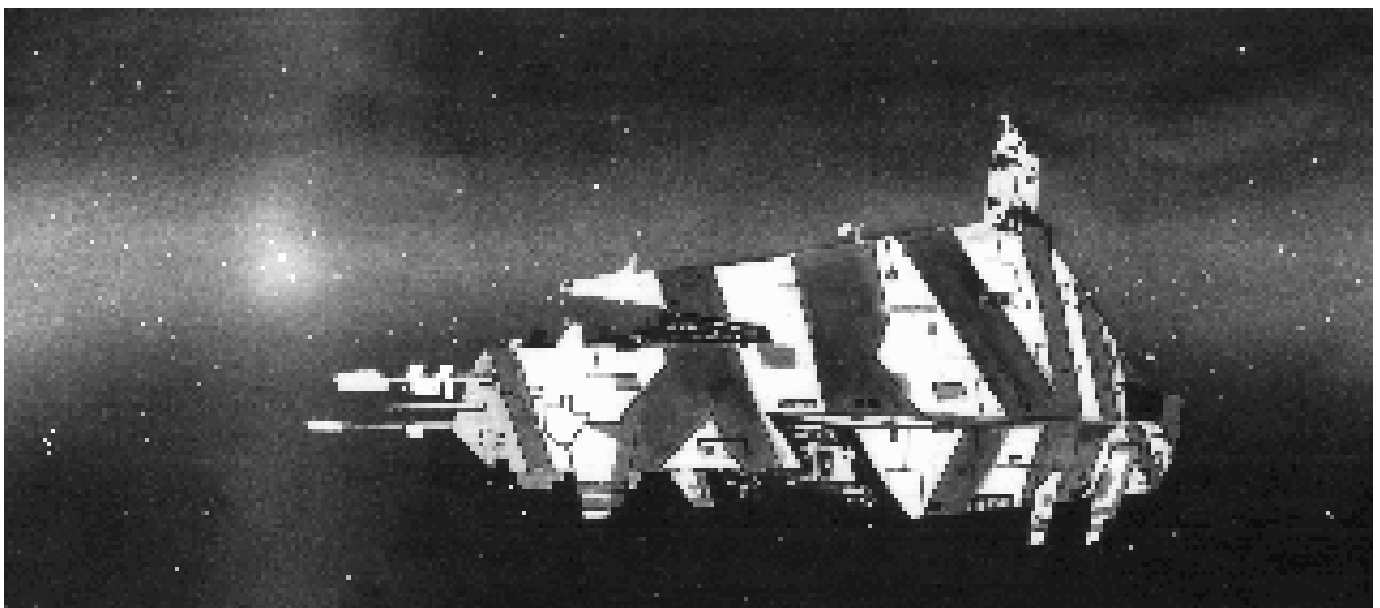
as far as it goes, in that the scanning player can see the model and presumably have some idea of what class and type of ship it represents – particularly if players are using a specific, recognisable line of miniatures. Things begin to break down when sight of the model itself does not actually give the opposing player any real information about the ship, eg: if the model is a scratchbuilt or conversion, or a commercial model is simply being used to represent a customised ship design (perfectly allowable of course!). The following system is a suggestion for enhancing the sensor rules to allow the scanning player the chance of gaining some real, usable information about the enemy vessel.

PASSIVE SENSORS: these continue to work exactly as per the original rulebook; they are very basic systems, serving to locate an opposing vessel sufficiently to achieve a firing lock on it while at the same time giving a visual indication of its identity and configuration. They are NOT designed to reveal any detailed information about the target ship.

ACTIVE SENSORS: these are much more advanced sensor suites that are now classified in three grades: **BASIC, ENHANCED** and **SUPERIOR**. Each grade of Sensor has a different Mass and Cost requirement, as detailed in the table below:

Sensor Type	Mass	Cost
BASIC*	Nil*	Nil*
ENHANCED	1	15
SUPERIOR	2	30

* As BASIC level active sensors are assumed to be fitted to ALL military ships, they do not have any separate Mass and points costs – they are inherent in the basic hull cost.

All ACTIVE sensors function in the same way as those in the original rules, in that they must be deliberately used to scan a given target ship or bogey, once per turn. The use of Active sensors immediately "illuminates" the ship using them, causing it to be placed on the table if it was previously represented by a bogey marker. If **BASIC** active sensors are used, they simply work as per the original rules, and the scanned ship is placed on the table. If **ENHANCED** or **SUPERIOR** active sensors are in use, the scanning player ALSO rolls 1 die; if his ship is using **ENHANCED** active sensors he uses the die score as rolled; for **SUPERIOR** sensors he **ADDS 2** to the score. The final adjusted score gives a result from the table below:

Die Score:

1–2   No information disclosed

3   MASS only of ship disclosed, and whether Military or Merchant.

4   Data on Mass, Propulsion and Screening systems (original values)

5   Data on ALL onboard systems (original values)

6+   As 5, PLUS current Damage Status and systems functional – ALL data about vessel.

The owner of the SCANNED vessel must disclose the required information VERBALLY to the scanning player – he does not need to show him the ship record diagram. The information should only be stated once per successful scanning attempt – it is up to the player to remember and/or note down what he is told about the opposing ship.

Obviously a degree of trust is necessary here that true information is being given – if advanced sensors are being used in a competitive game it is suggested that the umpire should check and relay the information rather than the player.

SYSTEM: **ENHANCED SENSORS**

SYMBOL:

SYSTEM: **SUPERIOR SENSORS**

SYMBOL:

SENSOR JAMMING – ELECTRONIC COUNTER MEASURES:

If players choose to use the advanced sensor rules given above, they should also be able to use ECM (Electronic Counter Measures) to "jam" enemy sensors.

Ships may be fitted with **INDIVIDUAL ECM packages** (to protect that ship only), at a MASS requirement of **2** and a Points Cost of **20**; alternatively a ship may be fitted with an **AREA-EFFECT ECM package** that can also protect other nearby ships against sensor scans, at a MASS of **3** and a Points Cost of **30**. It should be noted that, in general, Area-Effect ECM is only fitted to dedicated Electronic Warfare ships that would then accompany a flotilla of non-ECM-equipped vessels.

Individual ECM systems can only jam sensors aimed at the actual ship carrying the system, while Area-Effect ECM systems can jam sensor scans against any friendly vessel that is within **12"** of the ECM ship. While an individual or area-effect ECM system is in active use, the carrying ship (or any ship covered by the area of jamming effect) also suffers the jamming effects if it tries to use its own active sensors to scan an enemy; the jamming produces a blanket effect that inhibits all active sensor use, friendly and enemy. For this reason, it is necessary to note in a ship's orders for a given turn that the ECM is active for that turn – otherwise it is assumed to be switched off.

When an active ECM system (individual or area) is protecting a ship, the player owning that ship may make a die roll whenever an enemy tries to scan the ship with active sensors; this die roll is then SUBTRACTED from the roll the "scanning" player makes for his sensor results, and the final figure applied to the sensor table above. Thus jamming is not always effective – if a player is using SUPERIOR sensors (+2) and rolls a 6 (giving him a total of 8), while the opposing player rolls only a 1 for his ECM, the final result will be 7: still enough to reveal everything about the scanned ship.

If a player is trying to make a sensor scan while being effectively "jammed" by a **FRIENDLY** ECM system, he simply rolls twice, subtracting the second roll from the (modified) first roll.

SYSTEM: **ECM (JAMMING) SYSTEMS**

SYMBOL – INDIVIDUAL: **X**

SYMBOL – AREA EFFECT: **X**

DAMAGE CONTROL:

The original rules made no provision for any attempts to repair ship systems DURING the battle. In fact, it is quite likely that suitably trained Damage Control Parties in the crew may well be able to get certain systems back on-line after they have been "lost" in a Threshold Point Roll, provided that the damage to the system is not too severe. To simulate this, the following rule is suggested:

Each ship has a number of Damage Control Parties within its crew. Normal complement is **ONE DCP** for **Escorts of Corvette class and above** (Scouts, Couriers and Fighters, with their very small crews, have no personnel to spare for such duties – in any case they are usually vaporised by one salvo!), **TWO** for **Cruisers** and **THREE** for **Capital** Ships (these allocations costing no points) but additional teams may be allocated up to twice the basic allowance, at a POINTS COST of **10** per additional DCP – thus a Capital ship could have a maximum of 6 DCPs in total, for an extra cost of 30 points (Note that DCPs, both the basic and any additional ones, do not consume any MASS – they are simply part of the normal crew complement with extra training and duties).

At the end of each turn, prior to writing orders for the following turn, both/all players may attempt Damage Control rolls for any ship that has lost systems as a result of Threshold rolls. Note that Damage Control parties may NOT attempt to repair structural hull damage (ie: lost Damage Points), nor may they repair any system taken out by Needle Beams or other "selective" weaponry; the

Damage Control we are talking about here is re-routing through backups, jury-rigging systems and generally performing engineering miracles with a ball of string, some chewing gum and a bad Scots accent – anything structural or completely vaporised is going to require major work in dry-dock, if the ship survives that long!

Each DCP may attempt to bring any **ONE** system back on-line each turn; if multiple DCPs are available then more than one may be allocated to the same job, increasing the chance of success considerably. For each DCP at work, roll one die: a roll of **6** indicates the system is up and running again, at least for the time being ("Ah dinna ken how long she'll hold runnin' through that one cracked crystal, Cap'n....").

If a repair attempt fails, it may be re-tried next turn; however ALL DCPs to be used on one ship must be allocated their jobs for the turn before any roll for success – if you have two DCPs you could choose to have both work on getting a FireCon functional (probably not a bad idea...), and thus roll two dice in the hope of getting a six; what you could NOT do is to roll for one DCP's attempt THEN decide to have another go with the other team if the first fails.

Any system repaired by a DCP may well fail again at the next Threshold point – it is rolled for then as normal. A successful Damage Control roll on a ship's Drives will repair only HALF the drive strength, in the same way as it may be lost – TWO rolls of 6 on the same or different turns are required to get a completely non-functional Drive system back to full power.

Damage Control Parties are marked on the ship record diagram in the same way as other systems (see below for the suggested symbol to use), and must themselves be rolled for at threshold points – this represents possible casualties among the vital specialist crews; obviously, a DCP lost in this way CANNOT be "repaired" by another – they are well and truly dead!
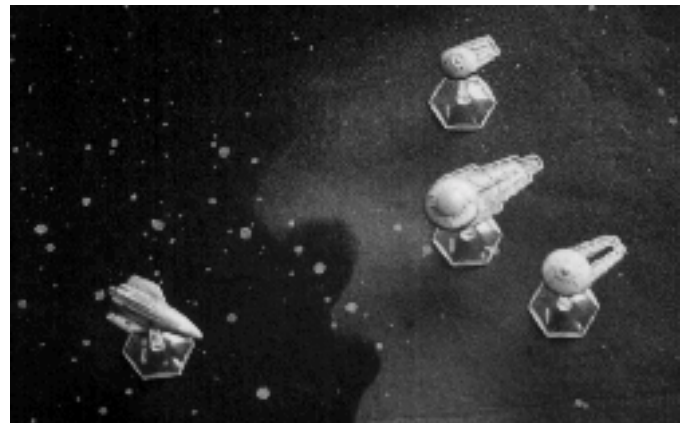
The use of the Damage Control rules adds a useful new dimension to the game, removing the horrible finality of a string of bad threshold rolls with a big ship – at least now they have a chance. The down-side is that making all the rolls takes a while, especially with big fleets, so the rule is probably better used with smaller games.

SYSTEM: **DAMAGE CONTROL PARTY (ADDITIONAL)**

MASS: **NIL**   POINTS COST: **10**

SYMBOL:

BOARDING ACTIONS:

A Boarding Party is normally composed of part of the Marine contingent (see P.17) from the attacking ship, specially equipped with Combat Vacc Suits or Powered Armour.

To launch a Boarding action the attacking ship must first be brought close to the target vessel, so that it is within **6"** of it at the END of the turn's movement. The attacking ship must also be travelling at a velocity that is not more than 1 factor different from the velocity of the target ship, and on a course that is again not more than 1 point different from the target's course.

For example, if the target ship ends its movement at velocity 6 on course 4, a boarding attempt could only be made if the attacking ship can get within 6" with a final velocity of not less than 5 or greater than 7, and on a course of between 3 and 5.

This rule is to allow players a little leeway when it comes to trying to "match trajectory", but not too much; it will still be quite difficult to do unless the ship you are attacking has very little thrust available to evade with – such as if you have already crippled its drives...

Once you have got your ship into the correct position to be able to launch a Boarding assault, the Marines may cross between the ships – they are assumed to do this either in small "assault pods" specially made for such actions, or in their own Powered Armour suits if they are equipped with them.

Prelude to boarding action? An interplanetary shuttle comes under attack from three unidentified vessels. (Models from CMD and Mercury Miniatures.)

For the size of Marine forces available for Boarding actions, consider that the Marine Detachment rules on P.17 basically work out at 1 man per MASS of the ship (not allowing for any vehicles in the detachment); it is reasonable to assume that not all of these troops will be used for boarding parties, as (a) there will only be a limited number of Assault Pods and Combat Suits available, and (b) it will be sensible to keep some of the Marine strength back for ship security and other duties. We may therefore state that a Warship may launch a Boarding party with a strength of 1 man per 2 MASS of the ship, or in other words 1 man per Damage Point the ship has. Thus a Heavy Cruiser would have a 16-man boarding unit, a Battleship 24 men and so on.

If the ship has taken damage, it is safe to assume crew (and therefore Marine) casualties in rough proportion to the damage suffered – thus the available troops should be calculated as equal to the CURRENT damage points the ship has left.

This strength is then divided up into 4-man Teams (rounding down to the nearest whole team), and the number of such Teams is the Boarding Factor of the assault force (eg: 4 for the Heavy Cruiser, or 6 for the Battleship).

[The rather round-about way of working this out that is given above is merely to explain what is going on – in fact, all you have to do to arrive at the Boarding Factor is to divide the ship's current Damage Points by 4.]

If this seems a small amount of men to send to assault an enemy warship, bear in mind that they will generally be VERY much more heavily armed and equipped than the defenders, and in addition such actions will normally be carried out only against Merchants with small crews, or crippled ships that have taken a lot of crew casualties.

To determine the strength of the DEFENDERS that the Boarding Party will face when it arrives on the target ship, count the remaining Damage Points of the ship.

If it is a Military vessel then it will be able to muster a Defensive Factor of 1 for every 4 remaining Damage Points, as this will represent some of the survivors of its own Marine contingent (it is assumed for simplicity that the same percentage of the Marines are available to defend as for the attackers, as the rest have probably been seconded to Damage Control teams and the like; anyway, these are only supposed to be abstract rules!).

If the target ship is a Merchant craft, it will be able to muster only 1 Defensive Factor per TEN remaining Damage Points – this is because a Merchant has far fewer crew members than a Warship in the first place, and also they are much more poorly armed and equipped for combat.

To resolve the combat between the Attacking and Defending parties, roll 1 die per Factor for each side and total their results – thus if 4 Boarding Factors were up against 2 Defending Factors, the attacker would roll 4 dice and total the scores while the defender rolled 2 and totalled them.

If either side's total score is MORE THAN TWICE the other player's roll, the higher scoring player has won the action; if this is not the case, then the action continues with the LOWER-SCORING force losing 1 Factor and both sides then rolling again (obviously if this causes one side to lose its only Factor, they have lost!).

Thus, in the example above: if the Attackers rolled 2,5,1 and 3 for a total of 11, and the Defenders were lucky enough to roll a double 6 for a total of 12, the ATTACKING (Boarding) side would lose 1 Factor, dropping them to 3. The combat would then be rolled for again, but with the 3 attacking factors to the 2 defending.

The combat continues to be fought in repeated "rounds" like this until there is a clear-cut winner, who takes (or retains) control of the ship. If the Attacking party loses and is repulsed, they may return HALF (rounded UP) of their surviving Factors (Teams) of Marines to their own ship – the remainder are assumed captured or killed in the attempted withdrawal.

Should the Boarding party win the combat, the surviving defenders are assumed to be "locked below decks" and a prize crew will be sent over from the attacking ship to bring the captured vessel fully under control.

[It must be noted that all of the boarding action is fought to a conclusion in the space of the ONE game turn – the action does not carry over several turns.]

Of course, if you want to work out more detailed rules for Boarding that fit more accurately with the Troop Contingents aboard the ships, feel free to do so (just in case anyone is stupid enough to try and board a full troopship!!). Boarding actions should be sufficiently uncommon, however, that the rather abstract system here will suffice in most cases.

FLEET MORALE:

The question of Morale in naval games, whether SF or historical, is always a bit of a problem. Will a fleet fight to the last ship, or will it turn tail and run (or even surrender) after relatively few losses?

The answer to this really depends on the kind of scenario being played, as the reactions of the Fleet and its overall Commander will be heavily influenced by what is at stake. If a force is defending a colony world against an invading fleet, it may well fight "to the death" in a desperate attempt to protect the colony. On the other hand, if it is a simple meeting engagement in a relatively unimportant Star system then it would be quite likely that the Admirals on either side would consider the preservation of their own ships and men to be quite a high priority.

If playing a simple engagement (or a Competitive game), then we suggest that the loss of **50%** of a player's overall force (calculated in MASS of ships destroyed) would be enough to cause the Commander to withdraw from battle.

For other games it is recommended that the level of losses to force a withdrawal should be written into the scenario when it is designed, bearing in mind the storyline being used.

STRIKING THE COLOURS:

The surrender of an individual ship is a slightly different matter to the withdrawal of the complete fleet. There are many possible circumstances where the Captain of a ship may decide that, orders notwithstanding, the survival of his crew is more important than continuing to fight in a hopeless situation.

One possibility is to make an extra roll at the same time as any threshold check; using the normal scores for losing systems at threshold points (ie: **6** the first time, **5 or 6** the second etc.), if the ship fails this roll then its captain decides to "Strike the Colours" and offer his surrender to the nearest enemy vessel. Whether this surrender is accepted is, of course, up to the opposing player!

Using this rule can, of course, result in the surrender of a vesel that has taken relatively little damage - however naval history is rife with precendents for this where colours were prematurely struck due to damage suffered being grossly overestimated.

One point must be made here - the use of this rule is strongly dependant on exactly who the two fleets are; for example , if
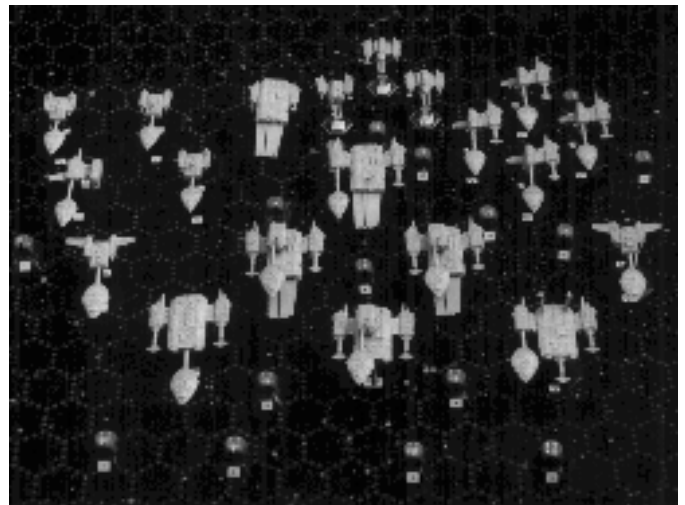
Large fleet of New Anglian ships. (Models from CMD, including several conversions from "spare parts".)

using the Full Thrust background then it is very unlikely that any Human ship would even attempt to surrender to a Kra'Vak (or vice-versa), simply because they would not expect to survive capture.

SQUADRON OPERATIONS (LARGE FLEETS)

If you are playing an especially large game involving several dozen ships per side, perhaps as a multi-player game, there is one simple "shortcut" you can take to make the game flow more quickly: that is dividing the fleets into SQUADRONS of several ships each, which then move and fight as cohesive units.

Squadron operations are especially suited to groups of smaller escort ships, though there is no reason why major craft should not also operate in this way.

Basically, a Squadron of ships all move together, using just one movement order – they all change velocity and course together, remaining in some sort of formation throughout the manoeuvre. The player has only to write the one set of orders for the squadron each turn, rather than ones for each individual ship; the movement of the squadron is then best carried out as follows:

The player plots out the move for ONE ship in the squadron (which may be the leading ship, or one in the middle of a formation, as desired); all the rest of the squadron are then placed in suitable relative positions to the moved ship, to retain their formation.

[Note that this does require a fair degree of tolerance between the players due to the somewhat vague nature of the positioning of ships – if a particular placement is critical to range or arc of fire etc. then it is suggested that the affected ship's movement should be carefully plotted as normal. For this reason, squadron movement is specifically NOT recommended for competitive or tournament play!!]

As a typical example, if a fleet consisted of four capital ships, six cruisers and huge swarm of (say) twenty assorted escorts, it would make the game much quicker if the cruisers operated in perhaps two squadrons of three ships each, while the escorts were divided into maybe three or four squadrons. The capital ships could still operate individually, or if preferred could be grouped into one major "Battle Squadron" (or even split between the other squadrons to form mixed "task groups", though in this case each group could obviously only manoeuvre at the rate of its least agile ship).

It is quite possible to devise rules to allow firing to be carried out by groups or squadrons in the same way as movement – one possibility is to allow all ships in a squadron to make their attacks at one time, rather than alternating ship-by-ship as in the normal rules. Just how far you go with this depends entirely on personal preference and how many ships you are wanting to use.

"TERRAIN" EFFECTS:

It may sound a bit odd to talk of "terrain" in a space battle, but if you think about it there are a number of possible ideas you can use to render certain parts of the table more difficult, dangerous or just plain different.

The following are suggestions for a few features that you can have on the table to make things a bit more lively than just the usual open space and occasional asteroid:

DUST CLOUDS or NEBULAE:
These have the following effects:

i) Travel through a cloud is restricted to a maximum SAFE velocity of **12**; any ship attempting to exceed this in a cloud will suffer potential damage - roll 1 die and apply damage as for Beam weapons fire (Screens offer no protection, but Hull Armour does).

ii) Dust clouds inhibit Beam weapons and Fire Control lock-ons: when attempting to fire at a ship in a dust cloud (or if the firing ship is itself in the cloud), roll a die after nominaing the target: on a roll of **1-3** the dust has prevented a successful target lock-on and the ship may not be fired at. On a **4-6** the shot may be fired as normal, but if using Beams treat the target as having one SCREEN level higher than normal due to beam attenuation caused by the dust (Screen levels above 3 remain at 3).

[Note that this rule may, if desired, also be used to simulate the effects of ships operating in the very fringes of planetary atmosphere, such as when "skimming" Gas Giants.]

SOLAR FLARES:
Flares may occur at random, perhaps diced for each turn, if the battle is happening fairly close to a very active star. They may be assumed to affect the entire table, or just a specific area as the players desire. Any ship that is caught in a Flare rolls 1 die for each of its FireCons and its Sensor systems (if the advanced sensor rules are being used), adding one to the score per active Screen level. On a score of **4+** the system is undamaged - otherwise it is knocked-out due to damage to sensory antennae etc.

METEOR SWARMS and DEBRIS:
These may cover areas of between 6" and 12" diameter (or other shapes/sizes at players' discretion) and may be stationary on the table or moving in a similar way to the "moving asteroid" rules.

Any ship that enters (or is hit by) such a Meteor Swarm or Debris Field has **1 die** rolled for every **FULL 6"** of velocity (ie: up to velocity 5 = no damage, 6-11 = 1 die, 12-17 = 2 dice etc.), with the actual score rolled equalling the damage sustained.

[This rule may also cover the effects of the debris in the "rings" of a ringed planet, in which case a large arc of it could be depicted on the table to cause all sorts of problems!]

BATTLE DEBRIS:
When a ship is "destroyed" by enemy fire (ie: reduced to zero damage points or less) it may simply become to a drifting hulk, or may actually explode into a cloud of debris.

To determine if this happens, note the amount of EXCESS damage inflicted (over that required to reduce the ship to zero points) and roll a die: if the score is less than or equal to the excess damage then the remains of the ship explode (eg: if a ship has 2 DP left and suffers a further 5 points of hits, a die roll of 3 or less will cause it to explode).

An exploding ship creates a cloud of debris 2" in diameter for an Escort, 4" for a Cruiser or 6" diameter for a Capital Ship. The debris cloud exists only for 1 turn after the explosion, during which it moves on the same course and velocity as the ship was travelling at the point of destruction; in this turn any ship encountering the cloud treats it exactly as for the Meteor and Debris rules given in the section above. After the one turn the debris is assumed to have spread out sufficiently to present little risk to other ships, and is removed from play.

These are just a few ideas for the effects of spatial phenomena; mostly they are pure Space Opera (ie: very high PSB factor...), and anyone who has seen a few episodes of St*r Tr*k will doubtless be able to think of lots more!

DEPICTING SPATIAL PHENOMENA:
The various effects suggested above may be represented on the table by means of pieces of card, cloth, acetate etc., cut to the relevant sizes for the affected areas (for dust clouds etc.).

Meteors and Debris clouds can be depicted by small cork-bark chips or even gravel spread over the required area. Explosion templates may be made if desired for destroyed ships, which if suitably graphic (ie: lots of red and orange explosion effects!) can be very effective.

A NOTE ON "STAR" CLOTHS FOR TABLES:
The photos in this book have all been taken using the very effective "STAR MATS" produced by Geo-Hex (and sold in the UK by us at GZG - shameless advertising plug here!!). Available either with or without a 1.5" hex-grid, these mats are 6' x 4', printed with a five-colour "Star Field" and then airbrushed with "nebula" effects in several colours; they are made from heavy duty black felt, and are very hardwearing - our display game ones have been folded up and stuffed into a bag after many shows, and still come out laying flat next time! Please contact GZG or Geo-Hex for further details on prices and availability.

The fighter rules provided in the original rulebook are fairly basic and abstract, as the game was intended to concentrate on the "big ship" side of the action – there are plenty of good space fighter combat games around if you want to simulate that kind of action in great detail. However, there is no reason why the use of fighters in Full Thrust should not be expanded somewhat while remaining within the context of the game; the rules that follow are suggestions for giving a bit more "flavour" to fighter combat without losing sight of the overall scope of the game.

Many players will have realised that the fighters in the original rulebook are actually among the most effective weapons available, in some ways perhaps too effective for their relatively low cost; several of the rules described in this chapter are actually aimed at redressing the balance by making fighter groups require a bit more thought in their use, without resorting to arbitrary changes in points values from the original book. In particular, the Morale and Endurance rules are strongly recommended to limit the potential power of fighter groups, especially if your regular opponent uses lots of them!

OPTIONAL FIGHTER TURN SEQUENCE:

This simple change to the basic rules will actually make a LOT of difference to the play of the game; the effect will be to make players have to really think about how to move and place their fighter groups in order to use them correctly.

The new rule simply involves shifting the FIGHTER MOVEMENT PHASE of the turn sequence from the END of all ship movement to BEFORE all ship movement, but still AFTER all players have written their movement orders for that turn. [This is the same as the Missile Phase suggested for the new Missile rules on P.3.]

During the new Fighter Movement Phase, players move their fighters in the normal way, up to the allowed movement limits; no written orders are required for Fighter Groups (except for a note in the Carrier ship's orders when a fighter launch is being made). If both players have fighters in action at the same time, move groups alternately starting with the player who has most groups in flight at the time.

Use of this rule means that players will now have to anticipate how the enemy ships have been ordered to move, so that they can place their fighters where they think or hope the enemy ships will end up after movement; this will mean that larger ships, with their lower thrust ratings and hence more predictable movement, will be easier to attack with fighters than the smaller classes which have enough thrust to make more sudden manoeuvres. As normal, to attack a target the fighter group must be within **6"** of it at the end of all movement, and with the ship in its forward arc.

Some players may not like this system, especially those who habitually use lots of fighters because of their power! Overall, however, we think you will find it gives better results.

FIGHTER GROUP MORALE:

A fighter group is a collection of individual pilots and their craft, and as such is much less predictable in its actions than a single ship with a Captain and crew. If there are only two fighters left out of a group of six, it is by no means certain that they will press home an attack on a Battleship that is spitting flak at them – they may well decide that it is a lot safer somewhere else!

To simulate this dropping of morale when suffering losses, simply roll a single die before making an attack with any fighter group that has lost one or more members; if the roll is LESS THAN OR EQUAL TO the number of fighters REMAINING in the group, they may carry through the attack. If the roll is GREATER than the number of fighters left, they abort this attack and do not fire. If an attack is aborted the group remains in its position and may freely move and/or attempt to attack again in the next turn.

If any group fails **THREE** consecutive attack rolls (against the same or different target ships) then their morale is deemed to have broken; the group must attempt to disengage and return to its carrier or mothership by the quickest possible route, and may not attack any further targets during that game. [Note that if the "endurance" rule explained below is in use, any group that fails an attack roll is NOT considered to have expended combat endurance for that turn, as they never went through with the attack; if a group's morale breaks, it loses all remaining turns of endurance.]

Any fighter group that contains an ACE pilot (see below) may SUBTRACT one from all morale die rolls, giving it a greater chance of success; any group classed as a "Turkey" group always ADDS one to the die roll – this means it must roll for morale even when at full strength (a roll of 6 (+1, = 7) will be a failed attack even if all 6 ships are operational).

"SCRAMBLING" FIGHTER GROUPS:

If a fighter-carrying ship comes under attack from an enemy fighter group while it still has some or all of its own groups on board, it may attempt to hastily scramble one or more groups into flight in a desperate attempt to intercept the attackers. This is the only time that fighter launches may take place when they have not been pre-planned in the player's movement orders for the turn, and it may be attempted ONLY when the opponent has just moved one or more fighter groups into position to attack the carrier itself.

To attempt to scramble fighters, roll 1 die:

On a roll of 1, the hasty launch attempt causes a mishap in the launch tube – one complete fighter bay (and its occupying fighters) is out of action for the rest of the game, unless a Damage Control Party (see P.6) can sort things out!

On a 2 or 3, no groups may be launched this turn;

On a 4, one group gets away but too late to intercept the attackers – the enemy group(s) may fire on the carrier BEFORE the scrambled group may attack them;

On a 5, one group scrambles in time to intercept – it may engage an attacking group in a dogfight to prevent them firing on the carrier;

On a 6, TWO groups manage to scramble in time to intercept the attackers.*

*Note that this is only possible to actual carriers which have the ability to launch two groups in a turn – other ships that can launch only one group per turn under the normal rules can only "scramble" one group at a time.

If a group is "scrambled" successfully in time to intercept, it may engage the enemy fighters in a dogfight immediately, thus preventing them from attacking the carrier in that turn. Should the group scramble just too late (a roll of 4); the attackers may press home their assault on the carrier, AFTER which the scrambled group may (in the same turn) immediately engage them in a dogfight, which is resolved as per normal rules, despite the fact that the attacking fighters have already "fired" once that turn.

FIGHTER ENDURANCE:

As fighters are very small craft, it is reasonable to assume that they will carry only a limited amount of fuel, ammunition and even life-support for their crew – they will not be capable of prolonged operation away from their carrier or base, but rather are launched for a specific mission or attack and will return quickly to the carrier following completion of the mission. While there are a number of valid options for representing this in the rules (including treating fighter groups more like other ships: writing orders for each move and recording fuel used for manoeuvring from a strictly limited fuel supply) the method we suggest is using an ENDURANCE rule for all fighter groups.

A normal Fighter group has sufficient fuel for **THREE** turns of "active" operation; an "active" turn is defined as any game-turn in which the group engages in any combat activity, whether attacking or being attacked.

Any turn that the group does not undertake any combat, it is classed as "loitering" and does NOT use up any of its endurance (it is assumed that ordinary flight and manoeuvring uses only negligible fuel compared to the heavy expenditure during combat).

Once a group has used up its three turns of active combat endurance, it MUST attempt to return to its carrier or base by the shortest possible route (within reason – they will not try to fly straight through the middle of a group of enemy ships!!). Should such a group be attacked by enemy fighters during their return trip, they must roll a die: on a **1 or 2**, they suffer the attack from the enemy but may NOT return fire at all; on a **3 or 4** they manage to evade the enemy group and continue on course, while on a **5 or 6** they engage in dogfighting as normal, ignoring the fact that they have exhausted their endurance (they are risking the use of their emergency fuel reserves!). Any that survive must continue the return to the carrier in the next turn if possible.

Any group that is unable to rendezvous with their carrier/base within **THREE** turns of using the last of their combat endurance

(either through distance, or being intercepted by the enemy) are deemed to have exhausted their fuel and are effectively lost – it is assumed that the pilots probably eject in their survival pods and await pickup after the battle, if they are lucky!

To record combat endurance, players can note the turns used on their record sheets; a better solution however is to allocate three small counters (either plastic tiddlywinks, or tiny discs cut from coloured card/plastic with a hole punch) to each group; one counter is removed each time the group expends a turn of combat endurance.
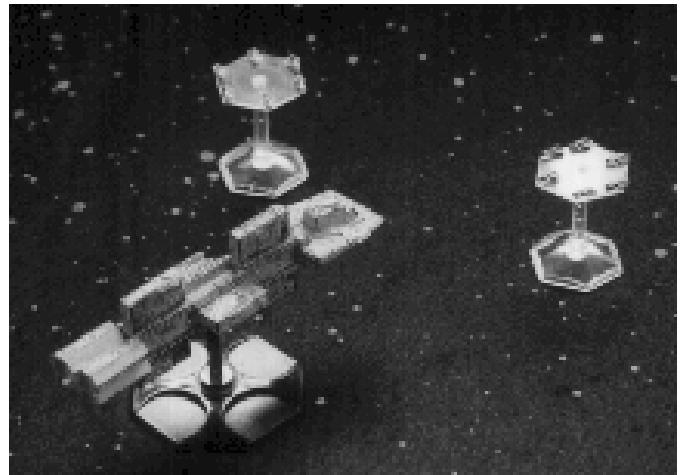
A transport ship comes under fighter attack. (Models from Skytrex and CMD.)

FIGHTER PILOT QUALITY: ACES AND TURKEYS:

While most fighter groups are classed as "average" in pilot performance, you do get the occasional outstanding pilot (the **ACE**); at the other end of the scale you can have the really raw, inexperienced or just plain bad pilots – the **TURKEYS**.

An **ACE** is an individual – the crack pilot attached to an otherwise average group. **Turkeys**, on the other hand, tend to come in flocks; the whole GROUP may be classed as a Turkey group due to low experience, poor training or a multitude of other factors.

If you wish to allow Aces to be "bought" with points, then by all means do so; we would recommend, however, that a random roll is made for each fighter group in a fleet at the start of the game or campaign: if a **6** is rolled, the group contains an ACE; a roll of **1** indicates the group is a Turkey group. Rolls of 2 – 5 give normal, average groups.

USING ACES:

If an Ace pilot is present in a fighter group, the group gets **ONE EXTRA DIE** during all normal attacks – so a full strength group of six fighters including an Ace would roll SEVEN dice instead of the usual 6. The presence of the Ace also affects the group's morale, as detailed above (subtracting one from all morale rolls).

The Ace pilot himself also has the ability to make one SPECIFIC SYSTEM ATTACK per turn if wished: when the group attacks a ship, while the other members of the group attack as normal for fighters with one die each, the Ace may choose to attack as a NEEDLE BEAM (see P.18 of main rulebook) instead of his normal attack – in this case he may choose to target ONE SPECIFIC SYSTEM on the ship being attacked, rolling just ONE die and treating the attack just as for a Needle Beam shot. Note that in this case the rest of the group does NOT get the "extra" die that the Ace would normally contribute towards the attack – for example, a group with five remaining fighters including an Ace could choose to either attack normally with SIX dice, or to have the four average pilots attack normally (4 dice) while the Ace attacks a specific system with just ONE die roll.

This option also extends to dogfighting between fighter groups – an Ace may either add an extra die to the group's overall attack,

OR may choose to specifically target an opposing ACE if there is one present in the other group – in this case he rolls just one die as normal.

SPECIAL NOTE: For simplicity, it is assumed that in normal losses the ACE in a group will always be the LAST fighter left surviving – after all, he/she is supposed to be the best, and getting the hero killed in the first dogfight is not good Space Opera!! The only case in which an Ace may be killed before other members of the group is if he is specifically targetted by an opposing Ace in an enemy group, in the best movie traditions (Lukewarm Jaywalker ignores the rest of the Imperial fighters, and goes straight for the ship of his arch-enemy, Duck Wader......).

THE TROUBLE WITH TURKEYS:
Any group unlucky enough to be classed as a Turkey group must always **add 1** to its morale rolls as mentioned above. If such a group fails **TWO** consecutive attack morale rolls then it must "bug out" back to the carrier (as against the three failures needed for an average group to turn tail).

Turkey groups attack target ships as normal (such attacks are largely computerised anyway), but when they are engaged in a DOGFIGHT with other fighters they modify their attack rolls by SUBTRACTING 1 from every die roll they make.

SYMBOLS:

"ACE" GROUP   "TURKEY" GROUP

ADVANCED AND SPECIALISED FIGHTER TYPES:

The Fighters depicted in the original rulebook are a good average, basic type – moderately fast, with reasonable anti-ship and anti-fighter capabilities; an all-round "multi-mission" type of craft. The rules that follow give some ideas for modifying your fighters into rather more specialised or improved types:

FAST FIGHTERS:
While normal fighters have a movement allowance of 12" per turn, "Fast" fighters have more powerful drives giving them a movement of **18"** per turn. A group of 6 Fast fighters costs an ADDITIONAL **2 Points** PER FIGHTER points on top of the normal 20 points cost, giving a total of 32 points per group.

HEAVY FIGHTERS:
"Heavy" fighters have the same offensive and drive capabilities as normal fighters, but are better protected against attack by armoured hulls, heavier structural components etc. When Heavy fighters are attacked, treat them as if they had **LEVEL-1 SCREENS** in operation, ie: rolls of "4" have no effect when under PDAF/ADAF or Fighter weapons fire. Turning a group into Heavy fighters costs an additional **12 points** (2 per Fighter).

INTERCEPTORS:
The Interceptor is a specialised type of fighter with no effective anti-ship capability, but optimised for anti-fighter performance. Interceptors may not fire on any vessels except other fighter groups (using the Dogfighting rules from FULL THRUST), but when they make such an attack they may **add 1** to all die roll results – thus they kill one fighter on a roll of **3 or 4**, and TWO on rolls of **5 or 6**. When themselves attacked (either by fighters or anti-fighter fire) they take casualties normally.

An interceptor group costs NO additional points, as they are trading-off their anti-ship capability for their enhanced dogfighting.

ATTACK FIGHTERS:
Specialised "Attack" fighters are really the opposite of Interceptors – they have very little ability to engage other fighters, but carry increased weaponry loads for anti-ship missions. When in a dogfight situation with an enemy fighter group, Attack fighters only hit and kill opposing fighters with rolls of **6** (which destroy one fighter only per successful roll). When engaging other ships, however, the Attack fighters **add 1** to all their die rolls ie: if firing on an un-screened target ship they would inflict 1 Damage Point

with rolls of 3 or 4, and 2 DP with 5 or 6.

Because anti-ship capabilities are usually of more importance in the game than dogfighting, an Attack fighter group costs an additional **6 points** (1 per Fighter).

LONG-RANGE FIGHTERS:
This is an option to be used IF you are also using the "fighter endurance" rule given in this chapter. While normal fighters can only operate for THREE turns before having to return to their carrier/mothership, a Long-Range group has its combat endurance increased to **FIVE** turns through additional fuel tankage, life-support etc.

A Long-Range fighter group costs an additional **12 points** (2 per Fighter).

TORPEDO FIGHTERS:
These are a further specialisation of the Attack fighter, carrying a heavy single-shot anti-ship weapon on each fighter. When the group attacks an enemy ship, roll once per fighter to see how many hits are scored – each fighter needs a roll of **4 or more** to score a hit with its "torpedo"; those shots that hit are rolled again, with damage inflicted being equal to the number rolled (ie: roll of 3 = 3 DP, 5 = 5 DP etc.).

The group may only attack ONCE in this manner, and for simplicity it is assumed that all the fighters in the group will attack the same target at the same time – it is not permitted to fire just some of the group and "save" the others for a later attack (unless of course you wish to agree this between yourselves, and work out the necessary record-keeping). Once the group has expended its torpedoes, it may then only fight in the same limited anti-fighter mode as for Attack fighters (ie: needing rolls of 6 for kills) and may not make any further attacks against enemy ships. The Torpedo Fighter group is thus very much a one-shot weapon, but a (potentially) extremely powerful one – for this reason it costs an additional **18 points** (3 per Fighter).
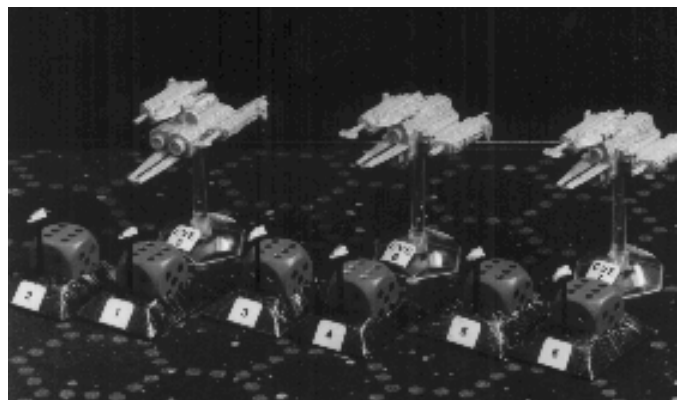
Three "Escort Carriers" scratch-built using various components from the CMD model range, with two fighter groups per Carrier.

When using specialised fighter groups, use the normal fighter symbol for the ship record diagram, but replace the "spot" in the symbol with the appropriate letter for the fighter type: for example, an "H" for Heavy Fighters, "T" for Torpedo Fighters, etc.

Note that all fighter groups, regardless of type, have the same MASS and hangar space requirement in the carrier or mothership, and operate under all the normal rules for launching, recovery and turn sequence.

Notes on use of fighter models:
The fighter groups shown in the photo on page 11 use a different method of "basing" the models to the suggestions given in the original rules. We have used a standard clear plastic "flying base" and mounted on top of it a hexagon of clear plasticard or acetate sheet, cut to the same size (approx. 1" across) as the stand base. The individual fighter models are then fixed on this hexagon near the six corners, leaving enough space in the middle to place a normal die (D6) which is used to indicate the number of fighters left in the group after losses.

Yet ANOTHER way of producing fighter groups is shown in the photo above; This uses just a single fighter model to represent the entire group, with a normal-sized D6 placed into a square hole in the sculpted base to indicate the number of operational fighters in the group.

PLANETS AND OTHER LARGE BODIES:

While asteroids and small planetoid bodies were covered in FULL THRUST, no mention was made of actual planets, moons etc. If you wish to play a scenario where the action is in close proximity to a planet, we suggest the following rules.

Planets and other large bodies may be represented on the table with any suitably-sized round or spherical object, with the ideal size being that of a dinner-plate or a large football (Soccer ball to our US readers, as an American football would give a very odd-shaped planet – severe gravitational stresses, maybe?). A plate or card disc may be placed flat on the table, though a well painted sphere or half-sphere looks very impressive. The actual size can vary according to how big the planet/planetoid is supposed to be – we are not going to define any scales, as they are quite obviously ludicrous compared to the ship models, just treat everything as abstract and symbolic!

Once you have your planet, you can define the optimum "orbit" distance from its surface. Simply measure the radius of the planet model or marker, and the orbit is a circle of twice this radius (eg: if the planet was represented by a **12" diameter** (6" radius) disc, then the orbit would be **24" diameter** (12" radius) – ships would thus orbit in a circle around the planet, 6" above the planetary surface.)

ENTERING ORBIT:
VELOCITY 6

IN ORBIT:
VELOCITY 6

6"

6"

LEAVING ORBIT:
VELOCITY 7+
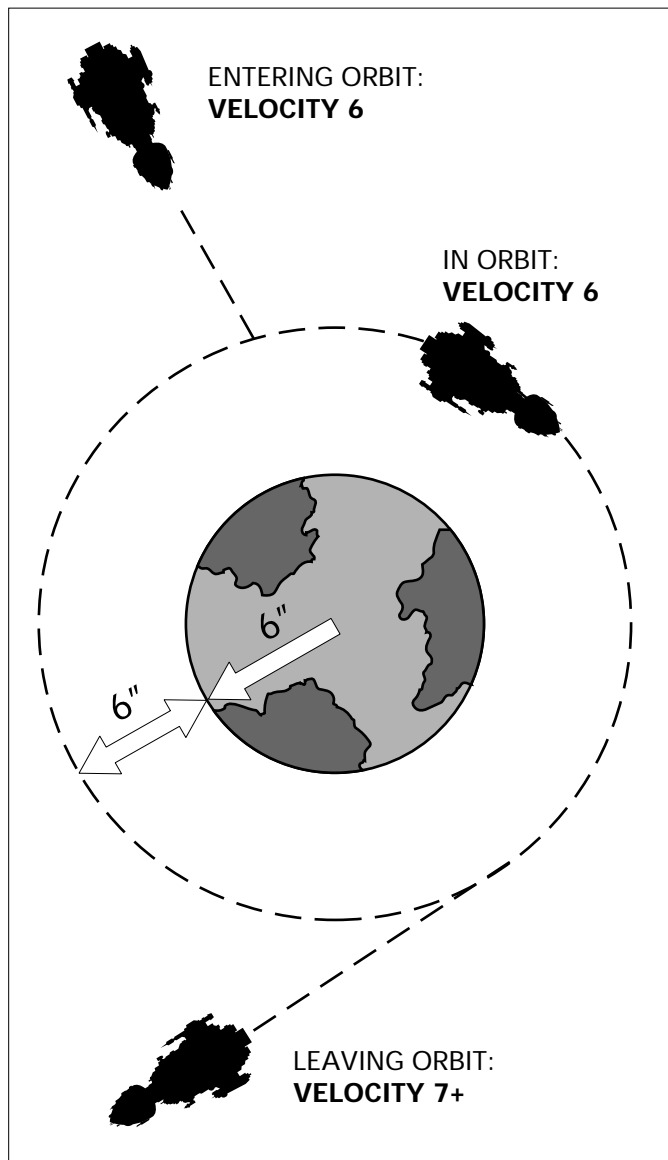
When in orbit, a ship must be travelling at a velocity equal to the orbital distance above the surface – thus in the above example ships would orbit at a velocity of 6, or 6" per turn. To move a ship around the orbit, simply measure round the arc with a flexible tape and move the model the required distance.

If the ship decelerates to LESS than the orbital velocity (in our example, to 5 or less) its orbit will decay and it will start to enter the atmosphere – for the effects of this see the rules on Atmospheric Operations on P.14. If it accelerates to OVER the orbital velocity it will leave orbit and move normally, in a straight line at a tangent to its orbital path.

[Note here to the Armchair Physics Brigade – yes, I KNOW this is dreadfully abstract and oversimplified (and in some places just plain wrong), but it is easy to use and gets the right feel in game terms. If you really want to do all the math and work it out "properly" then be my guest....]

While in orbit, the ship does not have to have any course-change orders written for it – the player simply notes that it is "in orbit". Any velocity change will cause the ship to leave orbit (either down or up, as above).

For simplicity, gravitational effects on ships that are not actually in orbit are generally ignored, but if you want to plot the gravity well around the planet and apply varying results according to ships' proximities to it then by all means do it!

ENTERING AND LEAVING PLANETARY ORBIT:

As noted above, to leave planetary orbit a ship has simply to accelerate to over the orbital velocity; it will then move away from orbit on a tangential course, as illustrated in the diagram on this page.

To enter orbit, a ship must approach the planet at the correct orbital velocity; when it reaches the orbital distance from the surface, it may (without expending thrust on turning) enter an orbital path (which may of course be clockwise or anticlockwise around the planet). This is, of course, another great oversimplification – but trying to position your ship at the correct tangential course to the planet seems too difficult a way of doing it, and frankly not worth the hassle.

If the ship hits the orbital distance at LESS than the orbital velocity, it will enter an automatically-decaying orbit and start to enter the atmosphere; if it arrives with GREATER than the correct velocity it will ram straight into the atmosphere in an uncontrolled entry – you have been warned!

AN ALTERNATIVE:
If you do not actually want to represent planets on the table, a valid alternative is the system used in Jim Webster's scenario on P.37 of this book – one edge of the table is defined as "Deep Space" and the OPPOSITE edge is the Planetary Orbit. To safely enter orbit, a ship must exit the Planetary edge through a small "window" marked on the table edge – say 6" wide – at a given velocity or less (this velocity must be specified to suit the scenario, but we would suggest it should be no greater than 6). If a ship exits the Planetary edge at greater than this velocity, or misses the window, it will suffer an uncontrolled atmospheric entry.

Using this system, the Deep Space edge of the table can, if desired, also be considered to represent the "safe Jump limit" from the planetary gravity well.

ATMOSPHERIC STREAMLINING:

The great majority of Starships are not built to ever enter a planetary atmosphere or attempt to land; most are assembled in space and spend all their operational lives there, using shuttles and other interface craft to carry personnel and cargo to and from planetary surfaces. Such ships are characterised by their totally unstreamlined structure and often square, blocky or fragile-looking designs.

Some ships, on the other hand, ARE built to operate in atmosphere as well as in deep space, to varying degrees of efficiency; a vessel that is FULLY STREAMLINED is completely atmosphere-capable, and can "fly" like an Aerospace craft. Other ships may be

classed as PARTIALLY STREAMLINED, which gives them some capability of atmospheric operations and landing, usually by sheer brute thrust from their Drives rather than any kind of aerodynamic lift.

For an average world with roughly Earth-like gravity, a FULLY STREAMLINED ship requires a THRUST RATING of at least 4 to allow it to operate in an atmospheric or interface mode; on the same world, a PARTIALLY STREAMLINED ship would need at least Thrust 6 to enable it to safely land and take off. These figures can be adjusted for other planetary sizes and gravities, as players wish.

If they wish, players may adjust the points costs of ship hulls during construction to reflect the level of Streamlining (if any), with streamlined hulls being somewhat more expensive; we would suggest that a **PARTIALLY streamlined** hull would cost an extra **25%** of the actual HULL points cost, and a **FULLY streamlined** hull an extra **50%** of the points cost: thus a Mass 40 Warship, with a normal hull points cost of 80, would cost an extra 20 points to Partially streamline (total of 100 points) or an extra 40 points to Fully streamline (total of 120 points). The same Mass of ship on a MERCHANT hull would cost 60 points Non-streamlined, 75 Partially or 90 points Fully-streamlined.

The question of whether or not a particular ship is Fully, Partially or Non-Streamlined is really down to the actual model that is being used in the game; if the miniature has a true "aerodynamic" shape, with either wings or a lifting-body structure, it can reasonably be classed at Fully Streamlined (a good example is the CMD FT 307 Intrasystem Shuttle, which looks like an oversized Space Shuttle orbiter). If, on the other hand, it is of a shape that looks as if it would stand some kind of atmospheric entry while not being actually aerodynamic (to take another CMD range example, most of the Eurasian ships (the FT 200 series) would fit into this category), then it may be considered Partially Streamlined. Typical Non-Streamlined ships, with no atmospheric capability at all, would be the CMD Neu Swabian designs (the FT 500 series).

ATMOSPHERIC ENTRY – PLANNED AND ACCIDENTAL:

A ship may enter planetary atmosphere for a number of reasons: if the ship is fully or partially streamlined, it may enter atmosphere deliberately in order to land on the world's surface. Alternatively,

a ship of any configuration may be forced to enter atmosphere due to either **(a)** a decaying orbit (caused by attempting to enter orbit at too low a velocity) or **(b)** approaching a planet at too HIGH a velocity and/or missing an orbital insertion window (if used; see rules above).

To make a deliberate safe atmospheric entry, a ship must first enter orbit (as described above) and then decelerate to less than orbital velocity; it will then make a controlled descent and enter the atmosphere – provided its drives can provide sufficient thrust for its configuration, it may be assumed to enter successfully and be able to make a safe landing. A ship entering atmosphere with a suitable velocity and configuration, but with insufficient thrust available (eg: due to drive damage) will make a safe entry but will then crash-land – the effects of this are up to the individual scenario being played.

If a ship makes an **uncontrolled** entry into atmosphere, roll a die and apply the following modifiers:

If ship is NON-STREAMLINED, **add 4** to roll;

If Partially Streamlined, no modifier;

If Fully Streamlined, **subtract 2** from roll.

Add 1 to roll for every **1 point** of velocity in excess of safe orbital velocity;

Add 1 to roll for every **full 6"** distance by which orbital insertion window was missed;

Add 1 to roll if ship's Drives are DAMAGED, or **add 3** if Drives knocked-out.

On a final result of **2 or less**, the ship manages to miraculously survive a ballistic entry, and crash-lands on the planetary surface – the chances of survival for crew/passengers and subsequent events are up to the individual scenario.

On a score of **3 to 5**, the ship burns up in the upper atmosphere, but there is enough time for any Interface craft (shuttles, Dropships etc) or Fighters on board to attempt to launch; if this occurs, roll for each small craft as specified in the "STIG IV" scenario by Jim Webster on P.37 of this book (there is little point in repeating that table here!).

On a score of **6 or above**, the ship burns up and all crew, passengers and equipment on board are lost.

INTERFACING SPACE AND GROUND COMBAT ACTIONS:

This chapter consists mainly of two DIFFERENT systems for linking FULL THRUST starship combat with Ground Action games, namely GZG's DIRTSIDE II and Wessex Games' HELLFIRE. The DIRTSIDE II Interface is largely designed and written by Mike Elliott, one of the designing team for DIRTSIDE II, with additional input from myself. The HELLFIRE interface is written by Jim Webster, author of the HELLFIRE system itself. As befits the very different approach and styles of the two games, you will notice that while then DIRTSIDE II interface delves quite deeply into the design and costing aspects, the HELLFIRE one is a much more "loose" and open system.

It will also be apparent that the HELLFIRE system allows ships to carry a lot more troops than the DIRTSIDE II version – this is down to the different views of the respective authors, and we did not feel it was necessary to alter either one for the sake of any mutual consistency (after all, we have never actually defined what a Full Thrust MASS point equals in terms of real tonnage!). Basically, each is as valid as the other; at the end of the day it is entirely up to the personal preferences of you, the player, as to which (if either!) you choose to use.

FULL THRUST/DIRTSIDE II INTERFACE:

DIRTSIDE II is GZG's own rules system for 1/300 ground combat actions with miniatures, based around combined arms units of armour and infantry; while a fully generic system in its own right, DIRTSIDE II shares the same overall background and approach as FULL THRUST and the two can work well together to provide a fully integrated system. DIRTSIDE II is available from good games shops, or direct from us at GZG – UK price £8.95 plus £1 post/packing. US/Canadian/S. American customers should contact GEO-HEX in the USA, who distribute DIRTSIDE II in North and South America.

The rules provided in this section will allow you to integrate FULL THRUST with our 1/300 Ground Combat SF rules system, DIRTSIDE II, to play games and campaigns that feature both space combat for the control of star systems and the ensuing battles on the planetary surface.

Using both games with these additional rules it is possible to build an invasion fleet to launch assaults on your opponent's worlds, provided of course you can get the transports through his System Defence forces first!

On a smaller scale you may be simply landing a couple of platoons of Special Forces troops to conduct a "surgical strike" against an enemy installation – in which case it might be more effective to use a 15/25mm infantry ground combat system such as our STARGRUNT rules (or the forthcoming STARGRUNT II version when it is published) to resolve the planetary part of the action. Either way, the rules that follow cover the transport of ground forces in FULL THRUST starships, and the methods of getting them down to the surface in one piece (if they are lucky....)

TRANSPORTING GROUND TROOPS:

Troop transport between star systems may be carried out in almost any kind of ship that has cargo space to spare, but the most common method will be in specialised ASSAULT TRANSPORTS. Such Transports may be of virtually any size (including VERY big ones if you wish to use the SUPERSHIP rules on P.22 of this book), but for the sake of an example we will look at one based on the hull of a standard Heavy Freighter as described in FULL THRUST.

An Assault Transport is basically a Merchant ship, and is therefore subject to the Merchant design rules in Full Thrust. This means it can have up to **10%** of its total MASS dedicated to weapons and/ or other systems; as **50%** of the total Mass is already assumed to be taken up with the actual structure of the ship, its Drives, fuel tankage, crew accommodation and everything else, this leaves **40%** of the total Mass available as **CARGO SPACE**. This Cargo capacity is what you must then use to carry not only your troops and vehicles, but also the means for getting them down to the surface.

Our example ship, based on a heavy freighter hull, would thus be classified as follows:

TYPE: **ASSAULT TRANSPORT**

Total Mass: **60**

Classification: **MERCHANT**

Thrust Rating: **2**

Standard FireCons: **1**

MASS available for weapons/systems: **6**

MASS USED:	Mass:	Cost:
Hull, Drives etc.	30	270
1 x "C" Battery (3 arc)	1	5
2 x PDAF	2	6
1 x Level-1 screen	3	25
Cargo MASS available	24	*
Total Mass	**60**	

* The actual points cost of the Cargo capacity will be determined by how much is allocated to troop accommodation, and how much to the "drop" capability, as explained later.

It is now necessary to work out how many troops, vehicles and dropships can be fitted into the available cargo space in the Transport; to do this, we need to define a new unit, and will term this a unit of CARGO SPACE **(CS)**.

Every MASS factor of space available on the Transport can hold **FIFTY** units of Cargo Space.

Vehicles in DIRTSIDE II are graded in SIZE from 1 to 5; for a measure of the relative Cargo Space (CS) taken up by the vehicle, multiply the Size class by FOUR; thus a Medium (class 3) vehicle would require a CS of 12. A single man is assumed to take up as much space as a Size 1 vehicle, ie: 4 CS, as this represents the room required for his living accommodation, mess facilities, life support, recreation areas etc. etc.

If you wish to transport your troops "frozen" in Cryosleep, then they require only 1 CS per man (but cost more due to the support equipment required).

Note that vehicle crews will also need accommodation while on board ship, at the same rate as other personnel.

The CS requirements for various elements are summarised below:

Class 5 vehicle (less crew)	20 CS
Class 4 vehicle " "	16 CS
Class 3 vehicle " "	12 CS
Class 2 vehicle " "	8 CS
Class 1 vehicle " "	4 CS
One man (normal accommodation)	4 CS
One man in Cryosleep	1 CS

The POINTS COSTS (in FULL THRUST terms) of cargo space vary according to what is carried: cargo hold areas for vehicles, plus normal accommodation for troops, cost **1 point per 50 CS** (ie: 1 point per full 1 MASS); Cryosleep berths for "frozen" troops cost **1 point per 5 CS** (ie: 10 points per full 1 MASS) – they are thus much more expensive per man, but you can cram more troops into the given space.

It is now necessary to consider how to get the troops and vehicles down to the planetary surface. This generally requires the use of interface-capable craft such as shuttles, or to use the common military term, "Dropships". Of course, you can also assume the use of Drop Capsules for jump troops (as in Heinlein's STARSHIP TROOPERS) or even teleporter systems if your background uses them.

For simplicity, we can take all these delivery systems as equivalent in terms of the space they take up in the Transport; each drop system requires **1 MASS factor** (in FULL THRUST terms) to deliver **10 Cargo Space factors** to the surface. Vehicle crews and Infantry that are mounted in APCs or MICVs are assumed to travel Dirtside "mounted up" in their vehicles, hence the CS required in the dropships is only for the vehicles; if dropping "leg" infantry without their own vehicles, the drop capacity is 1 CS per man.

So, for example, a typical DIRTSIDE II platoon of 4 x Class 3 (medium) vehicles takes up 48 CS in total, and thus requires 4.8

(rounded up to 5) MASS of drop systems to get it to the surface – this would probably be a fairly large Dropship of Mass 5.

The most important point to come out of this calculation is that it will usually be highly impractical to provide enough drop capability in the average Transport to get all its troop complement down to the surface in one load – thus it will become standard tactics to insert light units (possibly special forces) to seize and hold a "beach-head" ("planethead"??) and then shuttle in the heavy stuff in several trips once a safe landing zone is secured. (This is, of course, quite accurate with reference to "historical" precedents – The Royal Navy's old Assault ships HMS Fearless and Intrepid each carry only two landing craft (at least that's all I got in my Airfix kit!) while most Vietnam period gamers will have noticed that there are never enough Hueys to fit all your troops in...)

The COST (in points) of the Drop capability (of whatever kind) is set at **2 points per MASS**, ie: 2 points per 10 CS of drop capacity.

Bearing all the above in mind, it would be reasonable to provide our Assault Transport with enough drop capability for 100 CS (about two average platoons) at once, which means a total of **10 MASS** allocated to the Dropships. This drop capability would cost 20 points, plus the hangar bay cost, as explained in INTERFACE CRAFT below.

Deducting this Mass from the available 24 leaves us with **14 MASS** for the actual cargo and accommodation, or **700 CS** (remembering that 1 Mass = 50 CS of accommodation).

The cost of the drop capability (20 points, plus 3 for the Bay) and the accommodation (14 points, assuming no Cryosleep berths are used) is now added to the 306 points cost of the ship and its weapons/systems, to give a total cost for the Transport of **343 points**.

Using this system, you can adapt any Merchant ship design to serve as a troop transporter; when doing so, always bear in mind the pros and cons of carrying capacity versus operational flexibility – a single large ship may look the most cost-effective way of carrying lots of troops, but if it gets destroyed by system defence forces you may wish you had split your troops between several smaller ships instead......

To give an actual example of force composition and the capacities required, consider a typical (fairly large) DIRTSIDE II Combat Group:

1 platoon of 4 Heavy Battle Tanks (5 crew each);

2 platoons of 4 Medium Battle Tanks (4 crew each);

3 platoons of Mechanised Infantry in 4 MICVs (2 crew + 8 troops each);

1 battery of 3 SP Artillery vehicles (4 crew each);

1 command platoon of 1 command vehicle, 1 AA vehicle, 2 missile vehicles (total crew of 13).

To give the Cargo Space total required to transport this force:

VEHICLE	No.	Class	Total CS (Vehicles)	CREW (inc. troops)	Total CS (Crew)
HBTs	4	4	64	20	80
MBTs	8	3	96	32	128
MICVs	12	3	144	120	480
SP Arty.	3	4	48	12	48
Command	1	3	12	4	16
AA Vehicle	1	3	12	3	12
Missile Vehicles	2	4	32	6	24
Vehicle total:	31				
CS TOTALS:			**408**		**788**

(Combat Personnel total: 197)

The final Cargo Space total is thus **408** + **788** = **1196**; as the MASS 60 Assault Transport we have been using as an example has a total CS capacity of 700, a pair of these ships could comfortably hold the Combat Group with a fair bit of leftover space for additional stores, ammunition, spares, supplies and noncombatant personnel (the cooks, clerks etc.). It would be advisable to work out your loading profile carefully so as to minimise the effects of the loss of one transport in battle!

As far as Drop capability is concerned, the two Transports between them would be able to drop 100 CS of troops per trip using their combined total of 4 platoon-sized dropships; as we are only

concerned with transporting the 408 CS worth of VEHICLES to the surface (assuming all the crew and troops will ride down mounted-up), they would thus have to make basically four shuttle runs (plus one final trip by one single dropship) to get the entire group Dirtside.

INTERFACE CRAFT:

The rules above gave the necessary Drop capacities for moving units down to the surface, and briefly discussed the different uses of various sizes of Interface craft from tiny one-squad landers to the bigger Dropships carrying platoons, companies or more.

Whatever the size of craft you decide to use, its Mass depends on the carrying capacity you need it to have, as explained above. A craft of 1 MASS (in Full Thrust terms) can transport 10 CS of troops and equipment.

Dropships, Shuttles and Landers may be built to any size, provided there is enough MASS available on the Transporter to fit them in.

HANGAR BAYS come in sizes of **MASS 6** (like a Fighter Group Bay) and upwards, and are assumed to hold an equivalent MASS of small craft or interface craft – so a standard MASS 6 Bay could hold, for example, up to six MASS 1 squad-size landers, two MASS 3 Dropships (with 30 CS capacity each) or a single big MASS 6 Dropship with 60 CS capacity.

Larger Bays are available to hold bigger interface craft – it would be quite possible to have a huge Dropship of MASS 20, with 200 CS capacity, but it would need 20 spare MASS on the Transport for its Hangar Bay.

Note that a Mass 6 Bay is the smallest available – even if you only have a single Mass 3 lander aboard, you still need to allocate one Mass 6 Bay (though you could of course then put 3 Fighters in the spare bay space as well!).

Interface craft of less than Mass 6 must be grouped into full Bays where possible (eg: a Transport with four MASS 4 Dropships would accommodate them in pairs, in two bays of MASS 8 each).

When a threshold point is reached, each individual BAY (regardless of size) is rolled for once; the loss of a bay indicates the loss of any craft in that bay.

All Interface Craft are costed at a rate of 2 Points per MASS, as mentioned in the Troop Transport rules, and the Hangar Bays for them cost 2 points for a standard MASS 6 bay, 3 for a MASS 7 to 12 bay, 4 for a MASS 13 to 18 Bay and so on – thus a single MASS 6 Dropship costs 12 Points plus 2 for the Bay, total 14 Points; a pair of MASS 4 Dropships would cost 16 Points (8 each) plus 3 for a MASS 8 Bay for them , total 19 Points.

The MASS 60 Assault Transport from the example on page 15, with one MASS 10 Hangar Bay containing two MASS 5 Dropships. Total points cost of ship = 343 points.
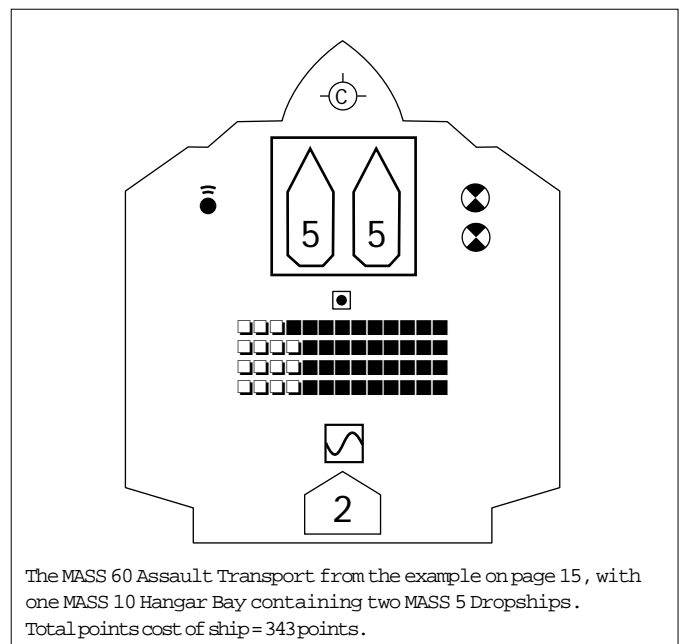
GROUND SUPPORT FOR DIRTSIDE II GAMES:

The primary role of Space forces in ground actions is one of transport, as described in the rules above; however, if players wish then orbiting Space Naval assets may provide a more direct contribution to the planetary battle, in the form of direct supporting fire.

This subject was briefly covered in the DIRTSIDE II rulebook under the heading of "Ortillery" (Orbital Artillery); to relate this to FULL THRUST we recommend the following system:

Starships in orbit around a planet may provide direct supporting fire for ground combat forces on the planet's surface. Such fire takes two forms: support from non-specialised ships, using their normal space-combat armament, and fire from specialised Planetary Bombardment Monitors that are dedicated to exactly that task.

For ordinary non-specialised ships, it is simplest to use a rather abstracted system; it is assumed that any Warship of FRIGATE class or larger is capable of engaging in orbital support fire, using some of its Beam Batteries.

As this is a very simplified resolution method, we do not consider the actual number or type of batteries on the ship, but just assume that the strength of the attack is dependant upon the class of the ship firing – ESCORTS (Frigates and larger) may fire ONE "converged sheaf" burst pattern aimed at any point on the battlefield, CRUISER classes may fire TWO separate sheafs and CAPITAL ships may fire THREE. Thus a Cruiser may fire at two separate target points, attacking each with a 4" diameter burst radius.

The incoming fire is subject to the deviation rules explained in the Ortillery section of DIRTSIDE II (P.40 of the rulebook); any elements within the final impact zone are treated as if under attack from ordinary Artillery, but drawing THREE chits per element in the zone; damage effects are calculated as if under HEF fire for INFANTRY elements hit, and as if under MAK fire for VEHICLES.

After an orbital fire attack, place a NUKE counter at the point of impact; unprotected troops and vehicles may not approach within 2" of this marker for the remainder of the game, due to the radiation left by the Particle Beam strike.

PLANETARY BOMBARDMENT MONITORS are specialised ships dedicated to orbital fire support; they are equipped with special Ortillery weapons systems, which are much more effective than using an ordinary ship's main weapons in a role for which they are not designed.

Each turn it spends over the DIRTSIDE II battle area, a PBM may make one attack for each Ortillery system it has on board. Each attack is made on a target point, exactly as for any other Artillery fire, and is subject to the deviation rules mentioned above.

An Ortillery attack covers a larger burst area than normal Artillery – its beaten zone is 4" radius (ie: 8" diameter) around the target point. All elements caught within this zone each have FOUR chits drawn against them, with the same validities as described above for Beam fire.

After an Ortillery attack a NUKE marker is placed as described above, though it still only affects a 2" radius as for Beam attacks.

It will be seen from the notes above that orbital fire support is a very powerful weapon on the DIRTSIDE II battlefield, even when only from a normal warship; when the Monitors come into play it will become VERY nasty for those on the ground. It is therefore strongly recommended that the use of such support is strictly limited to those scenarios in which it can be justified, and if desired an extra twist can be added as follows:

To provide Orbital Fire Support, a ship must be in low-orbit; "geostationary" orbit is much too high for effective ground support fire. This means that the ship will be orbiting quite fast, and thus will only be over the site of the battle for a relatively short time on each orbit. The ship may only fire in the turn that its orbit brings it directly above the battle area.

At the start of the game, roll a D6: the score is the number of the turn in which the orbiting ship is directly over the table and can give supporting fire. Given the length of most DIRTSIDE II games, it is thus quite likely that the ship will only be available for one turn in the whole game – should the game be a particularly long one however, it may be assumed that the ship comes round again every SIXTH turn following its first appearance.

For example, if a three is rolled then on turn 3 of the DIRTSIDE II game the ship is above the table and can provide support fire; it then moves on round its orbit, and will be back again on turn 9 if the game lasts that long!

"FULL THRUST" FIGHTERS IN GROUND SUPPORT:

Most of the Fighter types used in FULL THRUST may be assumed to be Atmosphere-capable and streamlined; it is therefore quite permissible to allow them to be used as Aerospace Fighters in DIRTSIDE II games, in a ground-attack or Combat Air Patrol role.

While in atmosphere on their mission, such fighters are subject to all the usual DIRTSIDE II rules for Aerospace operations; they revert to the FULL THRUST rules as soon as they return to orbit.

Due to the much higher fuel requirements for atmospheric operations, Fighters may only operate in ground-attack for one mission per game, and then only from a Carrier or mothership that is in orbit.

If desired, the same rules may be used as for orbital fire support, in that the carrier is only over the table for one turn in the game – in this case, the fighters may spend only that one turn over the battlefield, having then to climb back to their carrier before it disappears round its orbit. This will serve as an effective way of limiting the power of having six (or more) fighters appearing over the table at once!

MARINE CONTINGENTS:

Most Naval Starships of Frigate class and larger will carry small detachments of MARINES; these are actually a specialised part of the ship's crew, as opposed to being considered "transported troops" – they are used for both ship and shore security and policing, and to provide a small strike force when necessary (for example in boarding actions against other vessels).

Where the size of the ship allows, Marine contingents will be equipped with a few (small) light combat vehicles for planetary operations (normally Light Interface-Portable Personnel Carriers – LIPPCs – which are generally of Hi-Mobility Wheeled type); it is not unusual for the Marines from an orbiting starship to be used as a specialist unit in support of local ground troops or militia where required.

The Drop capability to land the Marines on-planet is assumed to be provided by the ship's own standard auxiliary craft (all ships that are not themselves atmosphere-capable are automatically outfitted with one or more small shuttles, launches or ship's boats with interface capability, for general landing and resupply missions – though these small craft are not armoured or equipped like a Military Dropship, they may be used to shuttle the Marines into action).

Given their small numbers on most vessels, it is often the case that Marine detachments are issued with Powered Armour to make the most combat potential of their limited manpower; a Powered detachment is not assumed to take up any more space on board ship than a normal "light" Marine unit, as the suits are in storage bays most of the time anyway. Powered Marine detachments are NOT usually equipped with vehicles as well.

Since Marines are counted as part of the ship's crew, the space taken up by their personnel and equipment is considered to be covered in the 50% of the ship's overall Mass that is allocated to Structure, Drives and non-combat systems (it will be remembered from the Full Thrust rules that a warship of MASS 40 has 50% of its Mass (ie: 20) available for fitting offensive and defensive systems, while the remaining 50% is taken to be the Hull, Propulsion systems, Fuel, Crew space etc.).

To determine the size of the Marine contingent in any given Warship, multiply the total **MASS** of the ship by **4**; this gives you the amount of available space (in terms of the CS factors used in the Troop Transport section above) for the Marine detachment.

Thus a ship of MASS 40 (eg: a typical Battlecruiser class) would have 160 CS available for its group of Marines. This space is to cover both personnel and vehicles if used, in accordance with the DIRTSIDE II Cargo Space requirements explained earlier in this section; thus such a ship could have a detachment of 40 Marine personnel (either as Line or Powered Infantry), or fewer if they were also equipped with light vehicles.

As mentioned above, it is NOT necessary to cost out specific Drop capability for the Marine detachment – they are assumed to ride down in the ship's standard allocation of auxiliary craft.

The following are typical Marine contingents for a number of standard Warship classes; it should be emphasised that this list is far from exhaustive, and that all detachments shown are EXAMPLES ONLY – within the limits of available space players may configure their Marine units as desired.

1) LIGHT CARRIER, MASS 70, Marine Capacity 280 CS.

5 Squads each of 2 Fireteams each, mounted in Size 2 vehicles	@ 40 CS	200
1 Command team in a Size 2 vehicle	@ 24 CS	24
2 Specialist teams each in a Size 2 vehicle	@ 20 CS	40
	Total CS used	264

OR:

6 Squads of 2 Fireteams Powered Infantry	@ 32 CS	192
2 Command teams Powered Infantry	@ 16 CS	32
4 Specialist teams Powered Infantry	@ 12 CS	48
	Total CS used	272

2) BATTLESHIP, MASS 48, Marine Capacity 192 CS.

3 Squads of 2 Fireteams each, mounted in Size 2 vehicles	@ 40 CS	120
1 Command team in a Size 2 vehicle	@ 24 CS	24
2 Specialist teams each in a Size 2 vehicle	@ 20 CS	40
	Total CS used	184

OR:

4 Squads of 2 Fireteams Powered Infantry	@ 32 CS	128
1 Command team Powered Infantry	@ 16 CS	16
3 Specialist teams Powered Infantry	@ 12 CS	36
	Total CS used	180

3) BATTLECRUISER, MASS 40, Marine Capacity 160 CS.

3 Squads of 2 Fireteams each, in Size 2 vehicles	@ 40 CS	120
1 Command vehicle, Size 2, with 2 crew	@ 16 CS	16
1 Specialist team in Size 2 vehicle	@ 20 CS	20
	Total CS used	156

OR:

4 Squads of 2 Fireteams Powered Infantry	@ 32 CS	128
1 Command team Powered Infantry	@ 16 CS	16
1 Specialist team Powered Infantry	@ 12 CS	12
	Total CS used	156

4) HEAVY CRUISER, MASS 32, Marine Capacity 128 CS.

3 Squads of 2 Fireteams each, in Size 2 vehicles	@ 40 CS	120

OR:

4 Squads of 2 Fireteams Powered Infantry	@ 32 CS	128

5) ESCORT CRUISER, MASS 26, Marine Capacity 104 CS.

2 Squads of 2 Fireteams each, in Size 2 vehicles	@ 40 CS	80
1 Command team in Size 2 vehicle	@ 24 CS	24
	Total CS used	104

OR:

3 Squads of 2 Fireteams Powered Infantry	@ 32 CS	96

6) LIGHT CRUISER, MASS 22, Marine Capacity 88 CS.

2 Squads of 2 Fireteams each, in Size 2 vehicles	@ 40 CS	80

OR:

2 Squads of 2 Fireteams Powered Infantry	@ 32 CS	64
1 Specialist team Powered Infantry	@ 12 CS	12
	Total CS used	76

7) FRIGATE, MASS 10, Marine capacity 40 CS.

1 Squad of 2 Fireteams (Line or Powered Infantry)	@ 32 CS	32

As will be seen, these contingents have about the right "feel" to them for the size of ship concerned. With the larger ships, the Marine detachments will give enough force for a small DIRTSIDE II engagement to be fought against (say) local insurgent forces; the smaller contingents on lighter vessels may be used to provide "surgical strike" or security teams for games using perhaps a 15/25mm scale combat system such as STARGRUNT.

The other use for Marine units aboard Starships is for Boarding Party duties, and some basic but workable rules for these are suggested on P.7; should players desire, of course, boarding actions may always be fought out man-to-man on a scale plan of the ship, using figures and a suitable rules system (eg: a modification of Space Hulk™ from Games Workshop?).

DAMAGE TO TROOP TRANSPORTS:

When a loaded Transport ship takes damage, it should be treated in the same way as the notes on "damage to cargo" for freighters, as given on P.23 of the Full Thrust rulebook; troops, vehicles etc. are assumed lost in proportion to the damage taken by the ship.

Just how you determine exactly WHICH elements of the transported units have been lost is up to the players, but one suggestion is that if the transport has lost, say, 30% of its Damage Points, then each individual unit or element on board should be rolled for on percentile dice, with a 30% chance of it being among the casualties. Using this method may give you a few more or less actual casualties than the straight percentage of damage points, but there is nothing wrong with that.

Such rolls should only be made ONCE, either at the end of the game or at the point where the troops are to be deployed on-planet; it is really not worth rolling every time the transport takes another point of damage!

Losses to Shuttles, Dropships etc. can occur in the normal damage rolls at threshold points, as they (or at least their hangar bays) are actually represented on the ship diagram as individual items.

FULL THRUST/HELLFIRE INTERFACE:

Author's note: HELLFIRE is a set of generic 1/300 SF rules written by Jim Webster, and published by Wessex Games. It is available from a number of stockists (including ourselves at GZG for £4.95 + £1 UK post/packing), or direct from the publishers at 4, Old Acre Road, Whitchurch, Bristol. Hellfire is very much an infantry-based system, ideal for the "low-down and dirty" end of SF ground combat – lots of planetary militia and police units, to whom a hover pickup with a mining laser on the back is a heavy combat vehicle! The rules that follow do not contain hard-and-fast points details, as HELLFIRE is not that kind of game; certain things may also contravene the normal FULL THRUST design rules, but so what? My thanks to Jim Webster for contributing this interface system.

Whilst HELLFIRE is a game which has its feet/wheels/tracks set reasonably firmly on the ground (or at least within the atmosphere) it is often necessary for our combatants to travel between worlds to take part in these curious little wars we plan. As you may be aware, Hellfire tends to cover the scruffy and disreputable side of SF warfare; hence when looking at transporting our forces we needn't look too closely at the "top of the range" purpose built spacecraft. So what ships could be plying their trade in your game universe?

First is the In-System Troopship, purely for moving stuff within one solar system; it has no FTL drives, and will probably be a converted bulk carrier of some kind. Such ships are almost certainly capable of working within planetary atmosphere.

Then we have the Marine contingent on board a Warship; many Cruisers or larger ships could take a shuttle/dropship bay, replacing some of their regular weaponry. While this is of less use in a pitched battle, most warships actually spend very little time in pitched battles, but an awful lot of time showing the flag. A group of shuttles could be used to drop Marines or security troops as backup to local forces in Colonial policing or similar instances.

Next up is the Space Marine Troopship: probably rare, this would be a specialist ship designed and built solely as a troop transport. The hull might be based on a Fleet Carrier, but with shuttle bays replacing the fighter bays; such a ship could transport perhaps as much as a Division.

The Converted Bulk Carrier, as illustrated by the example of the "Satyr" below, would probably be a common method of interstellar troop transport. Such ships might be converted in times of war, and any survivors converted back to merchant duty when peace breaks out. Some might even be kept on the fleet strength in peacetime and could be used for hauling bulk supplies when strictly military duties are not pressing.

Finally, we have the Container Freighter: a standard FTL tender-type ship which can pick up and transport a number of large (perhaps battalion-sized) landing ships. This would be a very flexible system, as a tender with (say) four loading hardpoints could take three commercial cargo modules and one military lander when on peacetime rotation duty, but swap to three landers and one containerful of supplies when in a war situation. In such a ship, the landing craft would be self-contained transports in their own right, with their troop contingents remaining on board them throughout the voyage.

To give an example, the **"SATYR"** is a converted merchant Bulk Tanker, upgraded and outfitted as a Troopship. the ship mounts the following:

One fighter bay with 6 fighters embarked;

Five shuttle bays each with 6 interface shuttles;

A level-3 screen system;

Three PDAF systems;

One "C" Battery.

You may notice that this looks a bit much for a merchant ship, however modular construction techniques mean that fighter and shuttle bays can be dropped in or removed as required, leaving cargo space. Indeed, it would be perfectly acceptable for governments to subsidise private companies to build their merchantmen with Military-style hulls, to allow for later requisitioning in wartime.

Note that troops have to be accommodated on board ship, and this must be factored into the design. I would allow mechanised and armoured units to be stored in their shuttles, and thus to be catered for in the Mass dedicated to the shuttle bay. Infantry, meanwhile, have to have some room for them built into the ship (although you may assume that they will share some of the crew's facilities). Ordinary infantry can be housed at a rate of 8 bases per point of Mass on ships with Military hulls, or 16 bases per Mass on

merchant-hulled ships (there have to be some advantages to not having all that compartmentalisation and multiple-redundant systems!). Note that these figures are for SPARE Mass that is not being used for other things, and NOT the overall Mass of the entire ship – that puts on an additional limiting factor, that no ship may carry more than 1 base per OVERALL Mass (after all, even infantry need room to stretch). Thus, a Mass 40 ship could carry no more than 40 bases, even if it actually had enough spare Mass (cargo capacity) for many more.

Returning to our Converted Tanker example, the Satyr's shuttles can each transport (in Hellfire terms) a half-company of infantry (4 bases), a mechanised Infantry section with its vehicle (1 APC plus 1 base of troops) or a single Armoured Combat Vehicle. This may seem harsh on vehicles, but fuel, spares and expendables take up a lot of room – also crews have to have access for in-flight mainte- nance.

On a standard mission the Satyr would carry the "Satyr Brigade", which consists of the following (all statistics in HELLFIRE rules terms):

1st Light Battalion:

A Company   Reaction 3,3,2,2,3,2,2,2   19 pts.
8 bases of infantry wearing Ablat and carrying personal energy weapons.

B Company   Reaction 3,3,2,2,3,2,2,2   19 pts.
8 bases of infantry wearing Ablat and carrying personal energy weapons.

C Company   Reaction 3,3,2,2,3,2,2,2   19 pts.
8 bases of infantry wearing Ablat and carrying personal energy weapons.

D (Mechanised) Company   Reaction 3,3,2,2,3,2,2,2   19 pts.
6 bases of infantry, with Ablat and personal energy weapons, each riding in a light armoured APC, mounting a crew-served projectile weapon and equipped with full vehicle NBC and ECM.

2nd Light Battalion:

Four Companies **(A-D)** organised exactly as for 1st Battalion but all with: Reaction 3,3,2,2,2,2,2,1   17 pts.
The fifth shuttle bay is occupied by the 1st Independent Armoured Company:

1st Independent Armoured   Reaction 5,5,5,5,1,1,1,1   24 pts.
6 Grav tanks with Heavy armour, full vehicle NBC and ECM, mounting crew-served energy weapons.

The Brigade is supported on the ground by a Fighter Group that is carried in the Satyr's one fighter bay:

The Fighter Wing   Reaction 5,5,5,5,1,1,1,1   24 pts.
6 atmosphere-capable fighters, each mounting a crew-served energy weapon with full vehicle NBC and ECM. In ground-attack configuration they can also be fitted with a rack of two manportable guided missiles, which normally mount conventional warheads.

The Satyr Brigade, while small, is a flexible force. The 1st Independent Armoured Coy. can be combined with the "D" companies from both infantry battalions to produce a small mechanised battalion, though that does leave the rest of the infantry to play very much a "leg" role.

GROUND SUPPORT IN "HELLFIRE":

Our space forces can do more to help the ground troops than merely providing transport; they may act as orbital artillery, although this is not of much use in police actions and counter-insurgency operations unless things get VERY out of hand! More importantly for local forces (and industrial concerns interested in keeping hold of their assets) they can provide backup in other ways.

Firstly, ship crews are trained personnel who can be used to bolster the defence of an isolated outpost. It was mentioned earlier that a Cruiser or similar ship fitted with a shuttle bay is a useful tool for low-key operations; the six shuttles could land, for example, 24 bases of marines in support of the local forces.

Even merchant ships would have a small contingent of security personnel who could help out in very minor disturbances; mer- chantmen would not carry large crews (they are after all a fixed cost that eats into Company profits), but one base of security men

per ship is not unreasonable. Such bases would be well trained and equipped, but would best be used as instructors or techni- cians, or in action as heavy weapon crews and the like.

Naval vessels would be a different kettle of fish; I would suggest that on top of any actual marine detachments carried a Naval ship could spare one base of armed crewmen per 10 Mass of the ship. Again, these men would be better trained and equipped than most paramilitary forces, but would not be up to the standard of regular infantry.

A final form of contribution to ground actions could be the "loaning" of heavy weapons. While A and B batteries could be difficult to use other than in fixed emplacements and wired directly to a city's power grid, smaller weapons such as C batteries could conceivably be stripped from the ship's mounts and fitted on improvised carriages, to create makeshift armoured vehicles or direct-fire artillery. Similarly, PDAF and ADAF systems could be cannibalised to provide jury-rigged anti-air defences or crew- served weapons. What the ship's Captain would think of this idea is another matter, of course.....

Anyway, the above ideas will hopefully give you something to be going on with; feel free to experiment – even the silliest idea has probably been used in an SF novel by someone at some time!

INTERFACING WITH OTHER SYSTEMS:

The rules in this section for interfacing FULL THRUST with DIRTSIDE II and HELLFIRE should give you sufficient guidelines and ideas to allow you to work out interfaces for other ground combat systems of your choice. In most cases the troop transport rules and calculations can probably be used as they stand (we would suggest using the DIRTSIDE II conversion system where points values are important, as it is probably the easier one to relate to unit and vehicle sizes in other rules).

There are a lot of other good SF ground-combat rules about, both for combined-arms actions in 1/300 (6mm) scale and for infantry actions using larger scales such as 15mm or 25mm; it would be unfair to mention some and leave others out, but have a good look around and use the set you are personally happiest with.

FULL THRUST was never intended to be a "Competition" style game when it was written; it was designed to be a simple system for enjoyable, friendly games or even to resolve large space battles easily for use with other game systems or roleplaying.

Over the last two years, however, the system's inherent simplicity and flexibility, coupled with the very easy-to-use design mechanisms, have proved it a suitable basis for tournament and competition play.

The most important point to remember when trying to use a rules system such as FULL THRUST to run competition games is that, as a deliberately "open" and generic system designed for players to modify as they wish, some aspects of the rules are far too flexible to let the dreaded "greater spotted rules lawyers" loose on without specifically closing up some loopholes first.

The notes that follow are intended as a GUIDE to anyone wishing to organise FULL THRUST competition games, and as such may themselves be modified or totally ignored as you prefer!

SHIP DESIGN AND FLEET COMPOSITION:

There are two ways of dealing with ship design for competitive games:

Option (a) is to run a "LIMITED" game in which players are allowed ONLY to use the specific basic ship designs given in the FULL THRUST rulebook, with no modifications, changes in weapons etc. The players have the freedom to select any ships from the classes provided, up to a maximum points limit set for their fleet. This should give a game where the tactics of play decide the victor, rather than who can stretch the design rules to the furthest limit! [An even more limiting, but quite useful, idea is to actually give each player a fixed, identical force – that way you are REALLY finding out who is the better tactician (or just luckiest with the dice....). This method can be effectively used for "enter-on-the-day" competitions where players do not have to bring their own fleets along, but can use one of a couple of forces provided by the organisers.]

Option (b) is to have an "OPEN" contest, where players are allowed to modify their ships to suit their own preferences and ideas of what is most effective. Even for this kind of game, it is strongly suggested that entrants are limited to the standard HULL MASS ratings of the classes given in the basic rulebook, rather than being able to use "special" hulls; this prevents too much exploitation of the anomalies that can occur at the break points between Escort, Cruiser and Capital classes (see notes on P.5 of this supplement).

Thus a player could have a Destroyer class hull, of MASS 14, with any systems or weaponry that they wish (subject to the normal limitations), but could NOT build a "special" hull of MASS 18, for example.

It is recommended that players providing their own fleets of models should be required to have an identification somewhere on the base of each model that not only contains its actual I.D. number or letter but also describes the specific HULL CLASS, eg: Frigate-size ships could be labelled FF-1, FF-2 etc, Light Cruisers CL-1, CL-2 and so on. This permits the opposing player to have some idea of the supposed mass of a ship, regardless of what kind of model is being used to represent it.

For OPEN games, all weapons and systems described in the original rulebook may be permitted; whether the organisers wish to allow the use of any of the additional ideas from this supplement is up to them, but we strongly suggest they try them out for themselves a few times before permitting them to be used in competition – we make no guarantees about what they will do to the balance of play!!

SIZE OF FLEETS:

It is suggested that for most competition play the fleets are kept fairly small to allow a game to be played to completion in a reasonable time. The ideal size is probably around **1500 points** in total, though fleets as small as 1000 points can still be effective. Forces of 2000 points or over will probably be a bit large unless plenty of time and table space is available.

TYPE OF GAME AND SCENARIO:

Most "historical" competition gaming is of the "both armies line up facing each other, and advance to beat the **** out of the opposition" type of scenario. Although rather uninspiring, this kind of game is certainly the easiest to use as it avoids the problems of balancing a specific scenario to give an equal chance to both contestants. Simply play the game as a "meeting engagement", with each fleet entering from a different table edge at a pre-agreed velocity. Note that it is NOT necessary to have the players approaching from OPPOSITE table edges – it is probably more valid to have them enter from the two corners of the SAME edge, on slightly converging vectors – as though the two fleets are trying to intercept each other by matching trajectories.

Of course, it is possible to use a more involved scenario for competitive games if you are prepared to design it very carefully, but be aware of the potential difficulties.

A bit of extra fun can be introduced by a few randomly-placed asteroids on the table (moving ones if the organisers are REALLY feeling nasty....)

SUGGESTED SPECIAL RULES AND LIMITATIONS:

i) NO FTL drive entry or exit may be attempted at any time during the game (assume the battle takes place too deep in a gravity well). ALL ships, however, MUST be FTL capable – ie: System Defence ships are not permitted.

ii) No stationary installations are permitted, unless part of a specific scenario.

iii) The FIGHTER MORALE rules on P.10 of this volume should be used, even with LIMITED games. The ENDURANCE limitations from the same section may be included also at the organisers' discretion.

iv) SENSOR rules may be used at the organisers' discretion – either the simple rules from the original book or the more detailed rules given in this supplement. In general, however, it is recommended that NO sensors or bogies are used, all ships being in plain view at all times.

v) If an umpire (or ideally two) is available, it is suggested that after the players have written their movement orders their sheets are handed to the umpire(s) who then actually move the ships according to their interpretations of the written orders. The decisions of the umpire(s) are final regarding any dispute over ship positioning; this prevents any deliberately vague order-writing and "creative flexible movement" by certain players... (not that you would even think of such a thing, would you??).

vi) Ships leaving the table, either deliberately or by accident, may NOT return at any time during the game.

vii) The DAMAGE CONTROL rules in this volume (P.6) may be permitted at the organisers' discretion, but in a slightly modified form: Ships are permitted only a basic limit of DCPs – 1 for Escorts of Corvette size and larger, 2 for Cruisers and 3 for Capital Ships. These teams are automatically available, costing NO points, and take up no mass. Additional DCPs may NOT be bought with points. DCPs CANNOT be lost at threshold points, and therefore do not need to be marked on the ship record diagrams. In all other respects, the Damage Control rules given in this book apply.

viii) Positively **NO** anoraks are to be worn while at the gaming table (the hoods won't fit over the Space Helmets......).

PLEASE NOTE:

Competition Organisers are hereby granted permission to reproduce limited portions of this book and the original FULL THRUST rulebook as necessary for defining specific rules to be used in a competition, including the copying of ship record charts and quick-reference sheets. Permission is specifically NOT granted, however, for the reproduction of full or partial versions of the actual rules of play for the purpose of supplying these to entrants or for any other purpose. Should any organisers wish for supplies of the rulebooks for use or resale at competitions, please contact us – we will usually be happy to help.

SUPERSHIPS:

Under the construction system given in FULL THRUST, it is only possible to construct Starships up to a MASS of 100. There is no reason, however, why larger ships should not be designed and used – the rules that follow are an extension to the original construction rules to cover such classes, which are known as **SUPERSHIPS.**

1) All vessels of **over 100 MASS** are classed as SUPERSHIPS. Hull costs are the same as for other ships, ie: 2 x Mass for Warships and 1.5 x Mass for Merchants.

2) FTL Drives cost the same as other ships, ie: equal to the Mass of the ship.

Normal Space Drives cost **2 x Mass per 1 thrust factor** (eg: a Mass 150 Supership with 2 thrust would pay 300 x 2 = 600 points for its Drives).

3) All Superships have the three basic FireCons as for a Capital ship, plus 1 extra for every full 50 Mass over 100 (eg: Mass 150 – 199 Superships will have 4 FireCons, Mass 200 – 249 ships will have 5 and so on) – additional FireCons may be purchased as for any other ship design if desired.

4) As with all ship designs, Military Superships can use up to 50% of their Mass for weapons fit (or 75% if no FTL Drive), while Merchant craft may use up to 10%. All weapons systems are available for use on Superships.

5) Damage boxes on the ship record diagram are provided at the same rate as for other ships, ie: 1 box per 2 Mass. Superships of 101 – 150 Mass use FIVE lines of damage boxes on the diagram, those of 151 – 200 Mass have 6 and so on, adding one extra line per 50 additional Mass. When rolling for Threshold Point damage at the end of a line of damage boxes, the score required starts at 6 on the first line as usual, drops to 4+ by the third line, then REMAINS at 4+ for all following Threshold rolls.

EXPANDED SPACE INSTALLATION RULES:

The Starbase and Installation rules in FULL THRUST, although rather "loose", are actually fairly comprehensive in that they allow almost any size of Base or Station to be constructed under the normal rules. The suggestions below are just two possibilities for expanding this design system to make very large installations a little easier to handle.

i) For Installations of over 100 MASS, use the SUPERSHIP construction ideas given above in order to determine the amount of damage box rows and the number of FireCon systems.

ii) For the VERY big installations and bases, a good way of dealing with them in game terms is to consider them as several separate sections joined together, with each section having its own independent Damage Points, FireCons and everything else.
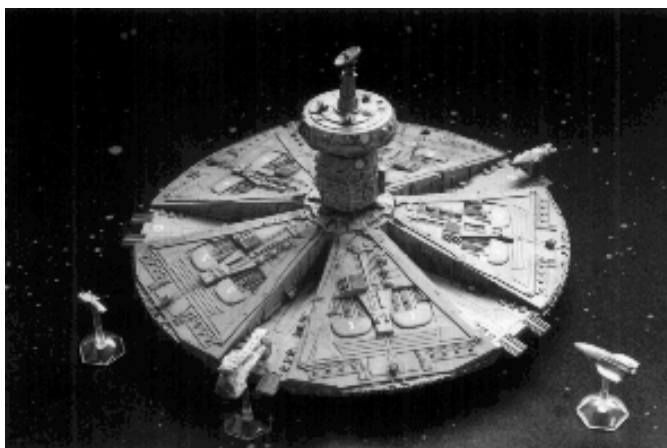

A large starbase installation, built from an old plastic kit with added parts from the CMD Starship range. Ships from CMD and RAFM.

The diagram below is just one example, a suggested record diagram for a Station of **MASS 600** divided into **SIX** segments of 100 MASS each – five sections of its outer disc and a central "core" section. The advantage of using six sections is that you can number them **1–6** and use a die roll to randomly determine which section is hit by incoming fire! [A suggestion on this is that fire from ranges of **18" and greater** hits a section of the station determined at random, while fire from CLOSER than 18" may be specifically targetted at a chosen section.]

In the example given in the diagram, it seems logical to give each of the outer sections a limited fire arc for its weapons (one-fifth of the total arc around the station) while the central core has all-round fire capability. This layout was actually designed for the model Starbase illustrated in the photo on this page, which has five outer sections and a central tower, but can of course be adapted to suit any model you wish to design.

As a final suggestion, if one section of a multi-unit Station is totally destroyed (reduced to zero Damage Points) then all ADJACENT sections take immediate damage equal to the rolls of a number of dice determined by the original number of Damage Box ROWS the destroyed section had; thus in the example, if section THREE were to be completely destroyed then sections 2, 4 and 6 (the Core) would each suffer 5D6 points of damage.
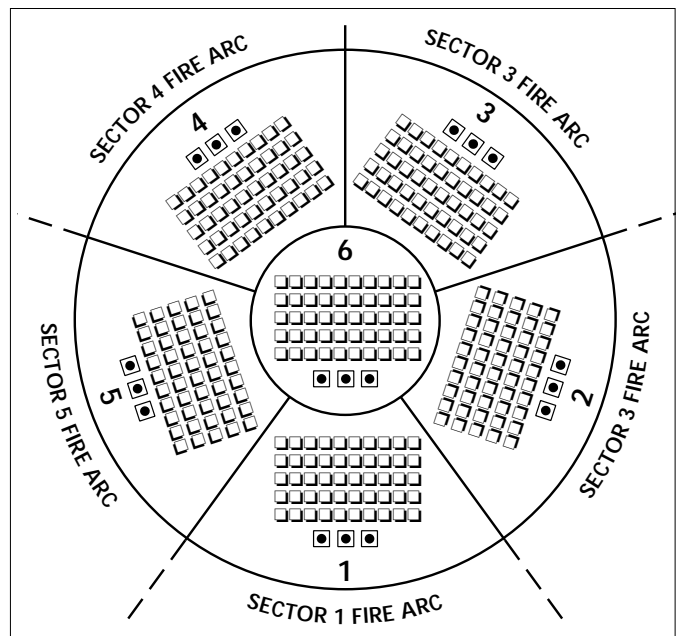

NEW GENERAL DESIGNS:

Designer's note: We had originally intended to include in this supplement the statistics and ship diagrams for all of the "official" FULL THRUST ship models produced by CMD. In the event, this plan was changed for two main reasons. One was simply a matter of space; the full details and diagrams would have taken up at least a quarter of the total pages in this book, if not more, and we felt that providing you with as much in the way of new rules and information was more important. The other factor that influenced our decision was that not everyone plays FULL THRUST using the background provided, and certainly not all of you use the CMD ships, many preferring either their own scratchbuilds or a mixture of models from other manufacturers. To take up a large portion of this book with stats for "official" models was therefore seen as somewhat detracting from the strictly generic nature of the rules, and getting rather too close to the policies of certain other publishers who shall remain nameless™.....

So, we took the decision that the new ship classes featured in this book would be mainly further general types, to expand the range listed in FULL THRUST; the exceptions to this are the Kra'Vak designs on P.27, which we decided to include after all simply because they illustrate the various new and specific rules for this alien race, and show how to design ships outside the normal parameters given for the "human" fleets.
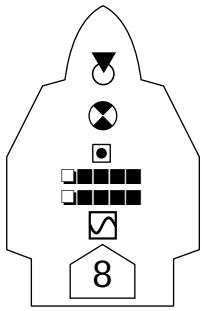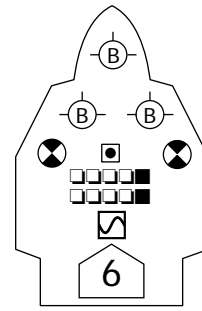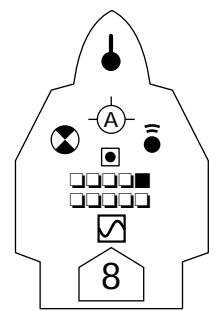
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MASS 4
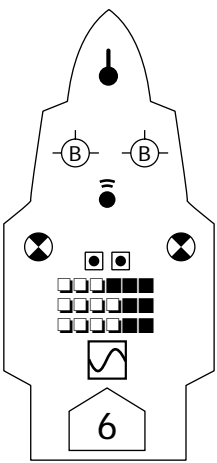26 POINTS
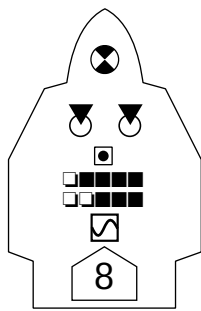
LANCER
MASS 6
39 POINTS
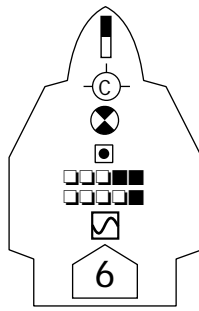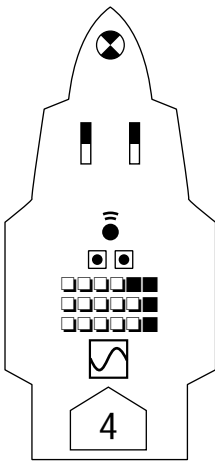
TORPEDO DESTROYER
MASS 14
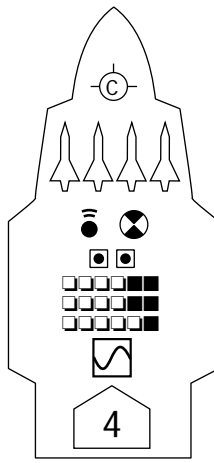86 POINTS

SUPER DESTROYER
MASS 16
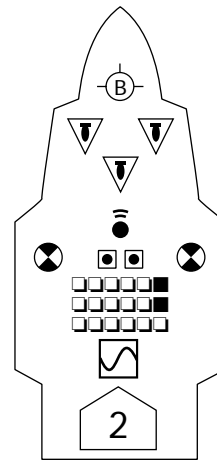105 POINTS

PRIVATEER
MASS 18
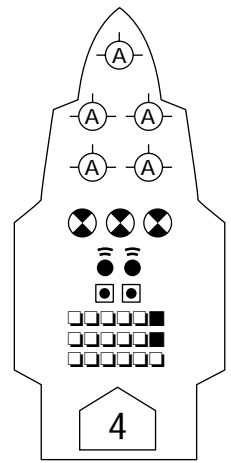137 POINTS

NEEDLE CRUISER
MASS 22
187 POINTS

STRIKE CRUISER
MASS 28
198 POINTS

MISSILE CRUISER
MASS 26
187 POINTS

PLANETARY
BOMBARDMENT
MONITOR
MASS 32
198 POINTS

SYSTEM DEFENCE
CRUISER
MASS 32
252 POINTS
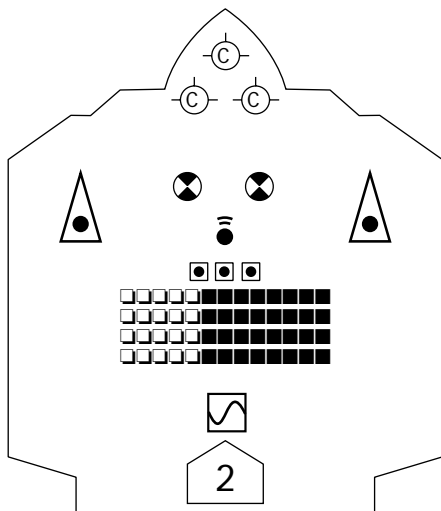
ESCORT/PATROL CARRIER
MASS 40
286 POINTS
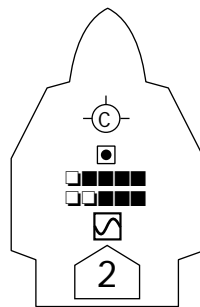
FREE TRADER
MASS 10
50 POINTS
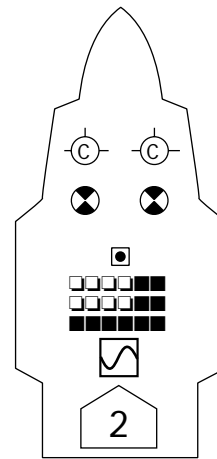
MEDIUM TUG
MASS 32
224 POINTS
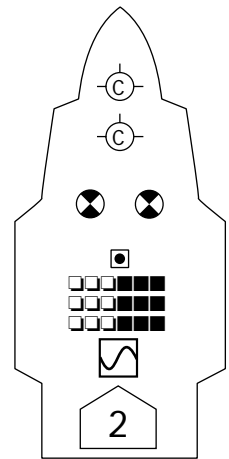
ARMED
MERCHANTMAN
MASS 36
178 POINTS

Our intention regarding the "official" ship designs (the NAC, ESU, FSE, NSL and others) is to publish – hopefully very shortly – a separate "Book of Fleets". This will be a somewhat lower-budget publication than this supplement (ie: probably just a single-colour cover etc.), and will essentially consist of full statistics, background details and ready-prepared ship record sheets for all the vessels featured in the CMD ranges (and possibly some others as well). Taking this route will enable players who DO wish to use the CMD designs within the "official" background to do so by purchasing the new Fleet Book, while those who prefer to continue with their own ship designs can happily ignore it!

This new booklet should, all being well, be available in mid-late summer 1994; please contact us at GZG (or Geo-Hex in the USA) for further details on price and availability.

CONTACT!

Captain Joshua N'goka contemplated the computer-enhanced long range visual that filled the main bridge screen of the Pan African Union Battlecruiser "Kinshasa". The intruder was obviously not constructed by any human hand; while it bore superficial resemblances to normal starship design, the was something indefinably wrong about its shape, the angles of the hull, even the green and mauve colouration which seemed to shift and change as he watched it.

The unknown ship had dropped into realspace on the edge of the New Lusaka system nearly seventeen hours before, and the Kinshasa had been hastily despatched to intercept it. Tensions were running high along the PAU borders, and any unscheduled arrival in a colony system was a potential threat. N'goka had not paid much heed to the media's hysteria about Aliens, at least not until about six minutes previously when he had first obtained visual contact with the incoming ship.

"Mister Bolu, still no response from our visitor?"

The Kenyan Comm Exec turned from his station:

"Nothing yet, Sir. We're still broadcasting wideband recognition codes and running every theoretical contact signal in the library banks. It doesn't seem to have any kind of IFF transponder either, at least nothing I can detect. Do we continue transmissions, Sir?"

"Yes, Mister Bolu – keep trying. Until our friend out there makes some kind of move, I want nothing but peaceful communication attempts. I'm damned if we're going down in the history books as the ship that turned a First Contact into a firefight. Tac stations, that does not mean I want us unprepared – keep all screens at full strength and weapon stations at amber status. Miss VanVoet, do we have a tac evaluation on the intruder yet?"

"We have an approximate mass reading, Sir – about the same tonnage as one of our destroyers, although the overall dimensions are considerably larger. No sign of any screens in use, though the hull density is greater than it should be; she may well be armoured. We can't get any reading off her weapons if there even are any on board – no emissions to indicate beam systems charging. The power plant output indicates a similar emission pattern to our own, though the muon flux in particular is way off the scale for a ship that size. We are now just entering maximum engagement range for our primary batteries, but we should still be well out of range of anything they could mount on a ship of that mass. There is more data and analysis coming through all the time, Sir, I'll patch it through to your station as it comes in."

Thank you, Ensign. Helm, commence deceleration to bring us to a relative holding velocity – I don't want to get too much closer until we know a bit more about what we're facing..."

VanVoet's shout interrupted N'goka: "Sir, she's turning!"

The screen showed the unknown ship execute a sudden turn to starboard, bringing itself bow-on to the Kinshasa's approach vector. N'goka took in the twin-boomed hull, almost too fragile for a warship, just as his subconscious said that a ship that size shouldn't be that agile....

"Tac – power up all batteries, condition red, rig for combat stations – but NO FIRE until I give clearance, is that understoo...."

" INCOMING CONTACT!!"

Bolu's cry echoed at the same moment that the computer shrieked a warning. N'goka's eyes caught a brief flash of light from the twin horns at the front of the alien ship, and the thought was half formed in his mind – that if he had seen the firing flash, then the lightspeed energy pulse must have missed them – when the ship shook as if it had been hit by a massive hammer. The bridge lights went out, then stuttered on again as backup circuits kicked in. Klaxons howled, and clusters of red indicators flashed on the status display of N'goka's command station.

"Report, Mister Bolu – what hit us?"

The Exec rapidly scanned the flood of data coming through his console:

"Not an energy weapon, Sir. Apparently some kind of solid projectiles, very high velocity. Went through our screens like they weren't there, and punched straight through the midships sections. Major hull breaches in three sections, severe structural damage – most of the midships decks have sealed themselves off, and I'm starting to get casualty reports....."

"Tac, all weapons free – return fire at will. Helm, evasive manoeuvring – all she can stand with out ripping us apart. Seal all bulkheads, all hands to full battle stations. Med and DamCon teams to decks 4, 5 and 6 Midships. Comm – signal to New Lusaka that we are engaging and dump them all data collected so far!"

The Comm and Tac stations responded almost together:

"Aye, Sir – data squirt away; do I continue hailing?"

"Systems armed and locked, Sir, we have a firing solution – initiating offensive operations..."

N'goka was opening his mouth to issue another order when is mind registered another momentary flash from the alien. An instant later, the Kinshasa's bridge and most of her forward structure was shredded by the colossal kinetic impact of the hypervelocity penetrators fired from the Kra'vak ship's long forward railguns.....
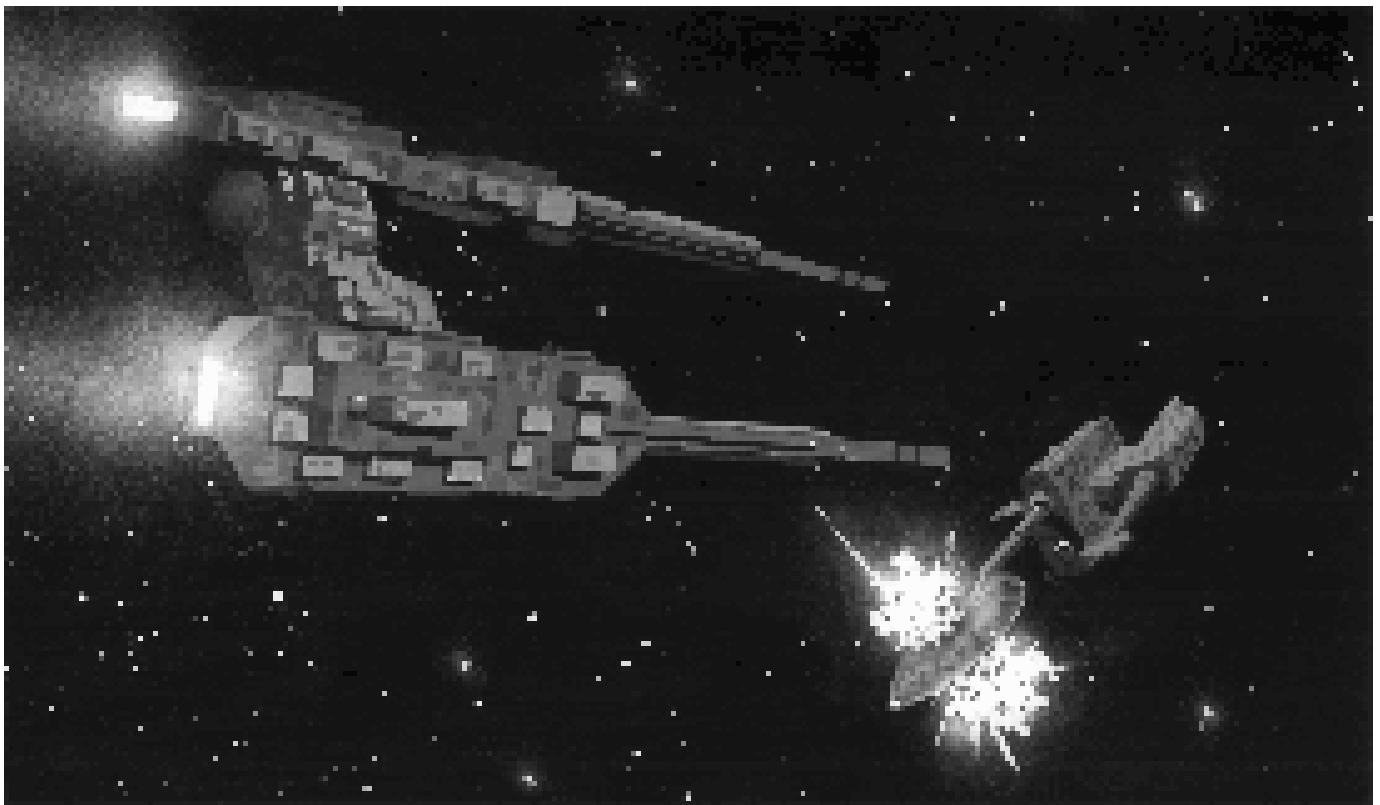
OVERVIEW OF KRA'VAK TECHNOLOGY:

Unlike the starships of the various Human powers, the fleets of the Kra'Vak do not use energy-weapon technology. Instead, they are equipped with electromagnetic-accelerator guns, or "Railguns", firing solid penetrators at incredibly high velocities. Even a small kinetic penetrator can cause quite massive damage when it impacts a target at a high enough speed, an the energy screens used on human ships provide no effective defence against such weapons.

The accuracy of the Railguns is limited by the accuracy of targetting computer predictions of exactly where the target ship will be when the projectiles arrive, hence accuracy degrades with range and the consequent increase in time lag on receiving target positioning data. The different calibres (classes) of railgun battery on Kra'Vak ships vary mainly in the mass of the projectiles fired, thus the damage caused by a successful hit increases with battery size. All railgun classes are assumed to have similar firing velocities and targetting systems, however, so range and hit probabilities remain constant regardless of battery class.

Kra'Vak manoeuvring drives (Normal Space Drives) are generally more efficient that their human counterparts, which results in even the larger ships having (in many cases) higher overall thrust ratings than the equivalent human classes. In addition, these drives are able to apply more of their available thrust (up to all of it, in fact) to changing course, making the ships much more agile than human designs. This is somewhat balanced by the fact that the Railgun batteries may only bear through much more limited fire arcs than human weapons systems, thus making tactical manoeuvring and ship facing far more important to the Kra'Vak captain.

Kra'Vak warships do not carry Screens, as these are of no use against the weapons they use for themselves (and therefore, as with most races, naturally assume that everyone else will use as well!). Instead, their ship hulls are built with a much higher degree of structural armour and integrity than the human designs (which has an additional bonus of being better able to take the massive stresses imposed by the enhanced manoeuvring capabilities of their Drives). This hull armour provides the larger ships with significant protection against both projectile AND energy weapons fire, without the disadvantage of being classed as a separate "system" as the Screen generators are; hence hull armour is considered integral to the structure and cannot be lost as a result of threshold rolls.

KRA'VAK THRUST AND MANOEUVRE:

Kra'Vak vessels move and manoeuvre in exactly the same way as other ships, using the normal rules, with one exception: they are permitted to use MORE than half their available thrust for COURSE CHANGES, and may in fact use up to **ALL** their thrust rating for this. Thus a Kra'Vak ship with a thrust of 6 could actually make a full 180-degree about-face in a single move (though its path would in fact be an L-shape manoeuvre rather than a turn in place, as it is still bound by the normal rules about splitting course changes between the start and midpoint of the movement).

It should be noted that this ability does NOT mean that Kra'Vak ships gain any extra thrust factors to carry out this increased manoeuvring; if the ship uses all of its thrust to change course, it will still have none left over to accelerate or decelerate with. The effect of this rule is to make Kra'Vak ships potentially much more manoeuvrable than their human counterparts, which will partially compensate for the more restricted fire arcs of their major weaponry.

Kra'Vak Normal Space Drives are costed at the SAME prices as Human drive systems – their extra manoeuvrability is a free bonus!

KRA'VAK ARMOURED HULL COSTS:

When costing Kra'Vak ships (or indeed any other vessel fitted with an armoured hull), apply the following modifiers to the Hull cost:

Level-1 armoured hulls (as on Kra'vak Cruiser classes) cost an additional **25%** of the normal Hull points, ie: **2.5** x MASS of ship.

Level-2 armour (as on Kra'Vak Capital Ships) costs an additional **50%** of Hull points, ie: **3** x MASS of ship.

BEAM WEAPON FIRE AGAINST KRA'VAK ARMOUR:

When human ships use their beam batteries against Kra'Vak ships with armoured hulls, the armour DOES have an effect on the damage done by the beams; treat Kra'Vak CRUISERS as if they have level-1 screening against beam weapon fire, and CAPITAL ships as if they have level-2 screens.

KRA'VAK RAILGUNS:

The primary anti-ship weapon of the Kra'Vak is a hyper-velocity railgun system, firing bursts of electromagnetically-accelerated solid penetrators at incredibly high speeds. Railgun systems are available in three sizes (denoted, surprisingly enough, as classes 1, 2 and 3!). A **class 1** railgun battery is the lightest, corresponding to a human "C" battery in Mass terms; **class 3** railguns are the heaviest versions.

Unlike the human ships' batteries of various classes, ALL railguns have the SAME overall range, and require the same roll to hit at a given range. The difference between the battery classes affects the DAMAGE done by a successful hit.

When firing a railgun battery, measure the range to the target and roll 1 die:

At **0-6" range**, a hit is scored on a roll of **2 or greater**.

For **every 6"** (or part thereof) increase in range, the score needed to hit **rises by 1**; thus at the maximum effective range band of 24-30" a hit is only scored on a roll of 6.

The same range bands and scores required apply to **ALL** classes of railgun batteries.

When a hit is scored, a second die roll is made to determine the amount of damage inflicted on the target: one die is rolled per shot that hit, and if the score is **1–3** the damage inflicted is EQUAL TO THE CLASS OF RAILGUN, ie: **1 point** for a class-1 railgun, **2** for a class-2 and **3** for a class-3. If the die score is **4–6**, the damage done is DOUBLE the class of gun, ie: **2** points for a class-1 etc.

If the target ship has an ARMOURED HULL (as Kra'vak vessels of Cruiser and Capital size have automatically), then **SUBTRACT 1** from the damage die roll for each level of armour – thus a Cruiser (with armour-1 hull) would take the doubled damage only on rolls of 5 or 6, and a Capital ship (armour-2) on rolls of 6 only; all other rolls are counted as basic damage equal to the railgun class.

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RAILGUN SYMBOLS:    [1]     [2]     [3]
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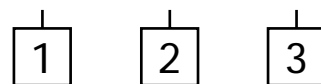
RAILGUN FIRE ARCS:

Although Railgun batteries are very effective weapons, able to deal a significant amount of damage even at long ranges, they do have one major disadvantage; due to the nature of the weapon system itself, an individual gun battery may only be mounted to fire through **ONE** fire arc (Forward, Port or Starboard). Kra'Vak ships can therefore only bring a limited portion of their ordnance to bear on any given target at any one time – for this reason they generally tend to concentrate most of their heavy guns in the Fore arc, with only minimal armament to the broadside, and rely on their superior manoeuvring ability to allow them to effectively engage targets. Thus if opposing ships are able to keep out of the forward arc of a Kra'Vak warship they can attack it with relatively little worry about return fire – this is, however, not easy given the Kra'Vak manoeuvrability!

RAILGUNS AGAINST SCREENED TARGETS:

When railguns are fired against human (or other) ships that use Screens as defences rather than hull armour, the damage is rolled as if firing at an UNPROTECTED ship; in other words, the energy screens (which are, after all, designed to defend against energy weaponry such as particle beams) have NO effect against the kinetic-penetrator projectiles fired by the Railguns.

KRA'VAK "SCATTERGUNS":

The Kra'Vak use a close-in weapons system on their warships known as a **SCATTERGUN**; this is a **single-shot** device very like a giant shotgun blast, firing a cloud of many thousands of small hypervelocity solid penetrators. The Scattergun may be used as both an anti-ship or anti-fighter weapon, though as Kra'Vak warships only carry a strictly limited number of Scattergun charges there is quite a bit of decision-making required as to when it is best to use one up.

When fired in an anti-ship mode the Scattergun does require the use of a FireCon system, and has an effective range of 12"; simply nominate the target, and roll ONE die – the score rolled is the number of damage points inflicted on the target (thus a Scattergun shot is always GUARANTEED to do at least 1 point of damage; its wide-cone effect and very large number of individual projectiles ensure that at least some will always find the target). Several Scattergun charges may be fired in the same turn if desired, though a separate FireCon is required for each separate TARGET that is fired on.

In its anti-fighter mode, a Scattergun has a range of only 6" and may only engage a fighter group that is actually attacking that ship, but the system does NOT require the use of a FireCon to operate in this mode. Only one fighter group may be fired on with each Scattergun charge, though if desired several charges may be fired at the same or different groups in the same turn. As with anti-ship fire, simply roll 1 die and the score rolled is the number of fighters destroyed (Note: if using the optional "Advanced Fighter" rules on P.12 of this book, "Heavy" Fighter groups suffer only HALF (rounded DOWN) of the number of casualties of normal unprotected types).

When a Scattergun has been fired once, its charge is expended – whichever mode it was used in, the symbol is crossed off the ship record diagram and may not be fired again in that battle.

Note that Scatterguns are assumed to be turret-mounted, and unlike Railguns they may fire in ANY d   any fire arc INCLUDING the rear arc (their scatter effect requires less positive targeting than most other weapons do). The orientation of the symbol on the ship diagram is of no relevance to the firing arcs of the Scattergun charge.

SCATTERGUN SYMBOL:

The Fighter groups used by the Kra'Vak are basically the same as their human fleet counterparts, except that they are always treated as HEAVY FIGHTERS as per the advanced fighter rules given on P.12 of this book, due to their heavier construction and significant hull armouring. A Kra'Vak fighter also uses a kinetic-projectile weapon system that (for simplicity) is diced for in exactly the that it ignores any SCREENS on the target ship (all damage is rolled as if firing on an unscreened ship). If firing on an ARMOURED ship, subtractions are made from the die rolls as for Railgunfire.

At the start of the "Xeno War", neither the humans nor the Kra'Vak have any experience of fighting the other's technology. As the war progresses, however, it is probably inevitable that both sides will analyse salvaged debris and maybe even the odd captured or disabled ship, and thus start to learn about the weapons and systems used by their opponents.

If players wish (and agree), therefore, there is no real reason why Human ship should not be designed using Kra'Vak weaponry and systems, or vice-versa. This should not cause any great anomalies, though any that do arise should be resolved by amicable discus-sion (or, as we are talking about Wargamers here) by a die roll

side" more costly in points (perhaps as much as **50% more**) to reflect the fact that it is still basically experimental (and possibly only partially-understood) to
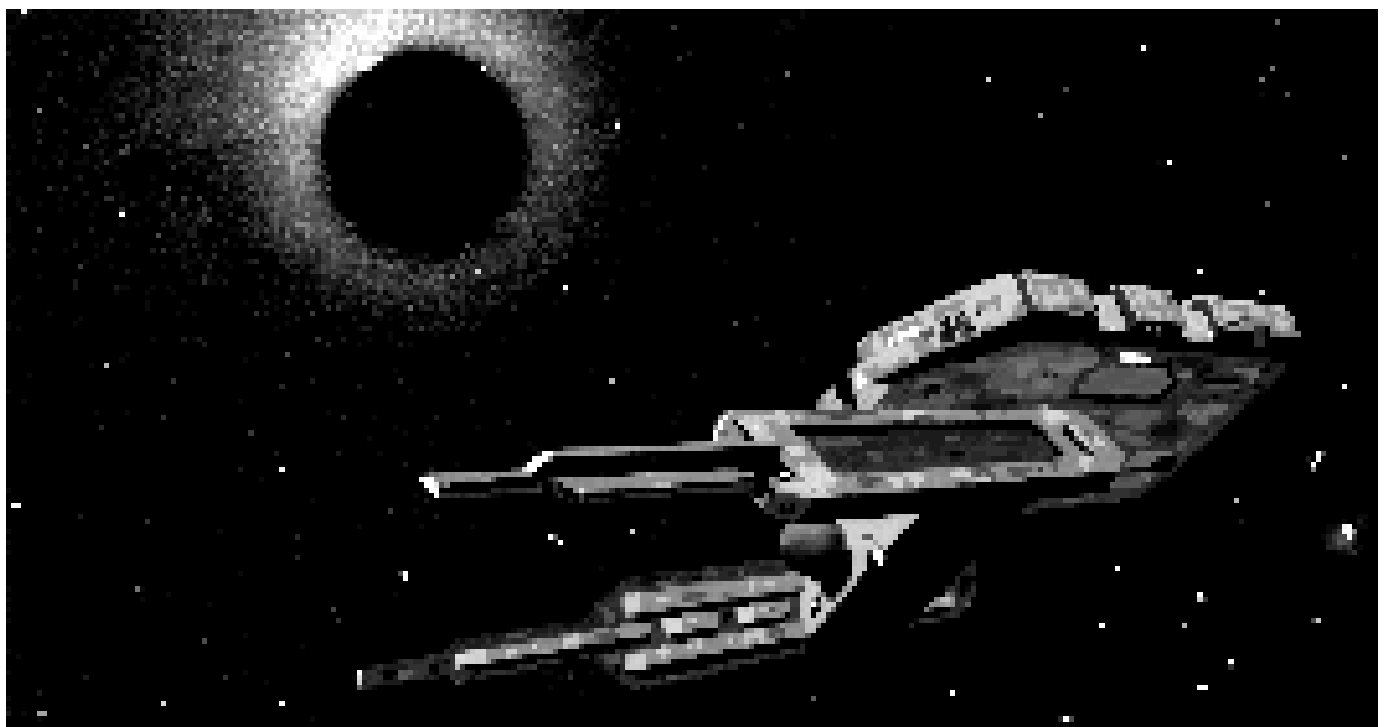
KRA'VAK BASIC SHIP DESIGNS:

Listed below are suggested basic specifications for Kra'Vak Warships, using the classes in the CMD model range.

Note that the Superdreadnought and Carrier classes have alternative points values listed for higher and lower thrust options. All these designs should be taken as examples only, and players should feel free to alter the specifications as they wish within the limitations of the normal design rules. In particular, with larger vessels it is standard practice with the Kra'Vak to build the ships as modular assemblies that can be configured according to the mission requirements (or often simply on the whim of the ship or fleet commander); this facet of their design is reflected in the model range, in which most of the larger ships are kits of modular parts that may be assembled in a variety of ways.
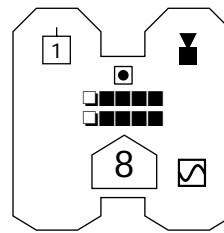
Lu'Dak class
INTRUDER
(SCOUTSHIP)
MASS 4; 29 POINTS.
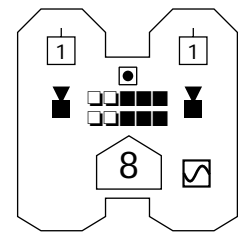
Ka'Tak class
STRIKER
(CORVETTE)
MASS 8; 58 Points.

Da'Kak class
FRIGATE
MASS 12; 86 POINTS.

Di'Tok class
DESTROYER
MASS 16; 114 POINTS.
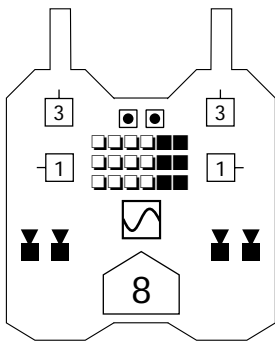
Vo'Bok class HUNTER
(LIGHT CRUISER)
MASS 24; 232 POINTS.
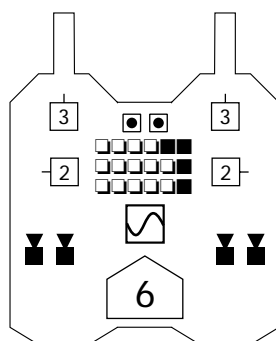
Si'Tek class
PATROL CRUISER
MASS 28;
242 POINTS.
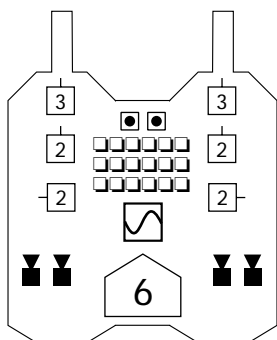
Va'Dok class
HEAVY CRUISER
MASS 36; 310 POINTS.
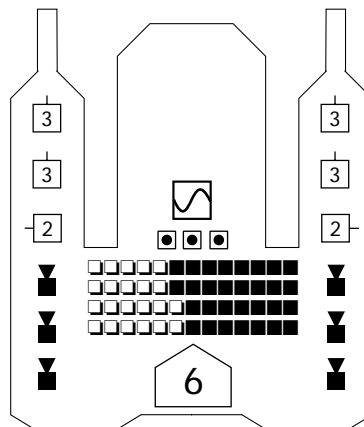
Ti'Dak class BATTLECRUISER
MASS 44; 446 POINTS.
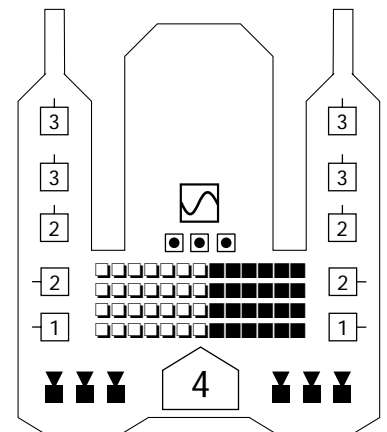
Ko'Vol class BATTLESHIP
MASS 56; 566 POINTS.
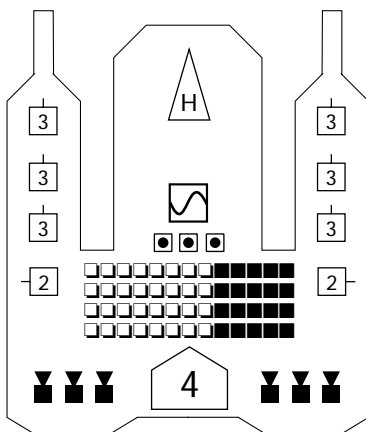
Lo'Vok class
BATTLEDREADNOUGHT
(Heavy Battleship)
MASS 64; 662 POINTS.
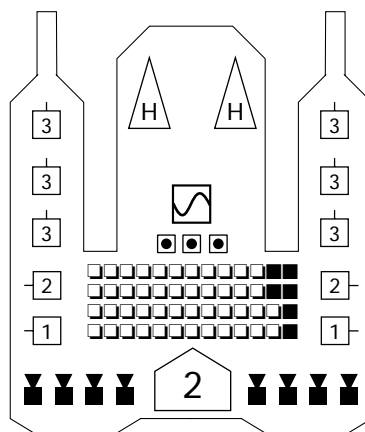
Yu'Kas class
SUPERDREADNOUGHT
MASS 92; 752 POINTS.
[Or 936 Points if Thrust 4.]
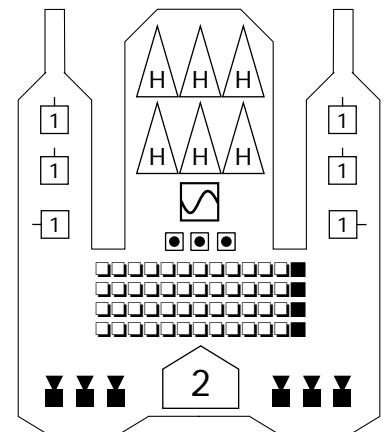
Ko'San class STRIKE CARRIER
MASS 96; 822 POINTS.
[Or 1014 Points if Thrust 4.]

THE SA'VASKU

Author's Note: This section is intended as a "preview" to the next alien race to be introduced to our background for FULL THRUST. The following rules and information concern the SA'VASKU, a race that has developed its technology along bio-engineered rather than mechanical lines (yes, we know this is an old cliche now, but it makes for (a) some nice ship designs and (b) some VERY different fleet tactics).

All the following details are mainly ideas and suggestions at this point, and players should feel free to experiment with them; no points values are given for the Sa'vasku ships as we have not tested them enough to be sure how they will balance out against Human and Kra'Vak fleets. The intention is to "firm up" on the rules and specifications at a later date, either in another supplement or in the form of magazine articles. In the meantime, have fun with the rules ideas here and let us know what you think!

Inspiration for the Sa'Vasku has come from many sources, including H.R.Giger's work and several pieces of Animé/manga – in particular the weird and nasty alien things in "Gunbuster" and the wonderful living ships in Johji Manabe's "Outlanders" (published in English by Dark Horse). Several other game systems have, of course, used similar ideas and a number of interesting models are available from them.

The screen showed the crest of Confederation Naval Command; below that:

<<<<<<NAVFLTCOMCENT/Albion/16.03.2188: CLASSIFIED MATERIAL: SECURITY CLEARANCE ALPHA ZERO ZERO. Communication to Admiral Alison J. Nakamura, COMFLT 23rd Operational Squadron. Security confirmation required to proceed>>>>>

Alison reached for the keypad and tapped a quick four-digit numeric, then touched her thumb to the reader plate; there was a brief flash from the monitor pickup as it completed a retinal scan for a final check, then the screen read "Confirmed" and put up the index of the lengthy report. "Section 01A – Summary" she said tiredly, but still clearly enough for the computer's recognition programming; as the first page appeared on-screen Alison took a sip from her near-cold coffee, pushed a hand through her greying hair and settled to going through the report for the fifth time.

01A: SUMMARY OF NAVFLTINT DATA FILE 46013.1A (CLASSIFIED A00)

SUBJECT: XENOSENTIENT CONTACT (UNKNOWN ORIGIN): FLEET RESPONSE.

Text from verbal report to NAVFLTCOM by Admiral Carlton Roberts (NAVFLTINT) 12.03.2188:

"All of you will, of course, be fully aware of the current situation regarding the state of war that exists between the whole of Humanity and the race that we have come to know as the Kra'Vak. While still a string of sporadic attacks and incidents, Kra'Vak aggression is apparently increasing steadily as they presumably gather a picture of our strengths and weaknesses. Despite a few minor victories over the intruding forces, we still remain at the disadvantage of not knowing their overall intentions; there seems to be no discernable pattern to their attacks or actions, and we are at present forced to remain continually on the defensive.

Within the last month, however, an incident has occurred of which most of you will have been unaware until now. For reasons which will become clear as I explain, only NAVFLTINT's senior command and certain members of Her Majesty's Government have been permitted access to this information until full analysis had been completed.

On 18.02, an intruder was detected leaving jumpspace around New Memphis, and a flotilla was immediately despatched from the Naval base there to intercept. Shortly before coming within sensor range of our ships, the unknown craft transmitted a wideband signal that linguistics rapidly identified as an amalgam of several different Human distress codes from various nationalities. Our vessels' attempts to respond to this hail were met with repetitions of the same signal; when the lead ship entered sensor range of the intruder, it was ascertained that the visitor bore no resemblance to the known configurations of Kra'Vak warships we have so far encountered. Our forces then detected the launching of a small object from the unknown ship – the alien then rapidly withdrew to the jump limit and warped outsystem, leaving the small object on a slow vector towards our ships. Fortunately for us all, the flotilla commander, Commodore Walters, held his fire – a risky decision with what could well have been an alien weapon approaching his ship. When close enough for a positive identification, the object was revealed to be a standard-issue Thyssen Mk.III ejection/survival module, damaged but still apparently retaining pressure integrity; computer scans of the module's markings identified it as a pod from the UNSC McCaffrey.

An EVA team from CNS Bunker Hill recovered the module and brought it aboard after ascertaining that it contained no detectable explosive device or other booby-trap; upon unsealing the module it was discovered that one of its cryoberths had an occupant, human and alive! The decision was taken not to
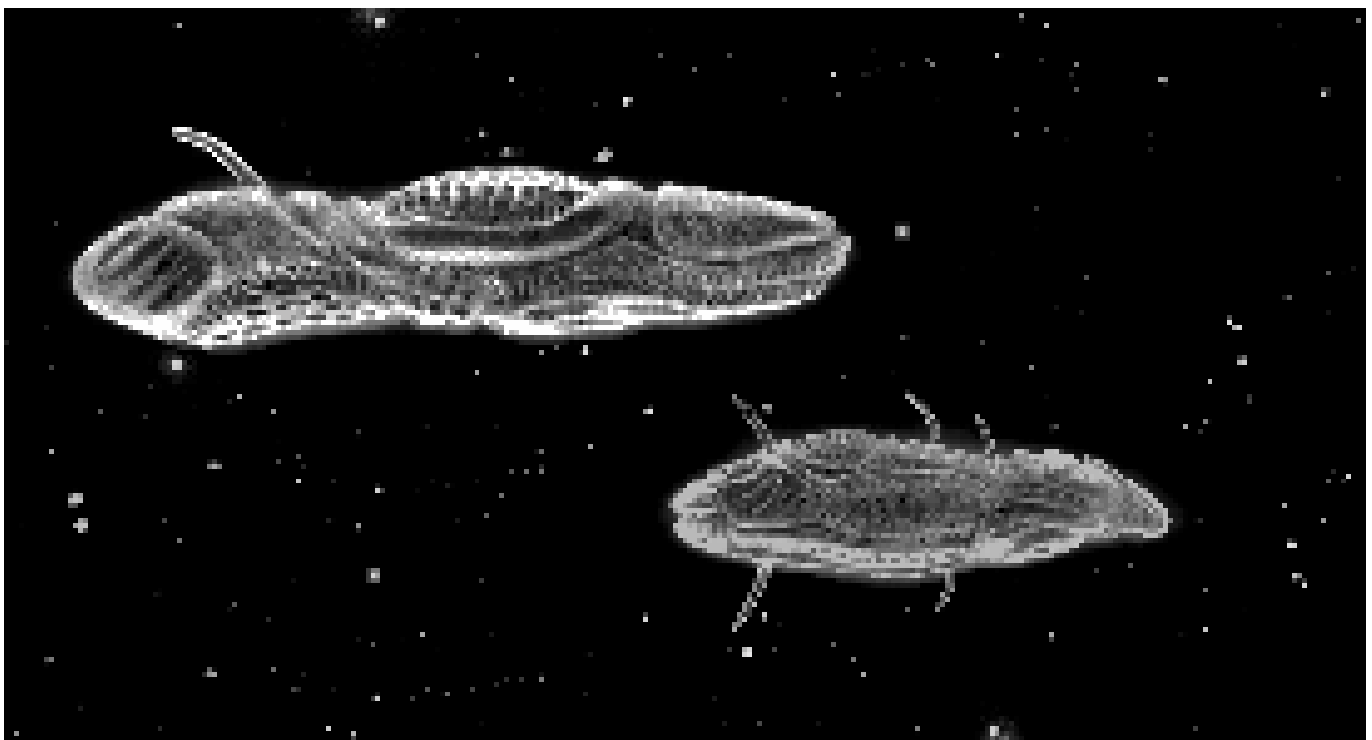
attempt revival in the Bunker Hill's limited medical bay, but instead to transfer the survivor in cryosleep directly to Caledon Base, to the isolation section of the Med/Rehab facility there.

Shortly after arriving by fast courier, the survivor – by then identified as Senior Communications Technician Lisa Piersen of the McCaffrey – was successfully returned to metabolic realtime. Before the medical staff cleared Miss Piersen for any kind of debriefing by NAVFLTINT, we received more detailed results of studies of the survival module; these indicated that the module had not at any point been ejected from the McCaffrey, but rather had been manually removed from its berth. In addition, there was evidence that the module had been opened and resealed at least twice since its removal from the ship. Given the assumption that the McCaffrey was captured by Kra'Vak units (which is borne out by the recovered debris of the Niven, which exhibited signs of attack by what we now know to be Kra'Vak weaponry), just how the pod and its occupant came to be in the possession of what appears to be yet another race is open to speculation.

Some twelve hours after being physically revived from cryosleep, Technician Piersen regained full consciousness. Fortunately, recording systems were in constant operation in the recovery room at the time, otherwise we might well have missed something vital to us – just at the point where Technician Piersen recovered consciousness she began talking rapidly, dictating a string of spatial co-ordinates and time references, followed by a very brief and cryptic message: "The Sa'Vasku will meet with the Mankind" (the term "Sa'Vasku" is the closest computer approximation we can achieve from the sound that Miss Piersen produced at that time, given the fact that she was trying to utter what is presumably a totally alien word with a human vocal system).

Immediately following this "message", which was spoken only the once, the subject lapsed back into what appeared to be a relatively normal deep sleep pattern; on reawakening some six hours after this, Miss Piersen was completely unable to remember anything of the message, the co-ordinates or indeed anything about what had happened to her since she was engaged in routine operations on the McCaffrey in 2183 off Lagos IV. It appears that every trace of the intervening years has been totally erased from her mind, as even our deepest intelligence probes have failed to recover so much as a single fragment of relevant memory. This aside, Technician Piersen is in amazingly good physical and mental condition, with all memories of events prior to the 2183 incident completely intact. Her current biological "age" indicates that, of the missing five years, no more than two of those were spent in cryosleep; we are unable to positively confirm this however, as all recording banks in the survival module appear to have been totally wiped prior to its "return" to us.

The obvious assumption is that Miss Piersen has been returned simply to carry this message, which appears to be a request for a rendezvous and, presumably, some kind of dialogue. Why these beings (who appear to call themselves the "Sa'Vasku") should have used this method of communication is unknown to us – we can only assume they have their reasons. We know nothing at this point about their intentions or position regarding either Humanity or the Kra'Vak – in fact we are only able to work on the deduction that we are dealing here with a separate species from the Kra'Vak.

The proposed "meeting" may be an offer of help, some kind of trap, or something else entirely – we have no way of knowing unless we attend the rendezvous at the designated time.

Working on the limited information we have, NAVFLTCOM has decided to accept the "invitation", but with sufficient force to defend our delegation if necessary; accordingly, the 23rd Operational Squadron is to be detached from its current duty and will proceed to the specified meeting point. A diplomatic group and Xenospecialist team from the UN, aboard the Peaceforce cruiser UNSC Altmann, will join the 23rd at Freya along with a representative naval unit from the Eurasian fleet, the Dreadnought Molchakna and her accompanying escorts. Admiral Nakamura of the 23rd will command the operation in consultation with ESU Admiral Tatiana Velkova and Ambassador Ramanujan of the UN delegation."

Alison glanced at the chronometer readout in the corner of the screen – two more hours before rendezvous with the Eurasian ships and the UNSC Cruiser, then nearly a week of successive jumps to make the meeting point at the specified time – and to meet with WHAT....?

THE ROLE OF THE SA'VASKU:

The Sa'Vasku species is an old culture which has been starfaring for many thousands of years. Over this time they have watched many younger stellar civilisations rise and fall, generally intervening only when their own regions of space are unduly threatened; the Sa'Vasku themselves reached a technological and cultural "plateau" long ago, and have little desire to expand their domain further. They are neither pacifistic nor particularly aggressive, though can appear to assume either of these postures as circumstances warrant – basically they seek continued stability over all else, and where expedient will not hesitate to overtly or covertly manipulate the affairs of other races to maintain this.

In the last few decades, the Sa'Vasku have watched with concern the explosive expansions of two relatively new civilisations – those of Humanity and the Kra'Vak.

As soon as the Kra'Vak encountered the Sa'Vasku, the ferocity of their aggression came as a surprise even to the ancient Sa'Vasku – seldom in their long history had they encountered a species of such single-minded warlike intensity. Seeing the inevitability of the war between mankind and the Kra'Vak, the Sa'Vasku decided that their best interests would be served through judicious support of the humans, at least for the time being......

SA'VASKU BIOSHIPS

Each Sa'Vasku warship is in fact a single living creature, existing in a symbiotic relationship with various other lifeforms that perform certain functions within the "ship" (including the actual Sa'Vasku themselves, who although basically the "crew" are actually more a part of their vessel than simply occupants of it). The ships are designed through advanced genetic engineering of basic living patterns and are grown rather than built. Each craft thus has much more individuality than human ship designs, and their capabilities vary quite widely.

Sa'Vasku ships are defined by their MASS, as for other ships, but do not have the artificial subdivisions into various classes – they are simply referred to by their Mass number (although human forces do tend to refer to them by very broad classes for ease of identification, thus a Sa'Vasku ship of approximately Cruiser size (eg: around Mass 20-40) would probably be referred to as a Cruiser by a human observer).

Each ship has a **POWER FACTOR** equal to **one-tenth** of its MASS, rounded up to the nearest whole number; thus a ship of MASS 24 would have a Power Factor of 3, while one of MASS 76 would have a Factor of 8. This represents the POTENTIAL capability of the ship's internal biosystems to generate power to be used for all ship functions, including drives, screens, weapons and everything else.

The ACTUAL amount of power available to the ship varies from turn to turn, at random – it is determined prior to writing orders, by rolling a number of dice equal to the Power Factor and totalling the rolls – thus a ship with PF 3 would roll 3 dice, and might score 1, 5 and 4, giving it a total of 10 usable power points for that turn only; the ship might equally have as little as 3 points to use, or as many as 18, depending on the luck of the dice.

The scores rolled for each ship are noted down by the Sa'Vasku player on his order sheet, but are NOT disclosed to his opponent (a certain amount of trust is obviously called for unless you have an umpire available); thus the opposing player has no idea exactly what capabilities each of the Sa'Vasku ships will have in any given turn (mind you, the owner of the ships will not have any idea of what his ships can do in the NEXT turn, either...). A small amount of power can be "stored" (in the ship's Biocapacitors) from one turn to the next if it is not used, but the limit of this is the value of the ship's POWER FACTOR – so a PF 3 ship could only "carry over" up to **THREE** unused points of power to the next turn (note that this carry-over is just three actual POINTS of power, not three die rolls!).

USING POWER POINTS:

Once the Sa'Vasku player has made his Power rolls, he must write his movement orders as usual for all his ships. Sa'Vasku ships move and manoeuvre exactly as for Human ships, but require the expenditure of Power Points from that turn's allocation for every velocity alteration or change of course. The rate of power used is equal to **HALF** the ship's **Power Factor** (rounded up) for **every 1"** velocity change or single point of course change; for example, a ship with PF 5 would need to expend 3 points of power for every point of thrust applied to velocity or manoeuvre. Bearing in mind that the same ship could conceivably have anything from 5 to 30 power points (the sum of 5 die rolls) available in a given turn, it could thus be able to apply anything between 1 and 10 thrust (or even 11 if it has "saved" its maximum 5 points of power from the previous turn!). Unlike Human ships, there is no maximum limit to the amount of thrust a Sa'Vasku ship may apply in one turn, regardless of its size, provided it has enough power available.

Any power that is not used for thrust may then be used for offensive and defensive systems – weapons and screens. Sa'Vasku ships have two main types of weapons, a directed Energy Pulse of similar effect to a conventional Beam weapon (although with a slightly shorter effective range) and small "bio-craft" known as Drone Pods – effectively like living fighters.

ENERGY PULSE WEAPONS FIRE:

Sa'Vasku ships do not have or need FireCon systems – this is all contained within the "senses" and processing capacity of the ship's main "brain". Different sizes of ship do, however, have different amounts of dedicated cortex allocated to weapons control, and this is reflected by allowing a ship to engage a number of targets equal to **HALF** (rounded up as usual) of its **PF** – so a ship with PF3 or 4 could engage up to 2 separate targets, while one with PF5 or 6 could engage 3. THIS ability IS reduced according to the loss of any PF due to damage, eg: if a PF3 ship loses a row of damage points and drops to an effective PF of 2, it may then only engage ONE target.

A ship may allocate as much power against each target engaged as the player wishes, up to the total power points available. There are three range bands for the Energy Pulse weapon, **CLOSE (0-8")**, **MEDIUM (8-16")** and **LONG (16-24")**, and the power required to produce damage varies according to range:

At **CLOSE** range (up to 8"), **ONE** power point in the Pulse will allow 1 die roll for hits;

At **MEDIUM** range (8-16"), **TWO** power points are required per die roll for hits;

At **LONG** range (16-24"), **THREE** power points are required per die roll for hits.

So, for example, if a ship allocates 4 power points to a shot at MEDIUM range, the player will roll 2 dice for hits; the same power of shot at CLOSE range would allow 4 dice, while at LONG range only 1 die (and would be a waste of the surplus 1 point of power); to get 2 dice of hits at LONG range requires 6 power points.

Each die rolled does the same damage as normal Beam Weapons, ie: nothing on a 1-3, **one DP** on a 4 or 5 and **2 DP** on a 6; this is modified by any screening on the target in the usual way.

ANTI-FIGHTER FIRE:

A Sa'Vasku ship may attempt to engage fighters with its Energy Pulse (within CLOSE range band only), in the same way as firing at other ships – each group so engaged counts towards the overall number of possible targets however. Due to the more difficult firing solutions against fighters, it takes **TWO** power points to get **ONE** die roll against a fighter group. Each die roll against a fighter group inflicts normal losses.

DAMAGE POINTS:

The Ship Record Diagrams for Sa'Vasku ships are shown opposite. Each ship should use a number of rows of damage boxes equal to its Power Factor – thus a MASS 36 (PF 4) ship would have 4 rows of boxes. The actual number of damage points is the same as for human ships of the same MASS, ie: 1 DP per 2 Mass, and the damage points are distributed as equally as possible among the rows on the damage track as for other ships. For example, the MASS 36 set out in 4 rows, which would work out as two rows of 5 DP and two rows of 4 DP.

Sa'Vasku ships do NOT make threshold rolls, and do not therefore lose specific systems; the damage works by reducing their POWER FACTOR by one for every complete row of damage boxes lost – ie: when a row of boxes is gone, the ship loses 1 of its die rolls for power points on all subsequent turns. Those power points that are available may still be allocated in any manner the player wishes, regardless of the amount of damage that the ship has taken overall.

Special Note: reduction of the PF due to damage does NOT mean that the operation of PF-dependant systems such as screens and drives becomes "cheaper" in power points – these requirements are always calculated on the ORIGINAL Power Factor irrespective of damage.

SCREENS:

Sa'Vasku Defensive Screens rely on bioelectric generation systems, but in their effects are virtually equivalent to those of Human ships. Unlike human technology, however, the screening for Sa'Vasku ships varies in power requirement according to the Mass of the ship (whereas human ships simply pay a fixed mass and cost for each level of screening they have).

Putting out a **level-1** screen uses power points equal to the ship's Power Factor, then double this for a level-2 and triple for level-3 screen. For example, a ship of MASS 36 (and thus PF 4) would have to expend 4 power points for a level-1 screen, 8 for level-2 and 12 for level-3. These points must be used up each turn that the ship requires screens, but there is no restriction on the screen level (up to 3) that may be used on any ship provided the power is available – thus even a small ship could put out a level-3 screen if it used virtually all its power allocation doing it.

The level of screening (if any) to be used in a given turn MUST be noted by the player in his order-writing at the start of the turn, and the power points used deducted accordingly. Failure to write down a screen level means the ship has no screens in operation for that turn.

The actual effects of Sa'Vasku screens on incoming fire are exactly the same as for the equivalent Human screen levels.

DRONE PODS:

Drone Pods are small organisms that are basically equivalent to human Fighters, with some exceptions. They are not actually piloted, having their own onboard "brains", and they are considered fully expendable at the end of their mission. Drone Pods operate in "clusters" of six, from which they can take losses in the same way as a normal fighter group. They are not actually carried in a mothership, but in fact are grown or assembled from basic genetic material immediately prior to launch; once in operation they may not return to the mother vessel – they simply "die" when their combat endurance is used up. To "grow" a cluster of Drone Pods, a ship must expend **20 power points** – thus it is a system that is only available to larger ships that can generate that much power in a turn. The player must note in his orders that a cluster is being grown – they are then ready for launch on the next turn, at no further power cost, or may be stored for later use.

Drone Pod clusters are subject to the ENDURANCE rules given in this book (P.11) for fighters; once launched, they have a Combat Life of three active turns before running out of power and being removed from play.
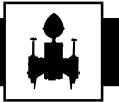
Drone Pod clusters move exactly like normal fighter groups (at up to 12" per turn), and attack in the same way, with 1 die roll per Pod surviving in the cluster; they may be engaged by anti-fighter defences in the normal manner. Clusters may also dogfight with fighter groups in the usual way, with such actions counting towards their endurance time.

DRONE POD CLUSTER SYMBOL:

FTL DRIVES:

Engaging FTL drive with a Sa'Vasku ship requires a power point expenditure equal to **FOUR TIMES** the **PF** of the ship; for example a Mass 36 ship (PF4) must use 16 power points to go into FTL. It may thus only be ordered to engage FTL drive on a turn in which it has rolled sufficient points, and if its EFFECTIVE Power Factor has dropped (due to damage) to a level where the required points are impossible (eg: if the ship had lost 2 Power Factors and thus could not roll over 12 points) then FTL engagement is no longer possible until the ship has had major "repairs" (regeneration).

SA'VASKU SHIP DIAGRAM:

The suggested record diagram for Sa'Vasku ships includes three lines of boxes for recording the amount of Power Points allocated during the turn; the top row is for power used for THRUST (including course changing), the second row is for power allocated to SCREENS and the third is the remaining power, which may be used later in the turn for weapons fire and such. The actual total power points rolled should be written in the ORDERS boxes on the full Fleet record sheet, as should any surplus power carried over between turns. As Drone Pod Clusters are "grown" during the game they may be drawn on the diagram, and then crossed out or erased as they are launched.

BASIC SA'VASKU SHIP DIAGRAMS:
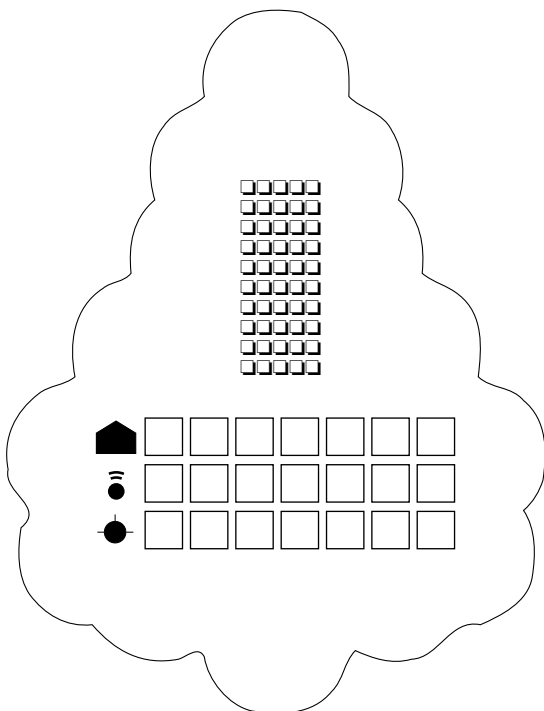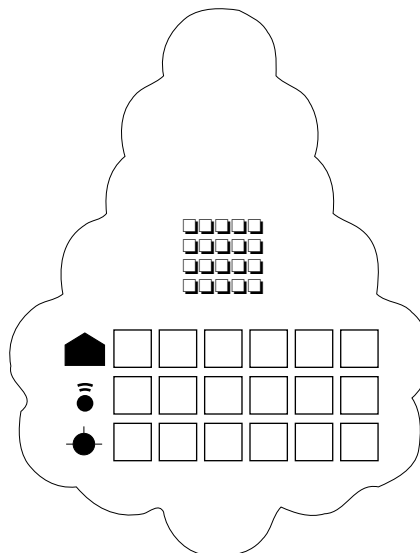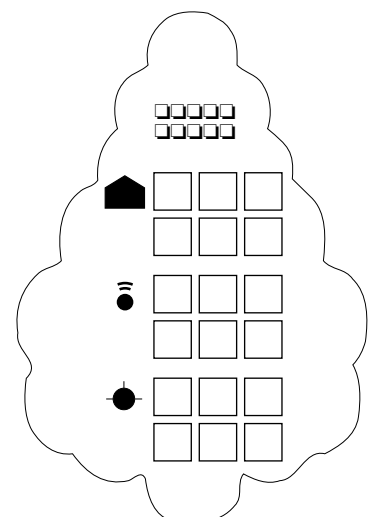
USING SA'VASKU SHIPS:

Using a Sa'Vasku fleet sets a whole lot of new problems for the player, but also opens up a number of new possibilities. The nature of the ships is so variable from turn to turn that long-term planning is difficult, and it becomes vital to make full use of your available power in each turn.

Taking an average example, say we have a fairly large Sa'Vasku ship of battlecruiser/battleship size, with a MASS of 46. It thus has 23 damage points, and a Power Factor of 5 (the damage track would be laid out as 3 rows of 5 and 2 rows of 4).

Each turn, the ship will get 5 die rolls for its actual power points (assuming it is undamaged). Let us assume that in a typical turn, the player rolls scores of 4, 5, 2, 2 and 3, for a fairly average total of 16 power points. With a PF of 5, the ship requires 3 power points (half the PF, rounded up) for every unit of thrust applied – so if it accelerates 2" without changing course it will have expended 6 points of power.

The ship now has 10 power points left, and the player decides to put up a level-1 screen this turn: this uses 5 power points (equal to the PF), leaving 5.

With only 5 points left for weapons use, the player decides to put 4 points into a single shot against a target at MEDIUM range, getting 2 dice to roll for the effect of the shot; the one remaining power point could either be used to make a 1-die CLOSE range shot if there was a suitable target, or may be "stored" to add to the power allocation next turn. Of course, if the player decided not to fire at all he could actually store all 5 of the points he had left after the drive and screen allocations – this would equal his PF and thus be the maximum amount of power storage available at any one time.

At the extreme, with the same overall power allocation of 16 points the player might choose to use no power at all on thrust or defences, but throw everything into one huge offensive pulse – in this case he could get a 5 dice burst at LONG range, 8 dice at MEDIUM or a horrific 16 dice at CLOSE range!

All this makes Sa'Vasku ships very unpredictable opponents; even a very small ship (Mass of say 12, ie: PF2) could quite possibly (with a lucky double 6 roll) allocate 12 power points to weapons fire, giving it the potential of a 6 dice shot even at MEDIUM range – enough to cripple many human ships of far greater tonnage. Bear in mind, however, that in the same turn the ship will be without any screen defences and unable to manoeuvre; using Sa'Vasku fleets will be a continual series of trade-offs and tricky minute-to-minute decisions – there will almost never be enough power to do everything you want to, but use what you have carefully at the right moment and it can be devastating!

"CAPITAL" SIZE SHIP   "CRUISER" SIZE SHIP   "ESCORT" SIZE SHIP

"Until the mid-2170s, many of us were actually beginning to believe that, after all, mankind WAS unique in the Universe in developing intelligence; although many forms of plant and animal life had been discovered on worlds throughout the human-settled sectors of space, there had been no sign whatsoever of other sentient species either past or present. Then in 2176, a UNSC survey team led by Doctor Emil Chandra made the first discovery of non-human ruins in the Malak system on the Indonesian Rim. While the relics found by Dr. Chandra's expedition were identified as several millennia old, they were indisputable evidence that at least one other intelligent life form had existed long before mankind came down from the trees.

It seemed at the time to be little more than coincidence that the first true contact with an existing sentient non-human species should come so few years after the Malak excavations, but the explanation is probably that the explosive expansion of humanity into space had finally brought our own sphere of exploration into contact with that of our neighbouring civilisations. Other theories have been put forward by both the scientific community and others, including the idea that the Malak find actually triggered some kind of long-buried "warning beacon" to alert the descend-ants of its builders that it had been discovered by another intelligence; still others believe that we had actually been under observation (and perhaps a form of racial quarantine) by other races for some time before the actual contact.

It is now known that the first real contact with other living sentients occurred in May 2183, with the incident off Lagos IV in which the UNSC Niven was destroyed with all hands; the fate of the UNSC McCaffrey, which disappeared in the same incident, is even now unknown.

Then, later in 2183, the historic engagement took place between the PAU warship Kinshasa and an unknown hostile in the New Lusaka system. Despite the loss of the Kinshasa and all her crew, the information transmitted by Captain N'goka prior to the destruction of his ship allowed mankind (or at least PAU Naval Intelligence) its first real glimpse of our spatial neighbours. For some months following the incident the Pan African government kept the whole matter under a veil of secrecy, but eventually its scientific advisors succeeded in persuading the Intelligence services that something was happening that transcended national security and would potentially affect the whole of human space. At this point, the PAU made all data available to the UNSC; by that time, however, a number of other incidents had begun to occur in other outlying regions. Reports of attacks on outposts and ships started to come in from several nations with increasing regularity, and it quickly became clear that the intentions of our newly-discovered "friends" were not just mistakenly cautious (as had been theorised in some circles following the New Lusaka encounter) but in fact overtly hostile.

Contact with the Kra'Vak, as we now know them (at the time they were being referred to simply as the NHS – Non-Human Sentients), did not so much bring an end to the Third Solar War as cause it to fizzle out. The war had long been one of attrition and occasional small offensives, with none of the major powers really having enough concentrated striking power for a decisive blow; in fact a few noted military analysts had been postulating for some time that the expansion of the human sphere had really rendered a major war effort by a single power logistically impossible.

Since the last serious flare-up in 2173 over the Sumani IV incident, military operations had been largely confined to occasional planetary raids and attacks on shipping. While the boundaries between the main powers remained fluid in the continuing state of declared war, the actual conflict had long ceased to have any real meaning.

The Kra'Vak threw a new factor into the equation; suddenly, for the first time in its history, mankind was confronted by a foe of which it had little knowledge and even less understanding. While the officially declared state of war between the ESU and NAC still technically exists with isolated incidents still occurring between the protagonists, in practice the Third Solar War is effectively over while all of mankind turns its attention and its military capabilities towards the new threat from outside.

Indeed, the Battle of Sulaxar nearly one year ago (in late 2185) is notable for the first real co-operative effort between NAC and ESU forces against the Kra'vak, when a squadron of Her Majesty's Navy under Commodore Lady Eleanor Fitzwarren entered the system on a mission to relieve the defenders of New Somerset (Sulaxar II), who had been under siege for several months by an

ESU naval unit commanded by Admiral Chang Tsu Pei. On arrival, Commodore Fitzwarren discovered the ESU forces to themselves be under attack from a large group of Kra'Vak vessels, and without hesitation ordered her captains to support the Eurasians against the alien force. Following several hours of heavy fighting during which Lady Fitzwarren was herself injured when her flagship, the battlecruiser CNS Raleigh, took a salvo of direct hits, the alien hostiles executed a sudden withdrawal from the system; three of their vessels, apparently crippled and unable to disen-gage, self-destructed rather than permit themselves to be boarded. After the battle the remaining Eurasian units offered their surrender to the NAC forces, but Commodore Fitzwarren instructed Admiral Chang instead to remove his ships from the system and report to his superiors with the details of the engage-ment. Lady Eleanor is recorded as telling the Admiral that "...We – that is, ALL of us – are going to need every fighting ship and crew we can muster in the coming times...".

Even today, it is not totally clear why the Kra'Vak are so inflexibly aggressive (amazingly, they even seem to surpass ourselves in their capacity for violence and destruction!). The best analysis available from the total collected data of the last few years suggests that the most likely motivation for the Kra'Vak is a kind of "racial paranoia", perhaps bred into them by a particularly harsh and predator-ridden environment on their homeworld – in effect, they may work under the assumption that all other life is out to kill them, so to survive they must kill it first.

However, this is still only one theory among many, and we need to acquire a lot more information before any firm conclusions can be reached. Certainly no form of dialogue has ever been possible with the Kra'Vak, and even the name we use for them is only the most likely computer deduction from linguistic analysis of intercepted communication transmissions.

Only a few things about the Kra'Vak are certain – they are implacably hostile toward mankind (and for all we know, to any other races as well), and any encounter with them appears to result in combat. Their technology, while somewhat different to our own, is of a roughly comparable level of development and their forces (fortunately for humanity) are not indestructible. On a physiological level, study of remains from combat incidents indicate that they are carbon/oxygen based forms like ourselves, but do not fall into any definable terrestrial category of species – they are bipedal anthropoids exhibiting some characteristics of both mammalian and reptilian life, though this is actually a gross oversimplification as most of their bodily systems bear no effec-tive resemblance to our biology.

We are now in the second year of what has become officially known as the "First InterSentient War", or as the popular media insist on calling it, the "Xeno War". As yet, combat incidents have been restricted to space engagements – no reports have been received of any attempted landings by Kra'Vak forces on human-occupied worlds. Given their overall biochemical similarities to us, however, most military analysts agree that it can only be a matter of time before they decide to strike against our colonies; the fact that they have so far restrained from orbital bombardment of any of our systems implies that they are, like us, interested in gaining planetary territory rather than incinerating it. Perhaps when our troops finally meet theirs on the ground, we will then begin to learn a bit more about this deadly but fascinating enemy......

[Excerpt from presentation given by Rear Admiral Sir William Delahaye, NAVFLTINT, to Independent Holovid News Services, 23.09.2186.

TIMELINE CONTINUATION:

The Timeline provided for the background in FULL THRUST took Human history from the end of the Twentieth Century to the late Twenty-Second – 2183 to be precise. The continuation below maps out a few key events of the few years that followed:

2183: The UNSC Survey Cruisers McCaffrey and Niven are attacked by unknown forces off Lagos IV on the Pan African Rim; the Niven is completely destroyed, and the McCaffrey disappears without trace.

Later in the year, The PAU Battlecruiser Kinshasa is engaged and destroyed by an unidentified hostile in the New Lusaka system.

2184: Unexplained attacks and incidents increase in frequency, affecting not only PAU space but other nations as well; with the
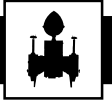
ongoing state of war between the NAC and ESU, much blame is placed by each power on the other. Both blocs, however, begin to realise that something far more important is happening.

Late in 2184, NAC Fleet Intelligence recovers the first identifiable alien debris following an encounter near Angel II in which a Confederation squadron managed to destroy two ships from an attacking alien group. For the first time, Humanity has positive proof that the attackers are another sentient life-form.

2185: The first co-operative action between the ESU and NAC against the Kra'Vak occurs at the Battle of Sulaxar; although tensions still run high (especially in diplomatic circles), the Militaries of both main Powers (and several smaller nations) are coming inexorably together in the face of a much greater threat. On 28.07.85, the UN Assembly declares that a state of war now officially exists between all the nations of Humanity and the race known as the Kra'Vak; the First InterSentient War has truly begun.

2186: Early in the year, the advances towards joint ESU/NAC response to the Kra'Vak aggression falter when a Eurasian naval unit fails to assist a Confederation squadron under attack by alien forces off Caleb. Finally escaping with barely 25% of his force and men, Commodore Farris accuses the ESU of standing off from the action in order to gain control of the Caleb system. The diplomatic repercussions gradually settle, but illustrate the deep distrust that still exists between the major powers.

The Kra'Vak offensive gathers momentum, and very late in the year reports begin to come in of the first surface assaults by Kra'Vak forces.

2187: The first major success against Kra'Vak ground forces is reported on the NSL Outworld of Rheinhold, where a combined force of NSL and NAC Marines supporting local Militia units manage to beat off an attempted planetary landing by the alien invaders. Rheinhold then survives five months of protracted siege and repeated landing attempts before the Kra'Vak are driven outsystem by the arrival of a large joint task force of NAC, NSL, Dutch and Free Cal-Tex ships.

Elsewhere, humanity does not fare so well, and the aliens continue to make inroads toward the Core Systems. Virtually no information is released to the public concerning what is happening on worlds taken by the Kra'Vak, which threatens to cause panic in some Colonies as rumours of massacre and genocide spread. Public opinion on Earth, Centaurus and Barnard begins to swing in favour of pulling all forces back from the Outworlds to defend the Core. Such a defensive concept does not find favour with the Military, nor (naturally) with the Colonial population.

2188: Contact is about to be made with a second Xenosentient species, the Sa'Vasku. Mankind waits to see if they will find friends, or new enemies......

SCIENCE AND TECHNOLOGY IN FULL THRUST:

As a generic system that can be moulded to whatever background the players desire, FULL THRUST can be used for anything from gritty, "hard" SF to High Science Fantasy.

What we do NOT claim it to be is a super-realistic simulation of space combat – the rules are written for playability above all, and while some aspects do actually approximate to the laws of physics this is often more by coincidence than design!

Exactly HOW a given system or piece of technology is supposed to work is really quite irrelevant to the actual play of the game; whether you actually want to try and explain it is up to the style of SF you prefer. In general, the "hard SF" type of background requires at least a plausible-sounding justification for most of its technology, while the Science Fantasy kind takes much more of the "its here, it works, so we use it" approach.

The following notes may help you to get an insight into the concepts that were used to develop the game, and can be used as starting points if you wish to alter any areas to fit your own preferences in SF styles; please note that all this contains variable levels of the PSB factor (Pseudo-Scientific Bullsh*t....).

WEAPONRY:
Given current technology it seems quite reasonable to assume that Lasers would be used as space combat weaponry, with railguns (electromagnetic-acceleration projectile weapons) and particle beams also good possibilities. For longer-ranged fire missiles with
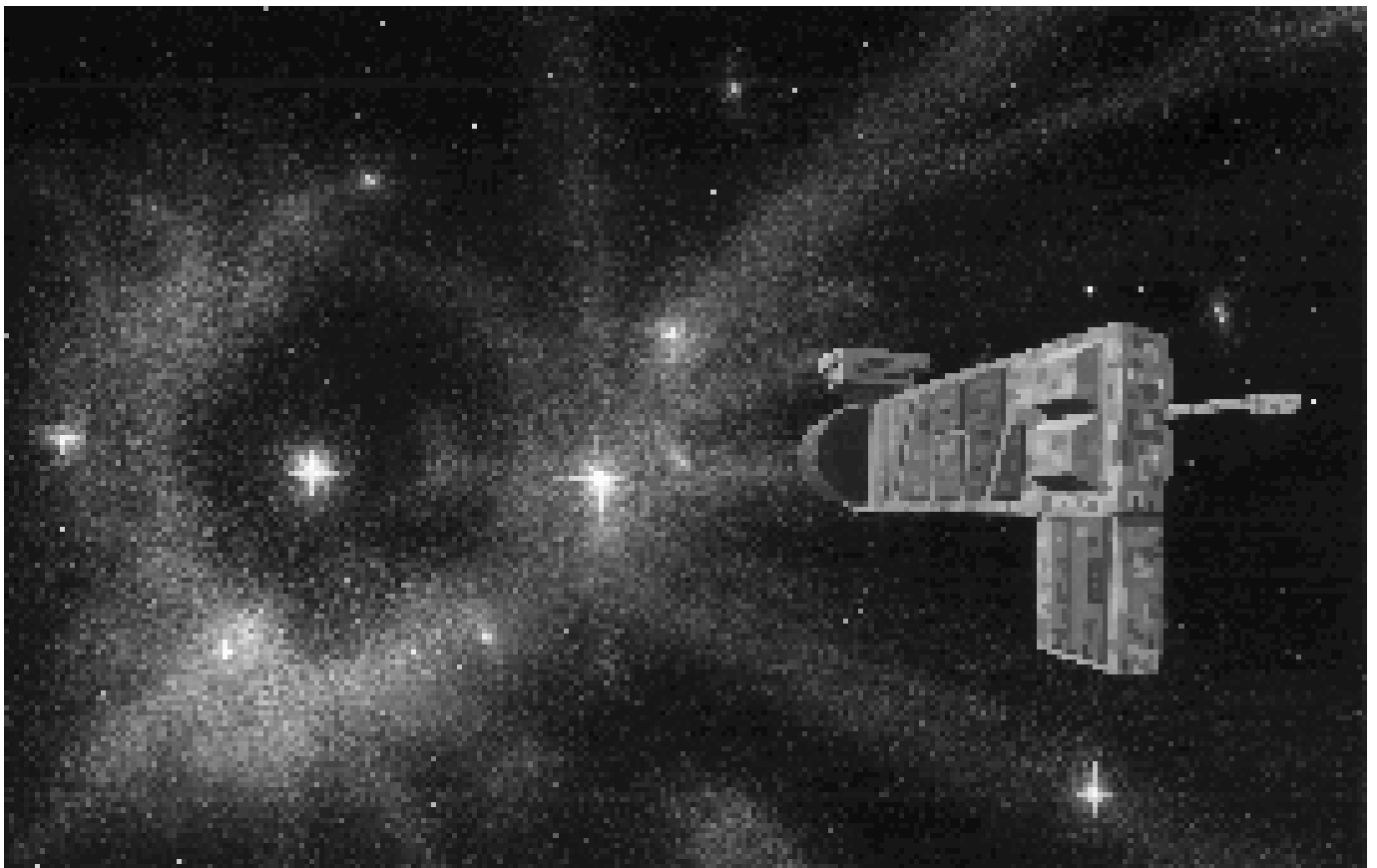
onboard AIs and either nuclear-explosive or detonation-laser warheads are strong contenders. For the Armchair Physicists among you who want a full discussion of laser weaponry in particular (including the problems of beam focus and dispersion, getting targetting solutions over lightsecond-plus ranges etc.) we strongly recommend you read the comprehensive article in CHALLENGE issue no.71 (GDW).

This all assumes, however, that we are not going to see any major new breakthroughs in weapons technology. It is not that long since the scientific community was scoffing at the "energy ray" concept in SF as totally impossible, then along comes the working laser.....

We stated in FULL THRUST that players could take the "BEAM WEAPONS" used in the game to represent anything they wished – lasers, phasers, blasters or whatever – but that our own preference in the "official" background was that they were a form of Particle Beam. This does not mean they are necessarily the sort of particle weapons that are feasible under current technology – they would be much more advanced, perhaps firing types of subatomic particles that are yet to be identified. The problems of targetting solutions on rapidly moving targets when the transit time of the beam is still measurable in milliseconds (if not whole seconds) are still there, which allows for the random factor of die rolls in the hit/damage procedure; the lessening of hit and damage potential with range is accounted for by a combination of the increasingly inaccurate firing solution and the effects of beam spread and dissipation over distance.

The other weaponry in both the basic rules and this volume varies from fairly plausible to downright silly (the Nova Cannon was originally to be called the Futtock Gun, but this is a rather obscure playtesters' in-joke...); the one common factor is that it has all been developed to enhance the game rather that get bogged down in a load of mathematics!

FASTER-THAN-LIGHT (FTL) DRIVES:
Here we are really getting speculative. FTL drives have no basis at all in current science, and as likely as not will never be feasible (but see comments on lasers above...). However, no FTL makes for a pretty boring interstellar campaign (...your crew wakes from cryosleep after three hundred years to find the enemy fleet has got fed up waiting and gone home....) so we have to come up with something. There is a huge selection of FTL ideas in SF literature and films, from the obvious "plot device drives" like good ol' Warp Drive to more plausible (or should that be slightly less implausible) concepts involving Black Holes, Collapsars and the like. Of course, there is always the Infinite Improbability Drive if you are running THAT sort of game, but you'll have to work out your own stats for the whale and the bowl of petunias.......

For practical game and campaign purposes, the sort of system best suited is something that takes a ship out of "normal" space into "Hyperspace" (or Subspace, Overdrive, the Dynefields, The Now or any one of a dozen others depending on your favourite books), but that also takes a measurable length of time to transit between stars. The author's personal preference is for a system that completes the trip in a number of short jumps through hyperspace rather than one long one, with a fair amount of time (probably hours, possibly days) of realspace "coasting" between jumps to recharge the drive and plot the next jump.

For the record, this is how the Tsukada-Krensberg (TK) Drive in our own background is assumed to function:

Interstellar travel is performed in a series of short (in relative terms) "jumps" through a timeless quasi-reality generally called Hyperspace. Each jump (which may also be referred to as a Shift, Shoot or Transit) moves the ship by anything from a few lightminutes to a little under one lightyear, depending on the energy put into the drive at the moment of jump and the proximity of the ship to gravitational influences – the nearer to a gravity well the ship is when the drive is engaged, the shorter the resulting jump. There is a definite limiting distance from any given gravity well that inhibits safe jumping within it – a ship must move to outside this limit before engaging the TK Drive or risk serious mishap (at best a misjump or drive failure, at worst total destruction).

The actual jump is perceived by the ship's occupants as instantaneous, but leaves a deep subconscious memory of disturbing change in the fabric of reality – as though the recesses of the human mind

can actually register the transition that the conscious levels cannot. This effect causes nausea and disorientation after the jump, which if untreated can last for several hours; for this reason most Military crews use specialised drugs to minimise the aftereffects and ensure that the ship is combat-ready as fast as possible after jump emergence, especially if several jumps need to be made in relatively quick succession. Civilian vessels and those on less pressing schedules will spread out the jumps to perhaps one every couple of days, and most personnel and passengers will undergo jump asleep in their cabins with just a skeleton bridge crew overseeing the automatics and AIs conning the jump.

The fastest cycle possible is around one jump per six hours, but this requires the latest Military drives and power plants along with the most sophisticated jump navigation software and tremendous crew stamina, even with chemical assistance. On average, naval vessels on most missions will make one jump per day.

The longer the jump, the greater the potential inaccuracy in both the distance travelled and the final emergence point. For this reason, most interstellar journeys begin with a couple of short jumps (necessary to fully clear the gravity well of the starting starsystem, followed by sufficient longer hops to bring the ship within a few lightdays of the destination system. The vessel will then make a number of successively shorter jumps, each of increasing accuracy, to place it as near as possible to its eventual target. The final approach, under Normal Space propulsion, can then take anything from a few hours to a few weeks depending on the accuracy of the last jump insystem and how fine the jump navigator dares to cut the gravitational limit.

When moving a fleet of ships together, the potential errors in the long mid-course jumps mean that it is highly unlikely that all the fleet will remain together throughout the journey – in fact for most of the between-jump periods each ship will be completely isolated from the rest by huge distances. For precise military operations, therefore, it is normal practice for the fleet to reassemble well out of the target system and then proceed insystem in a succession of much shorter than normal jumps in order to maintain some semblance of cohesive formation.

NORMAL SPACE DRIVES:
Here we are talking about the propulsion units used to move ships about within star systems, at sublight speeds. These are the drives used for interplanetary travel and for all combat manoeuvring. As the movement in FULL THRUST is a very rough approximation of a "vector" movement system, with ships behaving much as they would do in reality, this obviously does not fit in with some of the more peculiar forms of sublight drive used in SF literature (for example, E.E. "Doc" Smith's "inertialess" drive from his Lensman saga, which allowed ships to stop dead or skip about with instant right-angle turns, even at incredible speeds!). Basically we are looking at a more conventional reaction drive of some kind, or a type of "thruster plate" gravitic effect. Reaction drives could be anything from good ol' chemical rockets (not very fuel-efficient!) to more esoteric plasma or particle jets, while the existence of Gravitic (artificial gravity field generation) technology allows us to postulate a drive that acts on the fabric of space itself to produce a propulsive force without actually having to throw mass out of the back of the ship.

In the FULL THRUST background, we have assumed that the latest "state of the art" military ships use Grav-thruster drives, but there is still plenty of scope for older vessels in service with commercial concerns and smaller nations to have obsolete drives such as plasma "torches" and the like.

SCREENS AND OTHER SYSTEMS:
The operation of Defensive Screens was briefly explained in the FULL THRUST rules: they are assumed to be electromagnetic fields that disrupt and dissipate some of the energy of an attacking particle beam weapon. However, there is nothing to stop you altering this to fit any background you wish, including making them into "force fields" that also defend against material objects (railgun projectiles, missiles and the like). This could be justified as an offshoot of Gravitic technology, as could various other staple SF ideas such as Tractor beams, Pressor beams and so on.

We are not even going to try and explain some of the things in this book, such as the Reflex Field (P.4) – the PSB factor is just too high.....

USING FULL THRUST IN OTHER BACKGROUNDS:

Although it is perfectly acceptable to play a one-off battle without any thought being given to the background setting of the action, having some idea of the origins and intentions of the fleets involved does give an extra dimension to the game. The "official" background given in the basic rulebook and developed further in this supplement is just one possibility among countless ones drawn from films, TV, novels and (not least) from the players' own ideas and imaginations. Several of the more famous movies and series will naturally spring to mind, but hopefully this section will also guide you towards some less-obvious settings.

We cannot actually print rules for using FULL THRUST to simulate the battles in some of the better-known settings, as they are already licensed to other games companies; suffice to say that several players have sent us rules ideas and conversions that feature ships with pointy-eared First Officers and very Scottish Chief Engineers (we're sure you know what we mean....), and most of these ideas play very well; with a little thought most of you should be able to come up with something very similar.

So, what about the sort of alternative backgrounds that we ARE allowed to print? Well, a particularly unusual but thought-provoking one is the **"Victorian Science-Fiction"** theme – taking as its basis the idea that, in an alternate history, space travel becomes possible in the era of Jules Verne and H.G. Wells. By the close of the 19th century mankind has got a fair way towards exploring our own Solar System using spaceships made of boiler-plate and lots of rivets! This sort of background can be played very simply using just the basic FULL THRUST rules – the smaller ship classes become the little Gunboats and torpedo boats, the capital ships huge lumbering Space Ironclads. For added flavour, rename the weapons with something more "period" (the Pulse Torpedo becomes the Truscott-Ridley Mark III Ether Torpedo Discharger...) and consider the "screens" to represent the degree of armour on the vessel. You can tinker with the rest of the rules as much or as little as you like, but remember to really ham it up while playing – English Gentlemen ("It was hell, Carruthers – fourteen weeks in space without even a trouser press..."), Monocled Prussians, Unwashed Anarchists and all the other politically-incorrect stereotypes you can think of!

Another enormous area of possible background material is to be found in **Animé** (Japanese Animation) and its printed relative, Manga. There is a huge wealth of Science-Fiction settings here just begging to be used, especially as several of the films and series feature lots of spacecraft and some titanic battle sequences. Some particular examples are SUPERDIMENSIONAL FORTRESS MACROSS, SPACE CRUISER YAMATO, GALL FORCE, GUNBUSTER and the lesser-known LEGEND OF THE GALACTIC HEROES (which features some of the most amazing massed-capital-ship engagements you could wish for). Many, of course, feature that perennial Japanese favourite – the Very Big Robot, or "Mecha"; these can range from the reasonably-sensible smallish types used in MACROSS and MOBILE SUIT GUNDAM, up to the really silly huge ones in GUNBUSTER – great fun if you suspend your disbelief and take it all at face value.

If you want to use the very large Mecha types it is suggested that these are treated as "ships" in their own right, and use the normal design rules with perhaps a few special tweaks for their unusual nature; smaller Mecha may be treated much like fighters, operating in groups of up to 6. Given many Mecha designers' love of using lots of salvo missiles, it would be reasonable to use Submunition Packs as a major weapon type on Mecha of all sizes (and perhaps work out a smaller, short-ranged Submunition system for the little "Mecha Fighters").

One very "Animé-style" weapon that has been included in this book is the Wave Gun (see P.3); this was strongly influenced by the very big weapon systems used in several shows and films, including YAMATO.

[For a very good reference on Animé starships, look for a copy of Mecha Press magazine, issue no.9, (produced by IANUS PUBLICA-TIONS, 2360 de LaSalle Ave, No.211, Montreal, Canada H1V 2L1) – this particular issue contains an in-depth look at many Animé spacecraft, including statistics from which FULL THRUST designs can be easily extrapolated. The issue also gave us a nice plug for FULL THRUST itself – thanks, guys!]

THE HUMOUR ELEMENT:

Some players take their gaming far too seriously (especially the ones in the brown anoraks...). FULL THRUST is an ideal antidote to an overdose of "serious gaming", in fact I cannot remember a single game of it in which at least some of the participants have not been reduced to rolling around on the floor after someone cracks a particularly awful SF cliche.

There is quite a lot of good SF humour around in books, TV and films from which to gain inspiration for running some really silly games. "Red Dwarf" and "The Hitch-Hiker's Guide" are obvious ones that spring to mind, as is Mel Brooks' classic movie "SPACEBALLS" (if by any chance you haven't seen it, go and rent the video then write up some stats for Lone Star's spacegoing Winnebago....) and the wonderful black comedy "DARK STAR" with its sentient, talking bombs!

Just remember when running this sort of game that humour is generally more effective in small quantities – a little satire can often hit the mark much better than a pie-in-the-face joke. If you go too far over the top the game will degenerate into chaos, whereas a few well-timed bits of silliness will liven up the evening no end.
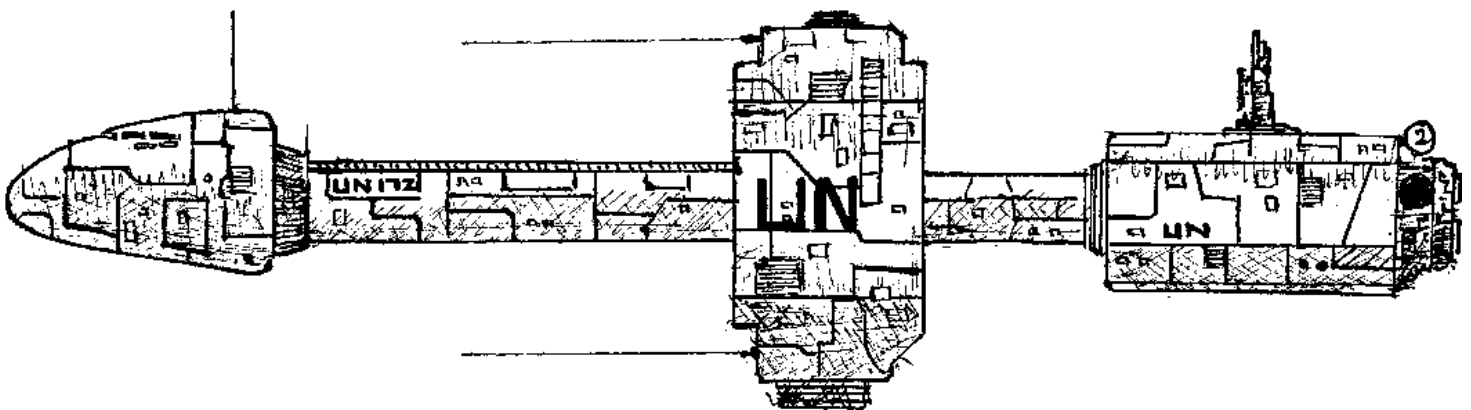
THE ASSAULT ON STARBASE 13:

Harry Kowalski was due off shift in twenty minutes, along with the rest of his maintenance team. He was currently cursing the thick fingers of his suit gloves as he fumbled the replacement AE-35 module again and just recaptured it before it spun out of reach. The other eleven members of Harry's work team looked like ants crawling across the huge grey bulk of the Light Carrier; above them the great disc of Starbase 13 almost eclipsed the bluegreen splendour of the world it circled. Harry was just about to chin his mic switch and call Jen over to give him a hand with the reluctant electronics module, when a voice he didn't know came through his helmet receiver:

"BULWARK Duty Officer to Maintenance Team Charlie Four; you guys had better get yourselves back to the station. We've got trouble coming to see us – commencing power-up in six minutes, all EVA personnel clear the area...."

Va'Ksha'Voc of the War Family Voc'Tcha stood on the Command deck of his flagship and watched his crew hurrying to ready the ship for battle. Once again they had caught the aliens unprepared – his screen showed the largest ship of the Hu'Man still docked against their satellite station, and the few other vessels were scattered around in nearby orbits in no better state of readiness. His navigator had done well in cutting their Overspace exit so close in to the planet, and his subfamily would be rewarded.

Va'Ksha clashed his mandibles in anticipatory pleasure as he imagined the celebrations of another victory over the dangerous aliens that infested this region of space......

This scenario is a battle between the Kra'Vak invaders and the defenders of a New Anglian system installation known as Starbase 13. The alien forces have exited Jumpspace quite close in to the Starbase, and have caught the defenders napping – the Light Carrier CNS Bulwark is docked to the station undergoing mainte- nance and a minor refit, with many of her crew on shore leave on the Base and the world below. A few other NAC Naval units are in parking orbits around the station in varying states of readiness, and there is also a Federal Stats Europa Cruiser on stopover during a diplomatic mission (there is still much tension between the NAC and the FSE, and the Federal crew have been causing problems on the station in the two days their ship has been in system...).
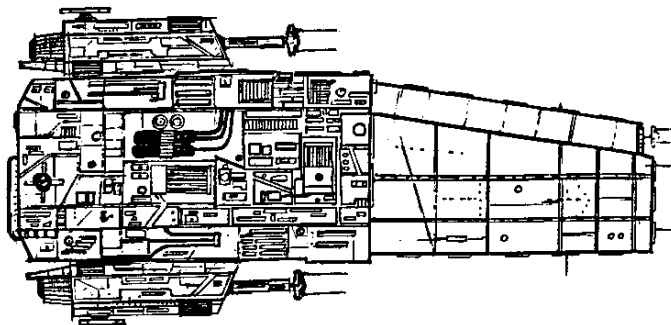
OBJECTIVES:

The Kra'Vak player has a fairly obvious task – to destroy any or all human assets he can, and if possible either destroy or capture the Starbase. For a full win, the Kra'Vak player must destroy all the NAC vessels, plus any fighters that the Starbase actually launches during the game; he can then sit off from the station and pound it to submission (or atoms...) at leisure.

If the NAC player can drive off the attackers, he has won a massive victory (this is pretty unlikely!). His major priority is to get the BULWARK away safely – if he can get the Carrier off the table at the Deep Space edge then it is an NAC victory. If any OTHER NAC ship(s) escape off that edge (without the Carrier) then the game is a draw. If the FSE ship escapes then it is probably a diplomatic incident!!

SET-UP:

Starbase 13 is located within 12" of the Planetary end of the table; CNS Bulwark is externally docked to the station, while all other ships (including the FSE Cruiser) are parked (stationary) within 12" of the station, but with no ship less than 6" from any other.

The Kra'Vak forces enter the table from the opposite (Deep Space) end, having just dropped out of FTL. They enter at velocity 8, on a course directly for the station.

Special Note: NO ships may leave the table by the Planetary edge, as this is the boundary of the atmosphere – any ship attempting this will suffer an uncontrolled atmospheric entry.

FORCES:

New Anglian Player:

STARBASE 13: Stationary Orbital Installation

MASS 400, Damage Points 100; 2 Fighter bays with standard Fighter Groups; Level-3 Screens, 4 x PDAF, 5 x A Batteries (all-round fire).

The following ships are all standard designs, as per the basic classes in FULL THRUST:

CNS BULWARK: Light Carrier.

CNS RELIANT: Escort Cruiser.

CNS TRURO, CNS VINCENNES: Destroyers.

CNS BRISTOL, CNS ARDENT: Frigates.

FSE Light Cruiser AFFONDATORE.

NAC Special rules:

1) The BULWARK is powered down at the start of the scenario, hooked to Station feeds and with all systems off-line. Each turn starting with the first turn, the NAC player may roll a die for each system on the Bulwark; on a roll of 5 or 6, the system comes on-line and may be used normally from then on. On a roll of ONE, the system is totally down and will not be available for the whole game – the only exception to this is the Drives (normal and FTL) which ignore rolls of 1 and will come on-line on a roll of 4, 5 or 6 (note the first successful roll with the normal-space Drives brings them to HALF thrust, and a second success is needed to bring them up to full strength – exactly the reverse of damage results). As soon as the Bulwark has manoeuvring power it may cast-off from the station.

2) All other NAC ships are in parking orbits with most systems at low output; each turn, roll a die for each complete ship – on a roll of 4, 5 or 6 it comes up to combat readiness and may begin to move and fight; until then the ships have their DEFENSIVE systems operational (PDAFs and Screens where appropriate) but nothing else.

3) On the first turn, roll a die for the FSE Cruiser; on a roll of 1 or 2, it attempts to leave the system by the deep-space edge without engaging in combat (it may move immediately, as it is at a higher readiness state than the NAC ships – after all, it is already in semi-hostile territory!). On a 3 to 6, the ship will stay and fight along-side the Anglians against the alien enemy; in this case, however, roll again each turn for the Cruiser – on a subsequent roll of 6 it will decide to attempt to withdraw after all.

Kra'Vak Player:

All ships are basic Kra'Vak designs as given on P.27.

YU'BAKH: Superdreadnought.

SI'VAK, SI'AAT: Patrol Cruisers.

DA'ZAR, DA'FAKH: Frigates.

KA'SKU, KA'UCH, KA'KHE: Strikers. (See below).

Kra'Vak Special Rule:

The three STRIKERS (Corvettes) are manned by Expendables, crew whose Subfamilies have failed the War Family in some way. At any time desired by the Kra'Vak player, these ships may self-destruct by deliberately overloading their Jump cores – this vaporises the ship, and causes 2D6 damage (2-12 points) to any other vessel within 3" or 1D6 (1-6) to any within 6".
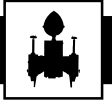
LIBERTÉ:

Introduction by Steve Blease:

The background for Full Thrust was designed purely as an option for gamers looking for something to use, as well as to provide some basis for the growing ranges of Full Thrust miniatures designed by CMD. However when plotting much of it out, it was always at the back of both Jon's and my mind to make it as 'balkanised' as possible by only looking at the major space faring powers and to an extent creating a generic background, where individual gamers could introduce whatever they wished without upsetting the applecart and creating the sort of anomalies you can with other games systems if you don't follow their 'history' exactly.

Largely for my own satisfaction (and for Jon to use when necessary) I have filled in a number of the blanks, especially in the years between 2101 and 2183; this scenario arises out of one of the minor incidents from this expanded background...

2133: French Separatists on the outworld colonies of Bretonneux, Doullens and Compville declare unilateral independence from the Federal Stats Europa. The FSE sends elements of the Colonial Legion – namely the 1e REP, 5th and 13th DBLC, to quell the insurrection. Resistance from the separatists proves stronger than anticipated and the Legion units find themselves penned into the capital cities and spaceports where they landed, besieged by Separatist planetary militia units. However with the assistance of offworld fire support from FSE Naval starships, the Legionnaires finally succeed in breaking out, smashing much of the Separatists' "regular" forces before being drawn into a vicious and long-running guerrilla war with parts of the indigenous population.

2165: The Third Solar War breaks out as NAC forces attack the ESU. Soon the FSE joins the ESU and the NSL sides with the Anglians. The Confederation Intelligence agencies supply covert aid to the French Separatists via the sympathetic Dutch government.

2169: Separatist guerrillas on Bretonneux and Doullens finally succeed in overthrowing the Federal garrisons on the colonies. A similar insurrection attempt on Compville fails, however the guerrilla war there continues.

The French Republic on Bretonneux and Doullens was only to last four years before the FSE forcibly took the colonies back under their wing. During this brief period, however, the Republicans proved a very painful thorn in the side of the FSE, especially their small and rather makeshift Naval force which scored many notable successes against FSE convoys.

This incident is one of many...

SCENARIO:

FSE forces have been attempting to provide their forces on Compville with much needed food and munitions as they hold out against nationalist insurrectionists who have recently overrun the garrisons on Bretonneux and Doullens. The garrison commander is confident that as long as the Navy can supply them, then he should be able to hold out against the rebellious colonists.

The Federal Navy sees little problem; after all they are a major space faring power, the insurrectionists possessing only a few obsolete captured vessels, crewed with inexperienced amateurs and retired geriatrics....

SET-UP:

The FSE convoy enters from one end of the table at velocity 12 and must exit the other end, which represents the atmosphere of Compville, at a velocity of 3 (after all what's the point of getting this far and slamming into the planet?!). The French forces can appear from either side of the board at their commanders discretion and at whatever velocity they wish. Because they're great fun put three or four asteroids on the table in orbit around the planet.

[Special note: if desired, players should feel free to use the Planetary Orbit rules on P.13 of this book, and actually represent Compville near one end of the table; if this option is taken, adjust the required orbital entry velocity to suit whatever model or marker you are using to represent the planet, in accordance with the new rules.]

FORCES:

It is important that the FSE player is unaware of the composition of the Separatist French forces. If you suspect that he is in possession of this information, a number of alternative options can be implemented and are advised below.

Federal Stats Europa Player:

Three standard Heavy Freighters: MASS 60, 15 damage points, thrust rating 2. Fitted with level – 1 screen and 1 x C battery (3 arc fire), plus 2 x PDAF systems.

Two Escort Cruisers, MASS 26, 13 damage points, thrust rating 4. Fitted with level – 1 screen, 3 x B batteries (3 arc fire), 1 x ADAF and 1 x PDAF

Three Frigates, MASS 10, 5 damage Points, thrust rating 6. Fitted with 1 x B battery (3 arc fire), 1 x C battery (3 arc fire) and 2 x PDAF

Separatist French Player:

Three Light Cruisers, MASS 22, 11 Damage Points, thrust rating 6. Fitted with level – 1 screen, 3 x B batteries (3 arc fire), 2 x PDAF

Three Destroyers, MASS 14, 7 damage points, thrust rating 6. Fitted with 2 x B batteries (3 arc fire), 2 x PDAF

VICTORY CONDITIONS:

The FSE player needs to get at least two of the Freighters into orbit around Compville, where they'll come under the protection of the low orbital and ground-based defence forces. He should also try and minimise losses of his naval forces, and by exiting the "Deep Space" edge of the table opposite the planet, can engage FTL.

The Separatists need to capture two of the Freighters to win, by boarding them and overcoming their crews (see the Boarding rules on P.7), however they will get a winning draw if whilst they don't succeed in this objective, they prevent the FSE fulfilling theirs.

To add a little spice, the Separatist player has some optional forces at his disposal WHICH MUST BE KEPT SECRET FROM THE FSE UNTIL USED!

Basically the sympathetic Dutch government has sent two Heavy Cruisers [MASS 32, 16 damage points, thrust rating 4. Fitted with level – 1 screen, 1 x A battery and 3 x B batteries (3 arc fire), 1 x C battery (3 arc fire), plus 1 x ADAF and 1 x PDAF] to join the French, providing the FSE do not find out about the Dutch involvement.

If the French player decides to use the Dutch vessels (this is strictly his choice) they will enter the board from either side of the table, but no more than half way towards the FSE entry edge. The catch is that once these Dutch ships are committed, the Separatist forces must ensure that no FSE vessel escapes from the table via the Deep Space edge (and thus can go FTL). Should any FSE vessel succeed in escaping and engaging FTL (reaching Compville does not count due to communication problems), then the Separatists have lost regardless of whatever else has happened.

Should you suspect that the FSE player is aware of the Dutch option and is gearing his tactics accordingly (eg: by leaving a vessel lurking near the FTL exit edge, ready to run for it), then double bluff him and have these two vessels as either NAC or mercenary vessels for which he'll gain no victory by exiting the table. If he does know, but is being sporting and pretending he doesn't, then play the scenario as it is designed.

THE BATTLE OF STIG IV:

This is the FULL THRUST section of a combined FT/HELLFIRE scenario by Jim Webster, originally written for this book but also published in Role Player Independent magazine, vol.2 no.2., along with an additional section to cover the ground action on Stig IV using the Hellfire rules. We are printing the original Space Combat part of the scenario here, with Jim's kind permission. As is usual with Jim's rules, no points value have been given for either side – the forces are determined to suit the scenario rather than by abstract calculation!

The scenario concerns the conflicting interests of two large corporations, Ingamoan Consolidated and H.O.V. Corp, both of whom are (very nominally!) under the overall jurisdiction of the sector government in the form of the Protectorate.

Ingamoan have a small chemical production facility on the sparsely-settled outworld of Stig IV, which is currently under attack from local insurgents covertly supported by their rivals, H.O.V. (who also, unsurprisingly, have industrial interests on the planet and would be quite happy to see Ingamoan out of the picture!).

FORCES:

In an attempt to support their interests and protect their property and personnel, Ingamoan Consolidated have mustered a small military force consisting of the following ships:

[Note that where certain details of ship specifications are omitted, eg: Thrust levels and Mass ratings, these are assumed to be as for the "standard" ships of these classes in the original rulebook.]

The Troop Transport "Satyr" with its embarked Satyr Brigade (as detailed in the FULL THRUST/HELLFIRE INTERFACE on P.19);

The Scout Ships Molieire, N'aga and Showna, each mounting one C Battery and one PDAF (Scouts are the largest type of military ship that the Protectorate allows private companies to build and own – in theory, anyway....);

The Frigate Ingamoan, commanded by Company admiral Thurlow Koronka, mounting one B battery, one C Battery and two PDAFs (sooner or later, the Ingamoan Consolidated Board is going to have to answer some difficult and embarrassing questions about just how they acquired the Frigate, and whether it had anything to do with the mysterious disappearance of the Protectorate Frigate H'awaine at round about the same time...);

The last ship in the escorting group is actually a **"Q-Ship"** (see rules in Full Thrust), **the Vasquo,** provided by Ubix Interfreight and commanded by Company Commodore Vorm Steenkamp. The Vasquo is built on the hull of an Exploration Cruiser, and mounts one A Battery, two B Batteries, two PDAFs, one additional FireCon system, a level-2 Screen and one Fighter Bay (the fighters from the Vasquo will not take part in any ground-support actions, but will

fight in the Space battle). Ubix's possession of a ship like the Vasquo is another symptom of the Protectorate's rather lax monitoring of company shipping in this sector.

In response to this threat from Ingamoan, H.O.V. Corp have stated that they will utilise their own fleet assets insystem to prevent "interference" with the insurgent operations going on down below, which they claim to be a legitimate peoples' uprising against the oppressive policies of Ingamoan towards their workers.

The H.O.V. units in the system consist of:

Three Heavy Freighters, H.O.V. 11, 13 and 24. Each mounts one C Battery and two PDAFs. At present, H.O.V. 13 is being loaded in orbit around Stig IV, H.O.V. 24 is already fully loaded and standing off awaiting departure, and H.O.V. 11 is empty and waiting its turn for loading.

The H.O.V. Upholder, a **Q-Ship** and flagship of Company Admiral Peggy-Sue Shulkov. Like the Vasquo, the Upholder is built on an Exploration Cruiser hull; it is insystem to escort the three freighters. The Upholder mounts one A Battery, two B Batteries, two ADAFs and an additional FireCon system.

H.O.V. has one other (dubious) asset in the form of their **Planetary Interface Shuttle,** the Stigian Dirt Rat (named after a particularly obnoxious local rodent that nevertheless plays a key part in certain of the planet's chemical production processes). The shuttle is used to haul materials up to the H.O.V. freighters in orbit; it has no FTL capability, but its main Drives are Thrust 6 (to help it to overcome the planet's gravity well). The Dirt Rat has a MASS of 50, and mounts a surprising amount of ordnance – two C Batteries, one B Battery and one PDAF.

SET-UP:

The H.O.V. Corp ships are spread out over the playing area; Nos. 11 and 24 are near the "Deep Space" edge (the Ingamoan forces'
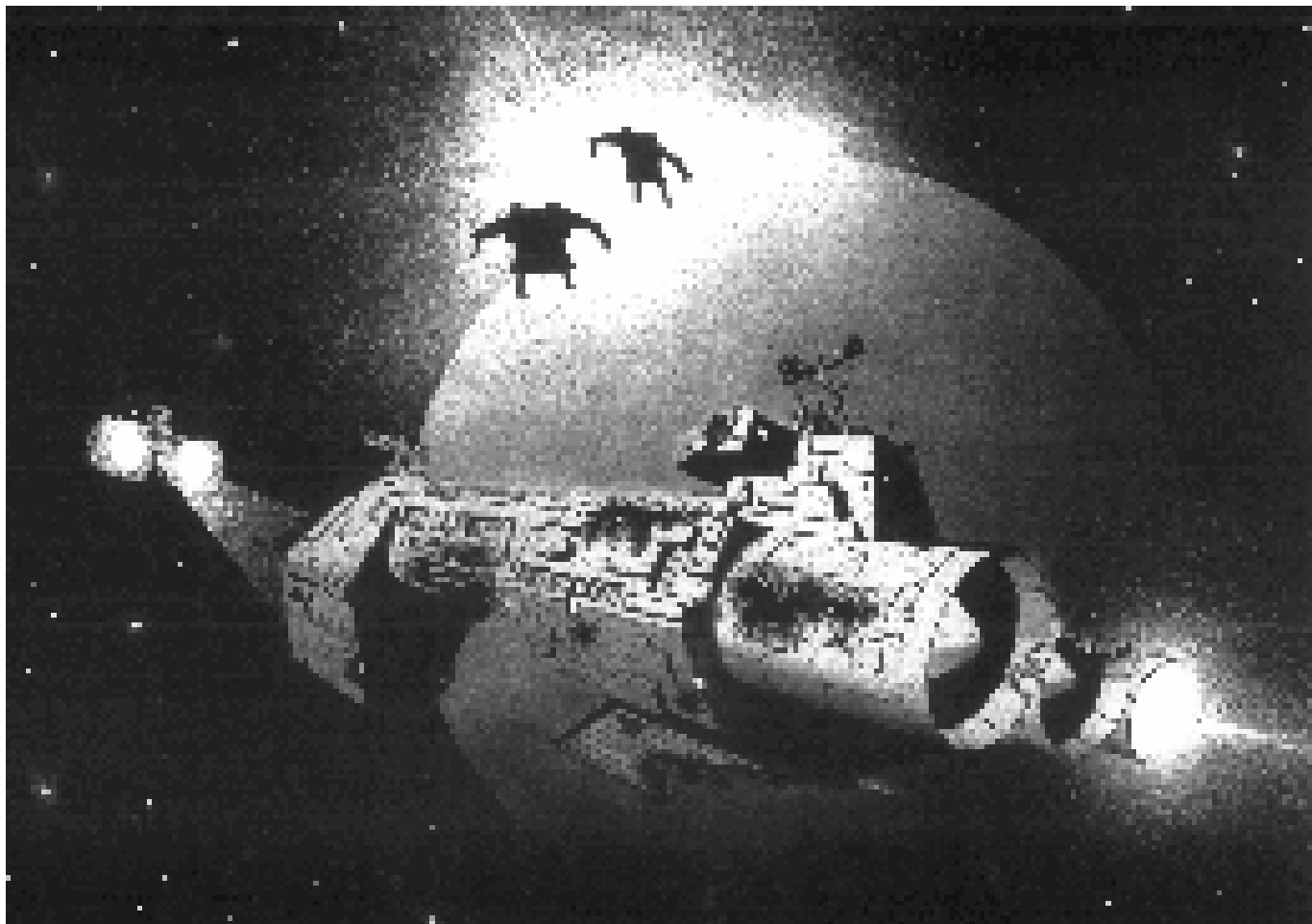
arrival edge) along with the Upholder, while No. 13 is loading in orbit adjacent to the opposite (Planetary Orbit) edge. In 1D6 turns, the Dirt Rat will arrive on the Planetary edge after its long climb from the surface, to rendezvous with H.O.V. 13.

The Ingamoan forces enter from the Deep Space edge on turn 1; their objective is to get the Satyr safely across the board and for it to pass through a 6" wide Orbital Entry Window in the middle of the Planetary table edge at a velocity of 2 or less (and still with manoeuvring power to enable it to enter orbit).

Success in getting the Satyr into orbit in this way means that it will be able to launch its shuttles and land its troop contingent, allowing the ground battle to be fought. If you are playing the space battle as a stand-alone scenario, this is a victory for the Ingamoan player.

Should the Satyr fail to reach the planet at all (by being crippled or destroyed), it is a clear-cut victory for the H.O.V. player; however if the Satyr reaches the Planetary edge but misses the orbital window (or hits it at too high a velocity), then roll 1 die for each of the shuttles and fighters aboard her:

On a **1 or 2**, the craft does not manage to launch before the Satyr burns up, or else launches but is unable to control its entry and burns up anyway – either way it is destroyed.

On a **3 or 4**, the shuttle or fighter successfully launches and makes a semi-controlled entry, ending up force-landing on the wrong continent entirely.

On a **5 or 6**, the craft makes a controlled entry and ends up in the correct place for the intended landing.

[Note that this table may also be used for ANY escape attempts from ships suffering uncontrolled atmospheric entry, as in the rules on P.14.]

If the Ingamoan player thus manages to get at least SOME of his ground forces on to the planet, even if the Satyr is lost in the process, the game should be considered either a draw or at best a marginal victory for one side, depending on just what proportion of the assault force actually land safely.

This scenario can be given a bit of added spice by "roleplaying" the various Commanders involved; this can of course be done for ANY scenario; in this case the motivations of the major characters are as follows:

Company Admiral Shulkov (H.O.V. Upholder): Shulkov's main objective is to prevent a landing at all, but if any troops do get down then she must attempt to get her ships off-table at the Deep Space edge so that the Freighters can escape and the upholder can lurk on the system fringe, as a perceived threat to tie down some of the Ingamoan ships in defensive duties.

Company Admiral Koronka (Frigate Ingamoan): to destroy as much as possible of the H.O.V. shipping insystem, while ensuring the safe landing of the Satyr Brigade. His own ship's value (and relative irreplaceability) to the Company is not to be forgotten; the Scoutships are more "expendable", however!

Company Commodore Steenkamp (Vasquo): to support the Satyr assault as he has been contracted to do, but he must NOT put his vessel in any serious danger for the sake of another Corporation.....

SCENARIO OUTLINES:

The following are brief outlines of other Scenario ideas, to be used as inspriration for developing your own full Scenarios; most of them were developed (or nicked from "historical Naval" ideas) by Steve Blease and James Clay, and were originally published in a slightly different form in Roleplayer Independent. [The "Free For All" idea at the end was used by the Author for participation games at conventions, and proved very successful at educating new players.]

"YOU CALL, WE HAUL":

Following a major space battle, a Superdreadnought has been crippled by enemy fire and abandoned by its crew. Now one player's force is attempting to recover the ship for repair, by towing it into planetary orbit using a Heavy Freighter. Two Escort Cruisers are supplying protection to the recovery vessel.

A small enemy force arrives in the area while the recovery is under way, with the intention of stopping the operation.

The attacking force should consist of mostly small ships, say a couple of Destroyers, a Frigate or two and maybe four Corvettes.

The Superdreadnought is currently "on tow" behind the Freighter, with the models 2" apart. They are moving at Velocity 4 (4" per turn) towards one table edge designated as the direction of the planet.

Although crippled, the Superdreadnought is not entirely "dead in the water" and actually has a small salvage crew on board who have managed to bring one FireCon system back on-line, one "A" Battery up to full power and two more Batteries to "C" class status. The ship has ten damage points left. Each turn of the battle, the Recovery player may roll once to see if the salvage crew can get another of the FireCons working, needing 6 for success. No other systems on the Superdreadnought may be repaired – they are too badly damaged.

Naturally, the attackers know nothing of the state of the Dreadnought – they assume the only opposition will come from the Escort Cruisers.

The attackers will win if they can destroy both the Dreadnought and the Freighter, but will lose if these ships manage to exit the edge of the board or if the attackers suffer over 50% losses to their force.

BROUGHT TO BAY:

Following an encounter with a "Q-Ship", a lone Battleship raider has lost its FTL Drive and has now been detected by a small enemy force of two Heavy Cruisers and two Destroyers. However, help is on the way: each turn, the Battleship player may roll one die – on a roll of 6 reinforcements arrive to assist; roll again, and a score of 1 brings on a Frigate, 2 a Destroyer, 3 two Destroyers, 4 an Escort Cruiser, 5 two escort Cruisers and 6 a Heavy Cruiser.

Victory hinges on the protection or destruction of the Battleship.

RESCUE UNDER FIRE:

One player has a small exploratory team on an asteroid that should be placed near one end of the table. The team is threatened by attacking forces, and the owning player must get to the asteroid and load the team, then get back off the table again without being destroyed.

Obviously, care must be taken when approaching the asteroid (you don't want to ram straight into it, do you?). If you really want some fun then make the asteroid a moving one.....

The "pickup" ship (which should not be anything too powerful, something like an Escort Cruiser would be ideal) enters by the edge furthest from the asteroid, and must come to velocity zero within 6" of the asteroid – or must match course and velocity with it if it is moving – and spend one turn there while the team are shuttled over to it. It may then start to accelerate again and make a run for the table edge by which it entered.

The opposing ships should be a small force of perhaps a Light Cruiser and a couple of small escorts; they arrive on-table in turn one from one of the sides adjacent to the rescuers' entry edge, and their mission is to either (a) prevent the pickup being made, or (b) to destroy the rescue ship after the pickup thus kiliing the team anyway.

FREE-FOR-ALL:

This is not really a scenario at all, but is a very good way of getting new players introduced to the FULL THRUST rules. Basically, all you do is give each player (we have had as many as eight at a time!) an identical ship – a Heavy Cruiser each is ideal – and sit them all round the table. Put a few stationary (or moving) asteroids in the middle of the table, then just let the players loose in an all-against-all fracas. Normally they will start to make their own little alliances between themselves, but will sonn learn the error of trusting someone else who also has guns on their starship.......

This all makes for a very silly but amusing game, and we have found that even players totally new to the game will be playing quite happily after just a couple of turns.

It is now two years since the FULL THRUST rules were published, and obviously changes have occurred in the availability of some of the starship models that were reviewed in the rulebook. As before, all the information presented below is given in good faith, and is believed to be correct as at the time of writing.

References to certain models, ranges and other game systems/ backgrounds in the following section are for review and comment purposes only, and no challenge is intended or should be implied to any Trademarks, Copyrights etc.

CMD (COPELAND'S MODELS): The "official" FULL THRUST range from CMD (available by mail order from GZG, and also produced under license for the USA by Geo-Hex) is growing very fast, as will be seen from the current listings given later in these appendices. In addition to these, we at GROUND ZERO GAMES are also starting to produce some items ourselves in both resin and metal, to complement the CMD ranges. Write to GZG at the address on the back of this book for latest information (SSAE appreciated!).

IRREGULAR MINIATURES: Some packs of (rather large) space "fighters" are now available, along with a few new larger ships including some revised designs. Still very much the "cheap and cheerful" end of the market, but excellent for budget fleets.

CITADEL MINIATURES/GAMES WORKSHOP have deleted their "Space Fleet" game, and along with it the miniatures lines; this does mean that at the time of writing many of their stores are selling off the ships at very silly prices, so bearing in mind that there ARE some very nice models in the range, this could be a good time to expand your fleet very cheaply!

I.C.E. have added some very useful "bio-alien" style craft to their Silent Death™ spacefighter range – excellent for our new Sa'Vasku rules in this book....

RAFM have just released the first of the official **"Traveller – The New Era"** starships under license from **GDW**. I have just received samples of these from the UK importers, **ROBINSON IMPORTS**, and must say they look good. Although a much larger scale than the CMD range (my guess is that they scale out at something like 1/600-1/700), there are some that would fit in very well with the other ship lines – especially as merchants and other ancillary vessels. Check these out at your local games shop.

One totally NEW firm is set to appear on the market very soon, under the name **MERCURY MINIATURES**; run by Jim Langer, Mercury will be producing some very "different" starships (including some "Bioship" style ones as shown in the Sa'Vasku rules....) that should mostly be compatible with the CMD ships and other ranges. We at GZG hope to be stocking these ships as soon as they are available, so please contact us for further information.

A useful source of attractive but well-priced models has popped up in the toyshops recently – the **MICRO MACHINES** collections of Star Trek™ ships! These are sets of three small soft-plastic ships, fully painted and finished, of various ships from the original TV series, the movies and the Next Generation™ (plus there is even a Deep Space Nine™ set now). Relative scales vary widely, as all the models are about the same physical size; they do however make very useful acquisitions if you like Star Trek style games. As with many toy ranges these may not be around long, so grab some while you can!

THE "FULL THRUST" STARSHIP RANGE:

This range is cast in whitemetal by CM Designs, using the FULL THRUST name under licence from GZG. In the UK and Europe, the ships are available by mail order exclusively from us at GZG.

UK and overseas customers (excluding North and South America) should contact GZG at the address on the back cover of this book, to place orders or request updates on range availability; kindly enclose a stamped SAE with all enquiries, or three International Reply Coupons (IRCs) for overseas enquiries. A full illustrated catalogue of all our ranges of SF gaming models, figures and rules in 25mm, 15mm, 1/300 and 1/2400 scales is available for £1.00 (UK) or 5 x IRCs.
UK Post and Packing on models is 10% of order value.

For **USA, Canadian and S.American customers**, the FULL THRUST Starship Miniatures range is currently being produced under license by CAPRICORN SPACE (a division of GEO-HEX), 2126 North Lewis, Portland, Oregon 97227, USA, for distribution to the Hobby trade throughout North and South America. Please contact Capricorn Space/Geo-Hex for current prices and availability of the range, or ask your local Hobby Store to contact them for dealer information.

The NEW ANGLIAN CONFEDERATION (NAC):

FT 101A	Firestorm II class FIGHTERS (pack of 12)	£0.95
FT 102A	Harrison class SCOUTSHIPS (pack of 4)	£0.95
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FT 508	Markgraf class HEAVY CRUISER	£2.45
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FT 510	Maria Von Burgund class BATTLESHIP	£4.45
FT 511	Szent Istvan class BATTLEDREADNOUGHT (Heavy Battleship)	£4.95
FT 512	Von Tegetthoff class SUPERDREADNOUGHT	£7.95
FT 513	Der Theuerdank class CARRIER	£7.95

MERCHANT, SUPPORT and CIVILIAN SHIPS:

FT 301	Exxon jupiter class BULK TANKER (resin & metal kit)	£5.95
FT 302	Clarke class EXPLORATION/SURVEY CRUISER	£4.95
FT 303	Starbase – kit of modular resin & metal sections	£6.95
FT 303A	Starbase extension section (resin, to fit FT 303)	£1.95
FT 304	System Defence Installation (based on FT 303 design, resin & metal)	£4.95
FT 305	Hamburg class Heavy Modular Freighter	£3.95
FT 305A	Freighter extension section & extra cargo pods for FT 305	£2.95
FT 306	Bustler class Deep Space Tug	£2.45
FT 307	Antares class Inner-System Shuttle (interface capable)	£1.65
FT 308	Medium Freighter	£2.95
FT 309	Medium Freighter (alternative to 308)	£2.95*

The FEDERAL STATS EUROPA (FSE):

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FT 607	Milan class ESCORT CRUISER	£1.95
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FT 611	Bonaparte class BATTLEDREADNOUGHT (Heavy Battleship)	£4.95*
FT 612	Foch class SUPERDREADNOUGHT	£7.95*
FT 613	Bologna class LIGHT CARRIER	£6.45*
FT 614	Jeanne D'Arc class FLEET CARRIER	£7.95*

* Indicates model not yet in production at time of publication – please check with us for current availability lists before ordering.