STAR FLEET BATTLES

FLEET TRAINING CENTERS

STAR FLEET BATTLES
CAPTAIN'S EDITION

CAPTAIN'S MODULE C4

TASK FORCE GAMES™

STAR FLEET BATTLES

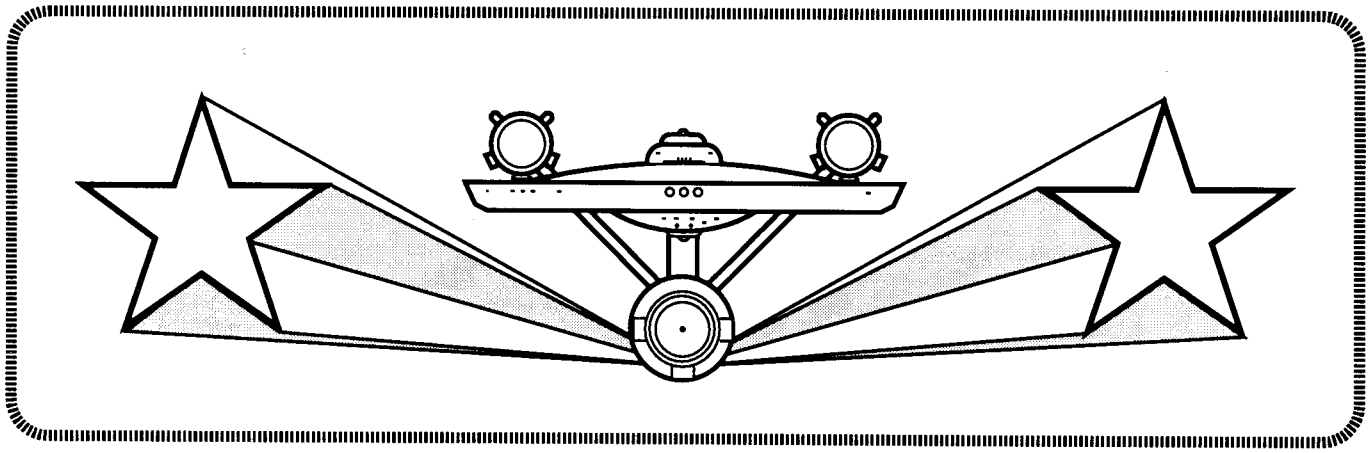

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TABLE OF CONTENTS

INTRODUCTION
PUBLISHER'S INFORMATION 2
DESIGNER'S NOTES 73
BOARDING PARTY TABLES 81
BOARDING PARTY DIAGRAMS 90

THE FRAX
E51.0 AXION TORPEDOES 7
E52.0 ANTI-FIGHTER DEFENSES 9
FD51.0 CATFISH CLOAKED DRONES 17
FD52.0 MISSILE RACKS 19
R51.0 FRAX SHIPS 35

THE QARIS
E53.0 KINETIC CANNON 10
FD53.0 SUBSPACE GUIDED MISSILES 20
FD54.0 SCUD MISSILES 21
G51.0 TRANS-MORTARS 28
G52.0 TURRETS 30
R52.0 QARI MOBILE COMBAT FORCES 39

THE TRIAXIANS
C51.0 TRIAXIAN TRI-DIRECTIONAL MOVEMENT 3
FD51.0 TYPE-A PLASMA TORPEDOES 23
R53.0 TRIAXIAN SHIPS 41

THE SHARKHUNTERS
E54.0 BOMB THROWERS 13
FP52.0 WIRE-GUIDED PLASMA TORPEDOES 25
G53.0 CHAFF THROWERS 31
J51.0 HELOSHUTTLES 33
R54.0 THE SHARKHUNTER SQUADRON 43

THE BARBARIANS
R55.0 THE BARBARIAN HORDE 45

THE FLIVVERS
C52.0 HOVERWARP 5
E55.0 HYPERDRONES 15
R56.0 FLIVVER SHIPS 47

MINOR RACES
R57.0 DELTAN SHIPS 47
R58.0 BRITANIAN SHIPS 48
R59.0 CANADI'EN SHIPS 48

SCENARIOS
SG64 AXES TO GRIND 49
SG65 THE TRI-ANGLE 50
SG66 DELTAN ATTACK 51
SG67 FORM LINE OF BATTLE! 52
SG68 FLYING FORTRESS 53
SG69 TRAFALGAR 54
SG70 THE SPACE WOLVES 55
SG71 BARBARIANS AT THE GATE 56
SG72 ASSAULT ON TIAWUK 57
SG73 THE BATTLE OF 73 COREWARD 58
SM17 MONSTERS, MONSTERS, MONSTERS!!! 59
PLAYTESTER LIST 60

ANNEXES AND MASTER SHIP CHART
UPDATE TO ANNEXES 61
MASTER SHIP CHART 75
MASTER PF CHART 79
MASTER WEAPONS TABLE 96

(Z25.0) NOTES ON MODULE C4

(Z25.1) PRODUCT ORGANIZATION AND COMPONENTS

STAR FLEET BATTLES CAPTAIN'S EDITION MODULE C4 is a modular component of the Star Fleet Battles Captain's Edition game system. To use this product, you must have Star Fleet Battles Basic Set. To use some of the material in this product, you must also have Advanced Missions.

This rulebook is designed to be cut into separate pages and integrated into your main SFB rulebook.

A complete copy of Module C4 includes:

96-page rulebook with rules, scenarios, tables, and boarding diagrams
96-page SSD book with new ships for nine races
two sheets of die-cut counters (216 counters)

(Z25.2) DESIGN CREDITS

DESIGN AND DEVELOPMENT STAFF

SFB Designer ..... Stephen V. Cole, PE
SFB Executive Developer .... Steven P. Petrick, IN
Senior Rules Editor ..... Tony Zbaraschuk
Project Staff ..... John Berg, Ken Burnside, Jon Cleaves, Gregg Dieckhaus, Stewart Frazier, Bruce Graw, Jeff Laikind, Ray D. Olesen, Gary Plana, Chuck Strong, Cliff Yahnke
Production, ADB ..... Leanna M. Cole
Production, TFG ..... Timothy D. Olsen
Publisher ..... John Olsen, Task Force Games
Chief of ADB Security ..... Blackie
Security Staff ..... Waylon, R Rex
Cover Artist ..... David R. Deitrick
Computer Artist ..... Stephen V. Cole

(Z25.3) PUBLISHER'S INFORMATION

STAR FLEET BATTLES CAPTAIN'S EDITION MODULE C4 was created by Amarillo Design Bureau and published by:

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TFG@genie.geis.com on Internet
76443,3031 on CompuServe.
The TFG telephone number is 806-372-1266.

(Z25.4) DESIGNER'S INFORMATION

Questions, comments, suggestions, and any expansion material for the STAR FLEET UNIVERSE should be sent only to Amarillo Design Bureau, Post Office Box 8759, Amarillo, TX 79114. All correspondence must include a stamped self-addressed envelope if you wish to receive an answer or evaluation of your submission. Your return envelope MUST bear enough postage to cover the return of your questions (about four pages to one first class stamp). Foreign customers should enclose two International Reply Coupons, not foreign stamps or money. It is imperative that you place your name and address (and the date) on EVERY page of your correspondence. Please do not put questions and expansion material on the same sheet.

When sending questions, phrase each one so that it can be answered with a yes or no, a brief answer, or by circling one of several choices. Leave several blank lines after each question (not each group of questions). In order to better serve the player community, letters asking 10 or fewer questions are given priority and are answered in 2–3 days. Letters with more questions are answered only as time permits (allow 2-3 weeks). Please attempt to look up the answer yourself first. We will cheerfully answer questions about how the rules work, but cannot answer questions as to "WHY?" various things work the way that they do. Such "WHY?" questions are sometimes printed (with answers) in Captain's Log. All future products for the STAR FLEET UNIVERSE will be prepared by ADB; all questions relating to existing products will be answered by ADB.

Players can contact Amarillo Design Bureau via the GEnie computer network. The GEmail address is "ADB$" for Email. Call 1-800-638-9636 for information on GEnie.

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(C51.0) TRIAXIAN TRIDIRECTIONAL MOVEMENT

The single thing that makes the Triaxians what they are is their unique triaxial movement system.

(C51.1) GENERAL TRIAXIAN MOVEMENT

(C51.11) HEADING: Triaxian ships (and only Triaxian ships) may move in any of three possible directions. (Normal ships in Star Fleet Battles can move in two directions: forward or reverse.) The three directions are referred to as "forward" (in the direction of the #1 shield), "port" (in the direction of the #5 shield), or "starboard" (in the direction of the #3 shield). The ship can, of course, only be moving in one direction at a time. Effectively, the ship can never move "in reverse" but only in one of its three allowed directions.

(C51.12) DIRECTION CHANGES: Changing direction is accomplished in the same manner as a normal SFB ship reverses direction [(C3.5) or (C12.37)]. All of these rules apply, including Quick Reverse (C3.6). The new direction (forward, port or starboard) is considered the "forward" direction for all purposes, including interaction with terrain.

EXAMPLE: A Triaxian cruiser is moving to port and is damaged by asteroids. The leading shield, which would be shield #5, would take this damage (P3.21).

(C51.13) RACIAL RESTRICTION: This movement capability was considered (in the simulation) to be a side effect of the triple-spoke warp engine configuration of Triaxian ships. (Attempts to recreate this effect with "real" ships all ended in failure.) However, damage to any or all of these engines does not affect the ship's ability to change direction.

(C51.14) SCENARIO SET UP: Triaxian ships may begin any scenario moving in any of their three legal directions at the owning player's option, unless specifically restricted from doing so by the scenario rules. The specific direction the Triaxian ship was moving on a hypothetical Turn #0 must be announced before the Energy Allocation Phase of the first turn as this will establish its acceleration limits in various directions.

(C51.15) NON-SHIP UNITS: Triaxian non-ship units (shuttles, etc.) do not use this system, but move using the normal SFB rules.

(C51.16) DISENGAGEMENT: A Triaxian ship can disengage by acceleration in any of its three allowed axes of movement as if that were its forward shield (C7.123).

(C51.17) INTERNAL DAMAGE: Irrespective of the direction of movement of the ship, forward hull and aft hull retain their identities. Phasers continue to be affected by the directional rule (D4.321).

(C51.2) HIGH ENERGY DIRECTION CHANGE (HEDC):

Triaxian ships may make direction changes "on the fly" by using this system. The change in direction can be to the "forward", "port", or "starboard" directions [see (C51.11) above] at the player's option. The exact same procedure (and energy cost) for a HET (including chance of breakdown, tumbling, etc.) is used with the following additions and exceptions. Any conditions which apply to a HET apply equally to a HEDC except as noted below.

(C51.21) OPERATIONS: Ships may not make a HET, quick reverse, or HEDC within 1/4 turn (8 impulses) of a HET, HEDC, or quick reverse.

Energy must be separately allocated to a HET or HEDC (although reserve warp can of course be specified at the time of use). Energy allocated to an HET cannot be used for an HEDC and vice versa.

(C51.22) MODIFIERS: Outstanding crew benefits (G21.22) and poor crew penalties (G21.12) which apply to HETs also apply to HEDCs in a like manner. A Legendary Navigator's bonus (G22.86) can also be used for this instead of for a HET or quick reverse.

(C51.23) NON-SHIP UNITS: Non-ship units (drones, shuttles, etc.) cannot use HEDCs.

(C51.24) BONUS: Triaxian ships have a "first-use" bonus to HEDC breakdown rolls which works exactly as (C6.52) does. This bonus is IN ADDITION TO the standard HET first-use bonus. The two bonuses are separate and distinct and cannot be substituted or traded for each other. Triaxian ships have both HET and HEDC check-off boxes on their SSDs.

(C52.0) HOVERWARP

Hoverwarp is a system used by the Simulator Race known as the Flivvers.

(C52.1) POWER REQUIREMENTS

(C52.11) FLIVVER WARP ENGINES: Flivver ships use a combination of Left, Right, and Center warp engines. Their Left and Right warp engines function normally. Center Warp can be used for anything that Left or Right Warp Engine Power can be used for, but can also be used for Hoverwarp. Note that approximately 40% of the warp power on Flivver ships is Center Warp; the Flivver CA for example has 12 points of Center Warp, 9 of Left Warp, and 9 of Right Warp.

(C52.12) RESTRICTIONS: Hoverwarp can only be used by the Flivvers and only uses Center Warp Engine power.

(C52.13) RESERVE CENTER WARP: Because of the effects of (C52.212), it will be necessary to note any Reserve Warp Power (H7.4) which comes from Center Warp engines.

(C52.2) HOVERWARP OPERATIONS

(C52.21) SOURCE OF HOVERWARP POINTS: Energy from Center Warp engines on Flivver ships can be allocated to purchase "Hoverwarp points" for use during the turn. These Hoverwarp points are not "Reserve" Warp (although they have some similar aspects).
(C52.211) Each Hoverwarp point costs the equivalent of one point of warp movement. This is not affected by the docking of the ship or the existence of a tractor link to another unit; however, see (C52.25).
(C52.212) Reserve Center Warp Engine power can be used to create Hoverwarp points during the turn. (It can also be used for any other Reserve Warp function.)
(C52.213) Hoverwarp points can only be used on the turn during which they were purchased. If not used, they are lost; they do not carry over to a later turn.

(C52.22) USE OF HOVERWARP POINTS: Hoverwarp points can be used in one of three ways. Regardless of any circumstances, no more than one Hoverwarp point can be used on any given impulse. There is no delay or interval between impulses on which Hoverwarp points are used; the use of a Hoverwarp point does not create restrictions on when the next Hoverwarp point can be used. Hoverwarp points CAN be used on Impulse #1 of a turn.
(C52.221) HOVERSLIP: Hoverwarp points can be used to move the ship one hex in any direction, but this can be done only during impulses in which the ship does not move by normal movement. The ship retains the original facing; the Hoverslip resets the sideslip mode to zero. This does NOT increase the effective speed of the ship for purposes of acceleration or disengagement by acceleration. Each Hoverslip point used adds 1 to the "maneuver rate" for the remainder of the turn (or until the ship uses emergency deceleration or otherwise comes to a complete stop).
(C52.222) HOVERBACK: Hoverwarp points can be used on an impulse in which the ship is to move normally to counteract (i.e., cancel) the movement normally scheduled for that impulse. (In effect, the Hoverwarp point is used to move in reverse at exactly the same speed as the ship is already moving forward.) The ship is treated, in all ways, as if it did not move at all during this impulse. This does not decrease the effective speed of the ship for any purpose. The hex not moved does not count for purposes of satisfying the turn mode.
(C52.223) HOVERTURN: Hoverwarp points can be used to turn the ship 60° to the right or left. This can be done during an impulse when the ship does not move (in which case it does not move the ship to another hex), or it can be done during an impulse in which the ship does move (and perhaps turn) normally (in which case it is done AFTER normal movement). There is no roll for breakdown solely as a result of using a Hoverturn.

This "turn" resets the unit's turn mode to zero, but can be performed even if the turn mode has not previously been fulfilled. This includes units using Directed Turn Modes (C3.8).

The Hoverwarp turn can be combined with a normal turn or HET to increase it by an additional 60°. Note that this might be done by a ship moving at speed zero since HETs and TACs are at different points in the Order of Precedence. Hoverturns have no effect on the required intervals between tactical maneuvers.
(C52.224) TIMING: Hoverwarp points are used at the point in the Order of Precedence when the ship would normally move. Note particularly that if the ship is at speed zero, it can still use Hoverslip to "move" but would move at the point in the Order of Precedence where ships that are not moving do their TACs.

(C52.23) DOCKING: A ship using Hoverwarp may dock on any impulse of a turn, provided that its speed is zero on the impulse prior to docking and it does not accelerate by any means thereafter.
(C52.231) A ship docked to a base may not use Hoverwarp, except to undock, which it may do on any impulse by simply declaring that it is doing so and expending the requisite points.
(C52.232) Hoverwarp may not be used to move a fleet repair dock, even by units docked to that FRD and providing movement energy, or units towing the FRD by means of tractors.
(C52.233) Ships docked to other ships may not use Hoverwarp to move the combined mass.

(C52.24) TUGS AND PODS: A tug can use Hoverwarp to cancel its movement on the impulse of pod release and thereby release a pod with no damage to itself or the pod. However, a movement point of Hoverwarp energy must be used for Hoverback on the release impulse whether the ship was scheduled to move on that impulse or not. A tug could also pick up a pod by the same procedure during a turn.

(C52.25) TRACTORED UNITS: Units linked to other ships by tractor beams require special rules when using Hoverwarp.
(C52.251) Hoverslip can only be used if the Flivver ship expends a number of Hoverwarp points equal to the combined movement cost of the linked units. Remaining fractional points could not be used unless combined with enough Reserve Center Warp Power to make up a full Hoverwarp point.
(C52.252) Hoverback can only be used to cancel the ship's own movement, not that of the other ship. This will require a number of Hoverwarp points (possibly including fractional points) equal to the cost of moving the combined mass. Remaining fractional points could not be used unless combined with enough Reserve Center Warp Power to make up a full Hoverwarp point.
(C52.253) Hoverturn is unaffected by being in a tractor link with another unit.

(C52.26) SPECIAL MOVEMENT
(C52.261) ERRATIC MANEUVERS have no effect on the use of Hoverwarp.
(C52.262) CHANGING SPEED (C12.0) is not affected by the use or non-use of Hoverwarp. Hoverwarp will not stop an acceleration from occurring, but may be used to cancel the movement that an acceleration may require.
(C52.263) WEB: Each Hoverslip point expended in the ship's current direction of movement adds one to the speed for purposes of breaking out of the web for the remainder of that turn.

(C52.3) SPECIAL CASES

(C52.31) TERRAIN
(C52.311) Hoverwarp cannot be used in an atmosphere.
(C52.312) A ship using a Hoverslip point to enter an asteroid hex is considered to be moving at a speed of 14 for purposes of asteroid damage (P3.2).
(C52.312) A ship using a Hoverslip point to enter a hex within the detection zone of a mine is considered to be moving at a speed of 14 for purposes of mine detonation (M2.40).

(C52.32) EMERGENCY DECELERATION: Performing an emergency deceleration does not cancel the ship's Hoverwarp points; these points are not transferred to the shields and remain available for movement. A ship which has used emergency deceleration cannot use Hoverwarp points until four impulses after coming to a halt.

(C52.33) ENERGY BALANCE DUE TO DAMAGE: For purposes of Energy Balance Due to Damage (D22.0), Hoverwarp points are considered to be allocated warp points (expended or unexpended as the case may be).

(C52.34) SHIPS IN SPECIAL CIRCUMSTANCES
(C52.341) Ships with Legendary Officers gain no benefits in using Hoverwarp. A Legendary Engineer could produce additional points of Center Warp power, making it possible to gain additional points of Hoverwarp.
(C52.342) The various levels of crew quality have no effect on the use of Hoverwarp.
(C52.343) Nimble ships gain no additional benefits from Hoverwarp.
(C52.344) Computer-controlled (G11.0) ships gain no additional benefits from Hoverwarp.
(C52.345) Hoverwarp cannot be used by any ship fitted with a Positron Flywheel.
(C52.346) Hoverwarp-capable ships may not use Hoverwarp if they are surprised until the turn following the turn in which they have been activated.
(C52.347) An uncontrolled ship cannot use Hoverwarp.

(C52.35) TACTICAL INTELLIGENCE: The fact that a ship is able to use Hoverwarp is announced at the instant that the first Hoverwarp point is used if the enemy has achieved Tactical Intelligence Level D (30 hexes from a ship, 45 from a scout, 9 from a fighter).

(C52.36) SHIPS WITH SPECIAL EQUIPMENT
(C52.361) SFGs: Use of Hoverback or Hoverslip is considered to be "speed greater than zero" and will block the use of a stasis field generator (G16.31).
(C52.362) Special Sensors: The use of Hoverwarp has no effect on special sensors.

END OF SECTION C, MODULE C4

(Z25.6) NOTES ABOUT THE SIMULATOR

Assuming (for the moment) that the game is "reality", the simulators are definitely NOT real. They are a gigantic walk-in computer multi-media game, complete with real-time maneuvering and simulated weapons effects (including systems that shake the entire bridge construct and "exploding" control panels).

The simulators are used to teach new (and veteran) officers how to fight and win in space combat. Most of the time, this is done with "real" ships fighting "real" enemies. Sometimes, it uses new (in design or under construction, or perhaps just rumored) ships on one or both sides. Often, training is against enemies who are not immediately at hand, but who might appear in the theater during an all-out war.

The really fun part of the simulators, however, is that tiny portion of their expensive time used against entirely fictitious new races. This is not just an extravagant game to entertain old captains, but a vital part of the training program of all fleets. Space is vast, and a captain might meet a totally new and unknown enemy at any time. What is being taught is not how to defeat a Qari or a Flivver (as they will never be met in reality), but how to think your way through a battle against an enemy you have never fought.

One of the best uses of this module will be to have one player read the rules for a new race and play it against opponents who have no idea what it carries or shoots. For even more fun, two players each read the rules for a new race and play (blind) against each other. (In one of the earliest tests of this product, Steve Cole flew a Flivver CA against Steve Petrick's veteran D7K. Petrick disengaged on Turn #3, convinced that — even at the cost of a court-martial for cowardice — the Klingon High Command really needed to know that something new and dangerous was "out there".)

It is important to realize that, within the simulator, most of the "engineering rules" do not apply. If you want to mount TR beams in an Orion CR's option mounts, just to see what it will do, go right ahead. (After all, who can say that the Orions won't, someday, get TR technology? Well, okay, Steve C *did* say no, but we can at least get the keys to the simulator by claiming we're doing valid combat training.)

In effect, there are no rules inside the simulator. If you want to, for whatever reason, play a scenario in which one ship NEVER suffers a breakdown, has free EW, or can hold weapons that can't normally be held, have a nice time.

The simulator can be a good place to train a new player, as you can forget or bend certain rules to give him a break and build his interest.

We said "no rules" inside the simulator, and we meant that. BUT — there are some "guidelines" which you need to be aware of:

(Z25.61) GUIDELINES OF THE SIMULATOR

1. AGREEMENT OF YOUR OPPONENT: You and your opponents need to agree on what you are going to do. If you both agree to let the Orion BR have an R-torp, fine. But imagine how upset he will be if you fire a Shield Cracker from your Orion without having first gotten his agreement that you could use "forbidden" technology. Such agreements can be as specific or as vague as you choose. You might give your opponent the freedom to pick ANY weapons, or you might agree that specific ones will be used.

2. UNCHARTED TERRITORY: You may be doing things that the rules don't really cover because they are "impossible" in the "real" universe. Obviously, we cannot list what the rules don't cover (if we knew it wasn't covered, we'd cover it), but if you find a "murky spot" in a technology interaction, do let us know, and we'll give you some guidance. But be warned that you may get stopped cold in mid-battle because there are no rules to define where you can go, and mid-battle is a very difficult time to try to reason with your opponent regarding how the rules should work. The traditional solution is to write up both ideas, toss a coin between them, finish the battle, and THEN work out (or obtain from a higher authority) the "correct" set for the next battle.

3. IT MIGHT NOT WORK OUT: You might try a new idea in the simulator and, an hour later, discover that you just wasted an hour of your life because the idea just will not work for some reason. (This is one reason why you shouldn't toss an untested rule into a campaign you have invested months or years in.) Maybe the ship doesn't have enough power. Maybe the idea of putting hellbores and ESGs on the same ship isn't *that* smart. Or your best guess of the BPV (using the optional weapons tables and basically pretending that anything you want to change is an option box) may prove wildly inaccurate. You have been warned that you might not have fun if something doesn't work. But consider how much fun you will have if something no one ever tried really DOES work out.

4. WHY ARE YOU HERE? Presuming that you don't have a line to the Star Fleet recruiting office, you are presumably here to have fun and enjoy a stimulating intellectual competition. Keep that in mind. Whatever you do, do it to have fun and stimulate your thinking, not to humiliate, embarrass, or dominate someone else.

5. SHARE THE FUN, AND THE PAIN: If something you try in your simulator works, write it up and send it to ADB for use in a new feature of Captain's Log. And if it crashes and burns horribly, then write it up anyway so that you can spare everyone else the pain.

—Stephen V Cole, with thanks to Steve Petrick, Jeff Laikind, Steve Latus, Neil Chochrek, Spencer Graham, and Ken Burnside who proofread this rules section on GEnie in a live RTC and contributed many of the ideas given here on how to get the most out of a simulator.

(E51.0) FRAX AXION TORPEDOES

Frax submarines, simulating 'wet navy' U-boats, use a short-range direct-fire weapon with a gravitic targeting array and a dark matter warhead which decays into electromagnetic radiation on contact with the target. This does not void the submarine's cloak or require active fire control, but it is inaccurate and short ranged.

(E51.1) DESIGNATION

(E51.11) SSD: Each AXT box on the SSD represents one Axion Torpedo. Each is recorded and fired separately. The Axion Torpedo is a direct-fire heavy weapon. It fires in the Direct Fire Weapons Fire Stage (6D2) of the Sequence of Play (Annex #2).

(E51.12) DESTRUCTION: Axion Torpedoes are destroyed on Torpedo hits on the DAC (D4.21).

(E51.13) COST TO REPAIR: Axion Torpedoes cost 8 points to repair.

(E51.14) TECHNOLOGICAL LIMITATIONS: Axion Torpedoes are simulator weapons and cannot be used by any non-simulator race. Axion Torpedoes cannot be mounted on anything smaller than size class 4.

(E51.2) ARMING PROCEDURE

(E51.21) ARMING COST: Each Axion Torpedo requires two points of warp energy on two successive turns to arm. This can be allocated or from reserve warp power. It cannot begin arming during the same turn that it was fired.

(E51.22) HOLDING: If an Axion Torpedo is not fired by the end of a given turn, it can be held and fired during the following turn, or any subsequent turn, at the cost of one point of warp power. This must be paid during Energy Allocation. Overloaded Axion Torpedoes cannot be held.

(E51.23) OVERLOADS: An Axion Torpedo can be overloaded; see (E51.4).

(E51.3) FIRING PROCEDURE

(E51.31) FIRING PROCEDURE: The number of damage points scored by an Axion Torpedo is determined by the true range and a die roll. Roll a single die. If the roll is equal to or less than the HIT# listed, the weapon has hit and scores the listed damage to the target's facing shield. If the number rolled is greater than the HIT# listed, the weapon has missed and no damage is scored. Refer to the AXION TORPEDO FIRING TABLE below.

AXION TORPEDO FIRING TABLE

RANGE	0	1	2–3	4–5	6–8	9–12	13+
HIT#	1–6	1–5	1–4	1–3	1–2	1	MISS
DAMAGE	10	9	8	7	6	5	NONE
OVERLOAD	15	13	12	10	9	NONE	NONE

SEE (E51.32) for small targets.

(E51.32) TARGET SIZE: The Axion Torpedo uses a gravitic target location system. This does not work well on small targets. Apply the following HIT# penalties when firing at targets of various size classes. Ignore other small target modifiers (E1.7), including firing at drones (FD1.52).

(E51.321) AXION TORPEDO SMALL TARGET FIRING ADJUSTMENTS TABLE

SIZE CLASS	0–1	2–4	5	6	7
HIT MODIFIER	+1	0	–1	–2	–3

(E51.33) LOCK-ON EFFECTS: The Axion Torpedo uses a special fire control system, which is not connected to the ship's Active (D6.6) or Passive (D19.0) Fire Controls and cannot use ECCM while the ship is cloaked. The range is not doubled (D6.123) for the lack of a lock-on. ECM is used by the target unit normally. If the ship armed with the Axion Torpedo is uncloaked, it may use ECCM normally if its fire control is active. The firing of an Axion Torpedo does count as a weapon fired for purposes of (D6.72) if using Low-Power Fire Control. The Axion Torpedo rolls to hit cloaked targets at the effective range, but the damage it scores is determined based on the true range.

(E51.4) OVERLOADS

(E51.41) ARMING: An Axion Torpedo can be overloaded by applying four points of warp power (total) on the second turn of arming, or by adding two points of warp power to a torpedo being held. This extra can be allocated or reserve (H7.54).

(E51.411) A partially overloaded Axion Torpedo can be fired. It will do the damage of a non-overloaded Torpedo, but WILL cause Exposure (E51.44). It does not cause feedback (E51.45).

(E51.42) HOLDING: An overloaded Axion Torpedo cannot be held. If not fired by the end of the turn, it must be fired into space. This WILL expose the firing ship (E51.44) but does not cause feedback (E51.45).

(E51.43) DAMAGE: An overloaded Axion Torpedo does 50% more damage to the target, rounded down.

(E51.431) An overloaded Axion Torpedo cannot be fired at a true range of more than eight hexes.

(E51.44) EXPOSURE: Firing or discharging an overloaded Axion Torpedo while cloaked reveals the firing/discharging ship, i.e., all units with active fire control within 35 hexes will immediately acquire a lock-on (G13.401). Units must then roll to retain a lock-on to the cloaked ship under (G13.331) in the Lock-on Stage of the following impulse (6B3). For each overloaded torpedo fired or discharged during a given impulse (after the first), one is subtracted from the subsequent lock-on retention roll. Non-overloaded torpedoes will not expose the ship and do not produce a modifier to retain the lock-on.

(E51.45) FEEDBACK: Firing an overloaded Axion Torpedo at a range of zero causes three points of damage to the firing ship's facing shield.

(E51.5) OTHER

(E51.51) ERRATIC MANEUVERS: If the firing ship armed with the Axion Torpedo is doing erratic maneuvers, the four points of ECM provided under (C10.41) are applied to any fire by the weapon. This can be countered by ECCM if the ship has active fire control (C10.411). Note that this will only apply to a ship that is not cloaked (C10.24). Erratic maneuvers by the target ship simply produces EW as per the standard rule.

(E51.52) NON-VIOLENT COMBAT: Axion Torpedoes cannot use Non-Violent Combat (D6.4). Axion Torpedoes cannot be fired by uncontrolled (G2.20) ships. Two or more Axion Torpedoes on the same ship can be fired in Narrow Salvoes (E1.6). Axion torpedoes operate against PA panels as other non-disruptor direct-fire weapons (D10.331).

(E51.53) DIRECT-FIRE WEAPONS: Axion Torpedoes are direct-fire weapons and as such:

- cannot be transported (G8.341);
- are affected by tractors as are other direct-fire weapons (G7.91);
- cannot fire through webs (G10.61);
- will not damage anything in a stasis field (G16.41);
- are affected by the quality of the crew by (G21.11) or (G21.21) as appropriate;
- can benefit from a Legendary Weapons Officer under (G22.71) and/or (G22.72), but not (G22.721);
- do not interact with ESGs (G23.83);
- blind special sensors on the firing ship (G24.134);
- void a wild weasel (J3.132);
- will not damage a plasma torpedo (FP1.62);
- sweep mines under (M8.52).

(E51.6) TERRAIN

Axion Torpedoes are affected by various types of terrain as described below.

(E51.61) PLANETS: Axion Torpedoes are blocked by planets (P2.321) and are affected by Ground Clutter [(P2.52) and (P2.53)]. This does not apply to Axion Torpedoes fired by bases on such a planet.

(E51.62) ATMOSPHERE: Axion Torpedoes lose 25% of their warhead strength when fired through an atmosphere hex (P2.452) for each hex of atmosphere. This does not apply to Axion Torpedoes fired by bases on such a planet. Round a fraction of 0.50 or more up, or 0.49999 or less down.

(E51.63) ECM: Asteroids (P3.33), dust (P13.4), rings (P2.223), black holes (P4.24), and nebulae (P6.2) all have an ECM effect on Axion torpedoes. Sunspots may have an ECM effect (P11.3).

(E51.64) BLACK HOLES, PULSARS: Black holes (P4.23) and pulsars (P5.32) will block Axion torpedoes.

(E51.65) WYN RADIATION ZONE: Axion Torpedoes cannot be fired by a ship for 10 turns after that ship has passed through the WYN Radiation Zone.

(E51.66) ASTEROIDS: Axion Torpedoes can be used to clear a path through asteroids (P3.25).

(E51.67) NOVAE: Novas affect Axion Torpedoes as per each of their effects (P12.5).

(E51.7) X-AXION TORPEDOES

(E51.71) HOLDING: Overloads can be held for two points of warp power.

(E51.72) EXPOSURE: Overloaded Axion Torpedoes, even multiple firings on the same impulse, do not cause exposure (E51.44).

(E51.73) TARGET SIZE: X-Axion Torpedoes are slightly more capable of tracking smaller targets than non-X Axion Torpedoes:

X-AXION TORPEDO SMALL TARGET FIRING ADJUSTMENTS TABLE

SIZE CLASS	0–1	2–5	6	7
HIT MODIFIER	+1	0	–1	–2

TECHNICAL NOTES: Axions are one of the possible cold dark matter particles being suggested for the universe's missing mass. Each has an energy of somewhere from 10 to 1000 feV (i.e., not much) and decays into two photons after a very long time (The Shadows of Creation, Riordan & Schramm, OUP 1991). Being dark matter, axions cannot interact with anything except by gravity. So the Axion Torpedo tube creates a warp field along which the axions move toward the target. They then decay into electromagnetic radiation (microwaves), prompted by a stimulus known only to the Frax scientists.

Axion Torpedoes were designed by James K Davies of the UK.

(E52.0) ANTI-FIGHTER DEFENSE

The Klingons fitted the carrier escorts of the Frax with the deadly anti-fighter defense system, a combination of a gatling phaser and an anti-drone system. This was, partly, for their own convenience in that the simulators could quickly be tailored to simulate Federation, Hydran, or Kzinti ships by simply deactivating one of the two modes of the weapon.

When left with its fully-active dual-mode capability, the AFD severely tested the abilities of Klingon captains and drone officers to penetrate the Frax defenses.

(E52.1) DESIGNATION

(E52.11) SSD: Each box on the SSD represents a single AFD. Each such AFD is armed, loaded, fired, and recorded separately.

(E52.12) DESTRUCTION: AFDs are destroyed on "phaser" or "drone" hits and are regarded as the best of either category of weapon. Note that "drone" hits can come from any direction, but "phaser" hits are subject to the (D4.321) Phaser Directional Damage restriction.

(E52.13) OPERATION: Each AFD combines an ADD–12 with a single phaser–G. The weapon can (E52.31) operate in either mode within certain restrictions.

(E52.14) REPAIRS: The cost to repair an AFD is 12 points. It can be hastily repaired as an ADD–12, phaser-G, or phaser-3, in effect, repairing (or partially repairing) one part of the system and leaving the other part unrepaired. If repaired as a phaser-G or phaser-3, it can only be destroyed on "phaser" damage points. If repaired as an ADD-12, it can only be destroyed on "drone" damage points and would still not be able to launch type-VI drones (E52.23). If partially repaired to any level, it cannot be fully repaired unless it is destroyed again and has to be repaired in total.

(E52.15) TECHNOLOGY RESTRICTION: This weapon is used only by the Frax and cannot be used by "real" races. The weapon exists only as computer software in a simulation and cannot be built within the "real" game universe.

The availability of the AFD to Frax warships is based on the class year of the cadets in the simulation:

1st (Commander) Class: All Frax ships have AFDs. At this level, the Frax are all but unbeatable in an even-BPV battle. Producing an even battle would require giving the anti-Frax forces a BPV advantage varying from 10% against direct-fire ships, 20% against plasma-armed ships, and 30% against drone-armed ships.

2nd (Leader) Class: Carriers, Escorts, and one-third of other Frax warships have AFDs. The BPV adjustment to achieve balance would be about one-half of that for the Commander Level.

3rd (Warrior) Class: Carriers, Escorts, Submarines, Battleships, Heavy Battlecruisers, and Command Cruisers have AFDs. The SSDs in this product (and the play balance of the ships and scenarios) reflect this level of deployment. Use of other levels is an option left to the mutual agreement of the players.

4th (Trainee) Class: Carrier Escorts and Submarines Only.

(E52.2) ARMING PROCEDURE

(E52.21) DUAL SYSTEM: The AFD is a dual system, combining a phaser–G and an anti-drone system. Each element of the system must be armed or reloaded separately.

(E52.22) PHASER-G: The phaser-G portion of the AFD is armed exactly as any other phaser-G, with one point of energy from any source.

(E52.23) ANTI-DRONES: The ADD portion of the AFD is a 12-round anti-drone system. It is reloaded exactly as any other ADD–12 is reloaded. That is, reloading is automatically accomplished if the AFD is not fired (in either mode) for one entire turn. There are two sets of reloads provided for the ADDs of each AFD. An AFD cannot be loaded with type–VI drones.

(E52.3) FIRING THE AFD

(E52.31) MODE SELECTION: The AFD can only fire one of the two systems (ADD or phaser-G) each impulse. The decision of the mode in which a given AFD will fire on a given impulse is made at the instant of firing. A single AFD can fire in both modes up to the maximum rate for the component system (until AFD ammunition and arming energy is exhausted).

(E52.32) GATLING MODE: In gatling mode, the AFD fires as a single phaser-G, limited to the firing arc shown. This mode can be affected by EW.

(E52.33) ANTI-DRONE MODE: In ADD mode, the AFD operates as an ADD–12. However, the AFD is limited to the firing arc shown on the SSD. [Normally, ADDs have a 360° firing arc. This is a special case.] This mode CANNOT be affected by EW.

(E52.34) RESTRICTIONS: An AFD can only engage size-6 or size-7 targets.

(E53.0) KINETIC CANNON

The Kinetic Cannon is the primary heavy weapon of the Qaris. It operates by accelerating a "dilithium penetrator" or a "nucleonic charge" to trans-warp speeds and directing it toward the target. The weapon fires very rapidly (several times per turn), but each ship generally mounts only one weapon. The "dilithium penetrators" can penetrate shields more easily than most weapons.

(E53.1) DESIGNATION

(E53.11) TYPE: A Kinetic Cannon is a direct-fire weapon. It is armed during Energy Allocation [or with reserve power (E53.21)] and is fired during the Direct Fire Weapons Phase. There are three different "calibers" of Kinetic Cannons.
(E53.111) The Kinetic Cannon Heavy, or KKH, is used to arm Qari cruisers and larger warships.
(E53.112) The Kinetic Cannon Medium, or KKM, is used to arm light cruisers and some advanced destroyers.
(E53.113) The Kinetic Cannon Light, or KKL, is used to arm destroyers and frigates.

(E53.12) SSD: Each Kinetic Cannon is represented on the SSD by a group of one or more boxes. Except for the largest Qari ships, each ship has only one Kinetic Cannon, but that cannon can fire two, three, or four shots per turn. The entire group of boxes represents a single Kinetic Cannon. Each such box of the cannon is armed, fired, and recorded separately.

Some larger ships (DN, BCH) have Coaxial mounts wherein two Kinetic Cannons (usually of different sizes) use the same directional arrow, but each is a separate system for all purposes, although both cannot be fired in the same impulse even at the same or different targets.

(E53.13) DESTRUCTION: Kinetic Cannons are destroyed by "torpedo" hits. Each such damage point destroys one box.
(E53.131) The destruction of one box of a given Kinetic Cannon reduces the firing rate of that specific weapon by one round per turn; this lost firing cycle is assumed to be one already used during that turn if there is one.
(E53.132) The cannon itself is destroyed with the last box and repaired with the first box repaired.

(E53.14) REPAIR: Each box of a Kinetic Cannon is repaired separately from the other boxes of the same cannon.

KKH boxes cost 8 repair points to repair.
KKM boxes cost 6 repair points to repair.
KKL boxes cost 4 repair boxes to repair.

(E53.141) HASTY REPAIRS: Each type of Kinetic Cannon box can be hastily repaired as a lower type of box for the appropriate cost. (This can result in a given cannon having subsystems of various types.)
(E53.142) CONTINUOUS OPERATION: While part of a given Kinetic Cannon is under repair, the remaining parts function normally.
(E53.143) NON-QARI REPAIRS: Unless specified otherwise in a scenario, Qari-specific systems (Kinetic Cannons, Scud Missile Launchers, Subspace-Guided Missiles, and Trans-Mortars) can only be repaired by Qari ships and Qari repair systems.

(E53.2) ARMING PROCEDURE

(E53.21) ENERGY: Each shot from a KKH costs three energy points. Each shot from a KKM costs two energy points. Each shot from a KKL costs one energy point. This energy can come from any legal source, including reserve power (H7.5) or allocated power. Explosive rounds (E53.24) cost an additional 1/2 point of energy per shot; this can come from reserve power.

(E53.22) ARMING CYCLE: A Kinetic Cannon (regardless of the caliber) can be armed and fired (several times) every turn.

(E53.23) FIRING RATE: Each box of a given Kinetic Cannon can fire one shot per turn, but cannot fire within eight impulses (1/4 turn) on two consecutive turns. Each Kinetic Cannon can fire all of its boxes on a given turn, but cannot fire any two boxes within a period of four consecutive impulses. This will require that a careful record is kept of the exact impulse that any given shot is fired by a Kinetic Cannon. A chart is provided on the SSD in which you can record the turn and impulse that the weapon is fired. Record the turn number in the first (smaller) box, and record the impulse number of each shot fired that turn in one of the rectangular boxes to the right of the turn number.

Two Kinetic Cannons in the same turret (E53.12) cannot fire on the same impulse. See (E53.361) in the case of bases.

(E53.24) AMMUNITION: There are two types of ammunition, designated "penetrating" and "explosive". While these rounds are physical objects, each ship carries many more rounds than it could reasonably expect to fire in several engagements, and the ammunition can be considered effectively unlimited. Special scenario rules might define a finite number of rounds of ammunition as being available.

(E53.25) OVERLOADS: There is no overloaded firing procedure for the Kinetic Cannon.

(E53.26) HOLDING: Armed Kinetic Cannons cannot be held for use on a later turn. If energy is allocated to fire a Kinetic Cannon and it is not used on the turn of arming, the energy is lost and cannot be regained. This discharge does not constitute firing the weapon and does not delay firing the weapon (with different energy) on the next turn, but it is detectable and must be announced. If using the limited ammunition option mentioned in (E53.24), such a discharge will not expend a round of ammunition.

(E53.3) FIRING PROCEDURE

(E53.31) PROCEDURE: The player controlling the firing unit designates which cannon (and which subsystem) will fire and designates the target. The player also announces which type of ammunition will be used. The player then rolls one die and cross-indexes the result with the range bracket on the firing chart for that specific type of Kinetic Cannon (heavy, medium, or light) on the chart below:

(E53.32) KINETIC CANNON FIRING TABLE

(E53.321) KINETIC CANNON HEAVY FIRING TABLE

RANGE	0–4	5–8	9–15	16–23	24–30	31–40
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	6	6	5	4	3	2
Damage–E	8	8	8	0	0	0

(E53.322) KINETIC CANNON MEDIUM FIRING TABLE

RANGE	0–3	4–6	7–12	13–18	19–23	24–30
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	5	5	4	3	2	1
Damage–E	6	6	6	0	0	0

(E53.323) KINETIC CANNON LIGHT FIRING TABLE

RANGE	0–2	3–4	5–8	9–12	13–15	16–20
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	4	4	3	3	2	1
Damage–E	4	4	4	4	0	0

(E53.33) EFFECT, PENETRATING AMMUNITION: If the cannon fired the "penetrating" type of ammunition, it scores the number of damage points on the "Damage–P" line, but by the special procedure in (E53.332). If it hits an unshielded unit, the penetrating round scores its entire damage as internal damage.

(E53.331) All penetrating warheads are scored after all other damage during the same firing step, but their internal damage is combined with any other internal damage that was part of that volley (including other penetrating warheads). In the event of two or more penetrating rounds which strike a single shield during a single volley, resolve them sequentially in any convenient order. [Note that hellbores and PPDs score their damage in separate volleys, and the damage from penetrating kinetic rounds is not combined with those volleys.]

(E53.332) Score the first damage point on the shield (if any), including any reinforcement. Then skip the next four shield boxes (including reinforcement), and score the second damage point on the next shield box (if any). Then proceed through the remaining damage points, scoring them on every fifth shield box until either there are no damage points remaining or there are no shield boxes remaining (including reinforcement and counting both boxes destroyed by damage and those skipped by the penetrating warhead). If there are no shield boxes remaining, any further damage points are scored as internal damage by the normal procedures. Shield boxes previously destroyed are ignored for purposes of this "count".

EXAMPLE: From a range of eight hexes, a Kinetic Cannon Heavy scores a hit and a nominal six points of damage on the #4 shield of a Federation CL, which has 12 boxes and is, for this example, reinforced with two points of general reinforcement and four points of specific reinforcement.

The first damage point destroys one point of general reinforcement. The other point of general reinforcement is skipped and remains available for any other shield damage on a later volley, or by other Kinetic Cannon hits in this same volley. The first three points of specific reinforcement are also skipped and remain available for hits on the #4 shield in subsequent volleys or damage during this volley.

The second damage point is then scored on the fourth and last point of specific reinforcement. The first four boxes of the normal shield are then skipped.

The third damage point is scored on the fifth shield box. Boxes 6–9 are then skipped. The fourth damage point is scored on the 10th shield box. The 11th and 12th shield boxes are then skipped; there are no more shield boxes.

The fifth and sixth damage points are then scored as internal damage. The #4 shield now has only 10 boxes, plus four points of reinforcement. A second hit by the same weapon four impulses later would destroy the final point of general reinforcement and the 2nd and 7th boxes of the remaining 10-box shield, leaving the other three damage points to penetrate as internal damage and an 8-box shield with three points of specific reinforcement to face the next shot.

(E53.333) In the case of PA panels, simply apply the total damage to the panel normally.

(E53.334) Applicable armor is treated as part of the shield being hit for purposes of (E53.331).

(E53.34) EFFECT, EXPLOSIVE AMMUNITION: If the cannon fired the "explosive" type of ammunition, it scores the number of damage points on the "Damage–E" line. This damage is scored in the traditional manner of most other weapons, striking the shields first without skipping any boxes.

(E53.341) This explosion does not create a lock-on to cloaked ships.

(E53.342) This "explosion" is not affected by terrain or other effects as ship and mine explosions are.

(E53.343) While the ammunition might appear to be defined as a solid object, it cannot be intercepted by ADDs or MCIDS, tractored, transported, displaced, or fired on by any other weapon system in the Direct Fire Weapons Phase.

(E53.344) In the case of PA panels, simply apply all of the damage to the panel normally. There is no "leak".

(E53.35) SEEKING WEAPONS: Kinetic Cannons fire at seeking weapons under the penalties of (FD1.52).

(E53.36) OTHER RULES: Kinetic Cannons act as direct-fire weapons in the same manner as other direct-fire weapons for determining the effects of: Fire Control Systems [Sensors (D6.1), Scanners (D6.2), Active Fire Control (D6.6), Disrupted Fire Control (D6.68), Low-Power Fire Control (D6.7), and Passive Fire Control (D19.0)], Electronic Warfare (D6.3) [including the effects of Erratic Maneuvers (C10.41), Terrain (P0.0), and other modifiers], Docking (C13.0), Tractor Beams (G7.91), Transporters (G8.341), Webs (G10.61), Crew Quality [(G21.111) and (G21.211)], ESGs (G23.83), Minesweeping (M8.52), and interacting with Power Absorber Panels (D10.331).

(E53.361) A base with two or more Kinetic Cannons, even of different types, can combine them into narrow salvoes on the impulses that they are able to fire. While a single die roll will resolve the effects of such a salvo, note that the different types of Kinetic Cannons have drastically different accuracy levels at different ranges.

(E53.362) An Uncontrolled (G2.2) Qari ship can fire its Kinetic Cannon (if it has more than one Kinetic Cannon, it can only fire one of them) only once in a given turn (G2.23). An Uncontrolled base (E53.361) could fire one shot from all of its Kinetic Cannons on a single impulse of a given turn.

(E53.363) Kinetic Cannons cannot use Non-Violent Combat (D6.4) due to the nature of their ammunition.

(E53.364) A Kinetic Cannon is a heavy weapon (D17.17) for purposes of tactical intelligence. It cannot be Concealed

(D17.74), and there are no Dummy (D17.73) Kinetic Cannons.

(E53.365) When fired at a cloaked unit, use the effective range to determine whether or not a hit is scored and the true range to determine the damage scored. Note that the final damage scored by any hit on a cloaked target will be determined under (G13.37).

(E53.366) Only one guard (D7.83) is required to protect all elements of a single Kinetic Cannon from hit-and-run raids (D7.81).

(E53.367) Orion Pirates, WYN ships, and Barbarians cannot use Kinetic Cannons except in a simulator.

If the Orions are using a Kinetic Cannon, each option box can hold one Kinetic Cannon Light-1 (i.e., a one-shot KKL); two connected boxes could hold a Kinetic Cannon Medium-2 (i.e., a two-shot KKM); three connected boxes could hold a Kinetic Cannon Heavy-3 (i.e., a three-shot KKH); four connected boxes (such as the BCH) could hold a Kinetic Cannon Heavy and one other system (such as a Kinetic Cannon Light with one shot), or two Kinetic Cannon Mediums (each with two shots), or any other combination. Each connected box would represent one shot for that cannon, and the Orion could elect to include extra adjacent option boxes in a given Kinetic Cannon in order to increase the number of shots. For example, the three forward option mounts on a BR could hold one KKH3 or one KKM3 or one KKL3 or one KKM2 along with a KKL1 or some other combination. All Kinetic Cannon boxes in a given group of option boxes are considered to be a coaxial mounting (E53.12) if more than one type is present. Kinetic Cannons in separate option boxes (i.e., the wings of Orion ships) are considered to be separate cannons for all purposes and could all be fired on the same impulse.

(E53.368) Any firing by any Kinetic Cannon will blind a special sensor (G24.1342). Subsequent firings by a given Kinetic Cannon will blind another unblinded sensor (G24.131) or extend the blinding of a blinded sensor if there are no unblinded sensors.

(E53.369) A Legendary Weapons Officer may apply the effects of (G22.71) and/or (G22.72) to a single, or every, firing of each Kinetic Cannon on the ship or base to which he is assigned

(E53.37) TERRAIN: The following Terrain effects apply to Kinetic Cannons:

(E53.371) PLANETS: Blocking Fire (P2.32), EW Effects of an Atmosphere (P2.51), Target on a Planet (P2.52), Firing From a Planet (P2.53), Firing Through an Atmosphere (P2.542), and Weapons (P2.72).

(E53.372) ASTEROIDS: Clearing a Path [(P3.25), (P3.251), (P3.253), and (P3.254)] and Electronic Warfare (P3.33).

(E53.373) OTHER: BLACK HOLE: Direct-Fire Weapons (P4.23) and Electronic Warfare (P4.24).

VARIABLE PULSAR: Direct-Fire Weapons [(P5.32) and (P5.355)].

NEBULA: Electronic Warfare (P6.2).

WYN RADIATION ZONE: Sensor Rating (P7.2).

WHITE DWARF: (P10.5).

SUNSPOTS: Jamming (P11.3), Solar Flares (P11.4), and Shadows (P11.5).

NOVAS AND SUPERNOVAS: Other Effects (P12.5).

DUST CLOUDS: Electronic Warfare (P13.4).

ION STORMS: Radiation (P14.1) and Sunspots (P14.3).

RADIATION ZONES: Other Effects (P15.6).

NEUTRON STAR: (P15.5).

(E54.0) BOMB THROWER

Bomb Throwers are used by Sharkhunter ships to gain a lock-on to a cloaked ship. They transport a micro-T-bomb known as a "flashbomb" (E54.3) which exposes the cloaked ships to lock-on.

(E54.1) DESIGNATION

(E54.11) SSD: Bomb Throwers are designated BT on the SSDs. They are usually located on the forward part of a Sharkhunter ship, but some ships include aft-mounted Bomb Throwers.

(E54.12) FIRING RATE AND ARC: Each Bomb Thrower can fire once per turn and not within 1/4 turn (8 impulses) of being fired on a previous turn. Bomb Throwers usually have 240° firing arcs; the arc of each BT is designated on the SSD.

(E54.13) DAMAGE: Bomb Throwers are destroyed on Transporter damage points.

(E54.14) FIRE CONTROL: Bomb Throwers cannot be used without active fire control and a general lock-on to the target hex. Uncontrolled ships (G2.2) cannot use Bomb Throwers.

(E54.15) REPAIR: Bomb Throwers cost five points to repair (D9.7) and cannot be hastily repaired as transporters, nor can a transporter be hastily repaired as a Bomb Thrower.

(E54.16) WEAPON: Bomb Throwers are considered to be a weapon for all purposes, e.g., they cannot be used until the ship is activated if it was surprised (D18.12).

(E54.17) TECHNOLOGY: Bomb Throwers are simulator technology and cannot be used outside of the simulator.

(E54.2) FIRING PROCEDURE

(E54.21) ARMING ENERGY: Each Bomb Thrower requires one-half point of energy to operate. This energy can come from any source and can be supplied from reserve power (H7.0).

(E54.22) FIRING: Bomb Throwers, despite being transporters, are treated as direct-fire weapons for purposes of operations. They are fired during the Direct Fire Weapons Stage (6D2). The flashbomb detonates as the very last step within that Stage.

(E54.23) SHIELDS: The Bomb Thrower can function through the ship's own shields. The shields do not have to be down, and the operation of a Bomb Thrower does not expose the ship to risk or damage.

(E54.24) TARGET: Bomb Throwers are targeted on a specific hex, presumably one known or thought to contain a cloaked ship. They are unaffected by EW of any cloaked ship, but are affected as normal transporters by natural source EW and offensive EW (D6.37). Bomb Throwers can function into any hex which the ship could use a standard transporter to move an object into. This effectively limits a Bomb Thrower to range five (as adjusted for crew quality or technology levels). Bomb Throwers can (and indeed, must in order to function) place their flashbombs into the same hex as a ship or other unit as an exception to (M3.22).

(E54.3) FLASHBOMBS

(E54.31) DESCRIPTION: Flashbombs are a type of micro-T-bomb, but function in many different ways.

(E54.32) EMPLOYMENT: Flashbombs can be deployed by Bomb Throwers, or they can be dropped by shuttles (J51.3) but not from the shuttle bays of ships. They cannot be deployed by normal transporters or from mine racks.

(E54.33) EFFECT: Flashbombs explode immediately upon deployment. They do not wait (and cannot wait) for a ship to pass or for a later impulse. They cause no damage (not even to a drone, ESG field, cloaked decoy, or PA panel).
(E54.331) Their sole effect is to expose any cloaked ship (or ships) in the target hex to lock-on (G13.552). Gaining a lock-on requires active fire control and the use of one LAB box. Each lab can examine the effects of one flashbomb per turn (and not within 1/4 turn of a flashbomb detonation on a previous turn). There is no benefit to using more than one lab.
(E54.332) Cloaked ships in the same hex as a flashbomb detonation are exposed only to Sharkhunter ships, due to their special detection systems. Any Sharkhunter ship with active fire control and a lab assigned within 10 hexes of a cloaked ship exposed by a flashbomb gains an immediate lock-on, just as if the cloaked ship had struck a mine. Thereafter, the Sharkhunter ship must roll to retain that lock-on as provided in the rules on cloaking devices (G13.33).

(E54.34) AMMUNITION SUPPLY: Flashbombs are very small, and the quantity provided for each Bomb Thrower is effectively unlimited. In special scenarios where flashbombs must be handled as cargo, they are treated as explosive ordnance (G25.3) and each one is one space for cargo purposes. All flashbombs on a given ship are assumed destroyed with last excess damage box if not stored in cargo boxes.

(E54.35) TACTICAL INTELLIGENCE: Because of the small size of a flashbomb's explosion, their use is detected at Tactical Intelligence Level C as Transporter Activity if the using ship does not have a down shield. If the ship has a down shield facing the direction it is transporting the flashbomb, the use of a flashbomb is detected at Level G.

(E54.4) RESTRICTIONS

(E54.41) USE AS TRANSPORTERS: Bomb Throwers use transporter technology, but are not transporters *per se*. They cannot be used to transport anything except flashbombs and can only transport flashbombs for immediate deployment to a target hex, not to the cargo bay of another unit. Note that this exclusion includes (D21.3).

Except as provided in these rules, Bomb Throwers operate under all the restrictions and limitations of transporters (G8.0), e.g., Bomb Throwers cannot operate if the ship is currently using erratic maneuvers (C10.521).

(E54.42) ORION AND WYN OPTION MOUNTS: Bomb Throwers are not real weapons and, as such, are not generally available to the Orions (or WYNs). Players may experiment with allowing these races to use this weapon in the simulator. Each takes one option mount box and has a firing arc of 180°. The cost is four BPV points.

(E55.0) HYPERDRONES

The primary weapon of the Flivver race is the Hyperdrone. Despite the term "drone" in the name, this is not a drone in the traditional sense. Hyperdrones are either very fast seeking weapons or very slow direct-fire weapons, depending on your perspective. They form a new category, with some aspects of seeking weapons and some aspects of direct-fire weapons. While launched/fired in the Direct Fire Weapons Stage, they are resolved in some ways as if they were seeking weapons.

(E55.1) DESIGNATION

(E55.11) SSD: Each group of boxes on the SSD marked "HDRN" represents one Hyperdrone launcher and its associated magazines.

(E55.12) FIRING RATE: Each Hyperdrone launcher can fire twice during each turn, one Hyperdrone per firing, but not within eight impulses of any previous firing of that launcher.

An uncontrolled ship (G2.234) can only fire each Hyperdrone launcher once per turn.

(E55.13) DESTRUCTION: Each "drone" damage point destroys one Hyperdrone magazine.

(E55.131) If all magazines associated with a given launcher are destroyed, that launcher cannot function further until one of the magazines is repaired and reloaded. It is not possible to destroy the launcher itself.

(E55.132) Hyperdrone magazines are considered the "best" of the "drone" weapons on a ship for purposes of (D4.3223).

(E55.14) TECHNOLOGY RESTRICTIONS: Hyperdrones and their launchers are "simulator" weapons. They do not exist in reality, but only within the simulators. As such, they cannot be used by any other race.

(While they could, in theory, be used by a simulator version of any ship in the game, there is no real point in doing so, since only Flivver ships have the Hoverwarp technology needed to make Hyperdrone tactics work. Of course, you could theoretically produce a simulator version of just about any ship with both Hoverwarp and Hyperdrones.)

If installed on a simulated Orion or WYN ship, each magazine would take one option mount and only connected option mounts would be linked to a specific launcher.

(E55.15) REPAIR COST: Repair of a Hyperdrone magazine costs 3 repair points. Hasty repairs cannot be used. A Hyperdrone launcher can continue to launch drones from undamaged magazines while another magazine connected to that launcher is under repair.

(E55.16) FIRE CONTROL: Hyperdrones cannot be fired without active fire control (by the firing ship).

(E55.161) Hyperdrones can be fired ballistically, but could never hit a target. (They might hit an ESG or be used to bombard a planet.)

(E55.162) Hyperdrones cannot be fired at a target more than 35 hexes away.

(E55.163) Hyperdrones cannot be fired at a cloaked target unless the firing ship has a lock-on. If a lock-on exists, the damage caused is adjusted by (G13.35).

(E55.17) ENERGY COST: There is no energy cost to fire a Hyperdrone.

(E55.18) SCATTER-PACKS: Hyperdrones cannot be placed in scatter-packs.

(E55.19) TECHNOLOGY: Hyperdrones are simulator technology and cannot be used outside of the simulator.

(E55.2) LOADING PROCEDURE

(E55.21) MAGAZINES: Each magazine box holds six Hyperdrones.

(E55.22) CARGO: All Flivver ships have cargo storage for spare ammunition. These are 50-point cargo boxes. Each Hyperdrone takes one space point.

(E55.23) RELOADING: Magazines are reloaded from cargo storage in the same manner as drone racks. No more than one magazine from each launcher can be reloaded during any given turn. The launcher can continue to fire drones from other magazines while reloading one or two of its magazines.

(E55.24) AMMUNITION: Hyperdrone racks can launch (and their magazines can hold) standard drones (but only one-space drones). Each drone launch takes up one Hyperdrone firing opportunity. Drones launched from Hyperdrone racks can only be targeted on targets within the firing arc of the Hyperdrone rack. Flivvers use the Federation percentages (FD10.6) for buying special drones.

(E55.3) COMBAT PROCEDURE

(E55.31) FIRING: Hyperdrones are fired during the Direct Fire Weapons Step, before any other weapons are fired or allocated.
(E55.311) All Hyperdrone fire is simultaneous. All ships armed with Hyperdrones must designate how many they are firing and the target of each Hyperdrone before any are resolved.
(E55.312) Hyperdrones do not have to be "controlled" as seeking weapons do.
(E55.313) Because of the unique operating characteristics of the Hyperdrone, it cannot be launched at a target at a range of less than one hex.
(E55.314) A ship performing erratic maneuvers cannot fire Hyperdrones.

(E55.32) PROCEDURE: When fired, each Hyperdrone "moves" toward the target using the standard seeking weapon movement rules, except that it moves up to 20 hexes in each impulse. This movement is conducted entirely within the Direct Fire Weapons Step. See, however, (E55.33) below.
(E55.321) Hyperdrones are initially placed on the map facing in any direction within the limits of the firing arc.

Hyperdrones from L+LF weapons can be placed facing directions A, E, or F relative to the ship.

Hyperdrones from RF + R weapons can be placed facing in directions A, B, or C relative to the ship.
(E55.322) Hyperdrones cannot turn or HET. They can sideslip normally. This severely restricts their ability to approach targets from a variety of directions as drones can.
(E55.323) Hyperdrones have a maximum range of 40 hexes, but moving more than 20 hexes requires two consecutive impulses. They can move less than 20 hexes in their first impulse for tactical reasons, but this reduces their maximum range (i.e., they do not move the "lost" hexes in a third impulse).
(E55.324) Once a Hyperdrone enters the hex of its target, a hit is automatic and immediate; see (E55.42). Each Hyperdrone scores 8 damage points.
(E55.325) It is possible that, if the target is just over 20 hexes away, a Hyperdrone which moves its full 20 hexes could "miss" a target that manages to move out of the way of the weapon (i.e., into a hex the weapon cannot sideslip into) during the intervening movement step. This could also happen if the target is displaced or transported out of the weapon's engagement arc in the intervening impulse.
(E55.326) If a unit docks to another unit, it remains the target of a Hyperdrone still in flight. If a target unit docks or lands inside another unit during the intervening impulse, that other unit becomes the target.

(E55.33) DEFENSIVE ACTIONS: Any direct-fire weapon can be used against Hyperdrones, including other Hyperdrones.
(E55.331) As each Hyperdrone moves, the opposing player (the player controlling the target) may select any hex of its path and require the Hyperdrone to stop in that hex. This selection is made as each Hyperdrone moves each hex; once a Hyperdrone has moved to a hex, any previous hexes of its movement become unavailable for defensive fire. All Hyperdrones fired in a given impulse (as well as those still on the map from the previous impulse) must move (and possibly be stopped) before any counterfire is allocated or resolved or any damage from a Hyperdrone is resolved. (There is really no good reason for the defending player not to stop every Hyperdrone at some point in its flight in order to maximize the defensive opportunities.)

(E55.3311) In the case of monsters or other non-player units, stop the Hyperdrone at the "best" firing opportunity. For MCIDS, this would be three hexes, unless the weapon was launched closer to the target than that.

(E55.332) After each Hyperdrone has been moved and stopped, the defending player may then use any or all of the direct-fire weapons [see (E55.334)] on any of his units (within the applicable rules) to fire at any or all of the Hyperdrones. This includes multiple shots by aegis-controlled weapons. Each Hyperdrone is destroyed after receiving six damage points.

NOTE: As the decision to fire weapons was made in the Fire Decision Step of 6D1, a player who realizes during the Direct Fire Step of 6D2 that his ship will be destroyed by Hyperdrones can fire its weapons at those Hyperdrones (apparently to no avail) but cannot use this defensive opportunity to fire his weapons at other targets. The chance to fire at non-Hyperdrone targets is already passed.
(E55.333) After all defensive fire is resolved, the player controlling the Hyperdrones then moves them (in any order) to complete their movement for the impulse. Presumably, many will hit their targets. This damage is recorded and resolved in the Direct Fire Weapons Consequences Stage.
(E55.334) Heavy weapons normally penalized when firing at drones are penalized in the same manner when fired at Hyperdrones (FD1.52).
(E55.335) Hyperdrones which remain on the map at the end of an impulse (E55.323) may be attacked by any direct-fire weapon in the normal Sequence of Play. [It will not be possible to "attack" them with seeking weapons due to the Sequence of Play, but see (E55.336).] Hyperdrones may be placed in stasis or displaced. They may be distracted by chaff or wild weasels (E55.432).
(E55.336) If a Hyperdrone did not hit its target on the impulse of launch, the target may launch a counter seeking weapon. This counter seeking weapon will always be between the ship which launched it and the incoming Hyperdrone, provided the ship does not leave the hex of the drone, and if the counter seeking weapon has an explosive warhead (as opposed to a phaser module, null module, ECM module, multi-warhead module, or other non-explosive module), the Hyperdrone will be destroyed by the impact.
(E55.337) If a Hyperdrone did not hit its target on the impulse of launch, and the target is destroyed before the Hyperdrone can complete its movement, the Hyperdrone is removed.

(E55.4) SPECIAL RULES

(E55.41) OVERLOADS: Hyperdrones cannot be overloaded.

(E55.42) EW: Hyperdrones are affected by EW; use the table in (D6.361) to reflect their effect.

(E55.43) WILD WEASELS: There is no time to launch a wild weasel during the Direct Fire Weapons Step, so WWs are generally not a good defense against Hyperdrones.
(E55.431) A ship protected by a wild weasel (including the explosion period of a destroyed WW) cannot be targeted by Hyperdrones; they will retarget onto the WW if fired at the ship.
(E55.432) If the Hyperdrone does not reach its target during the first impulse of flight (E55.323), a wild weasel launched by the target in the next impulse would be effective.
(E55.433) Hyperdrones will contribute to WW collateral damage (J3.31).

(E55.44) TERRAIN-INDUCED DAMAGE
(E55.441) WEB: A Hyperdrone which hits a web hex of more than 20 strength points will be destroyed, although it will hit a target in such a hex before being destroyed. If the web hex has a strength of 20 or less, the Hyperdrone will pass through the web, losing an amount of its total range equal to the strength of the web hex. If a Hyperdrone completes its first impulse in a web hex, and the web hex was strengthened by the Tholians in an intervening period, the additional strength of the web will also be subtracted from the total movement available to the Hyperdrone, but it will not be destroyed as a result unless it enters another web hex and that hex has a strength greater than 20.
(E55.442) Black holes affect Hyperdrones as both direct fire and seeking weapons [(P4.22) and (P4.23)].
(E55.443) Asteroids, ring material, and dust clouds do not damage Hyperdrones. Other weapons and units cannot follow Hyperdrones through asteroid hexes (P3.23).
(E55.444) Atmosphere affects Hyperdrones as a direct-fire weapon, providing ECM but not weapons degradation. The Hyperdrone is not slowed by its passage through the atmosphere.
(E55.445) Mines will not be triggered by a Hyperdrone.

(E55.45) MODULES: Hyperdrones cannot use any of the drone modules provided in (FD10.0) or elsewhere. They can only use the 8-point explosive warhead.

(E55.46) FIGHTERS: Flivver fighters can carry Hyperdrones. Loading is the same as a one-space drone.

(E55.47) SPECIAL SENSORS
(E55.471) Special sensors cannot attract or "turn off" Hyperdrones, even those still in flight after their first impulse of movement.
(E55.472) Because of their high-energy launch, the firing of a Hyperdrone will blind a special sensor.

(E55.48) TRACTOR BEAMS
(E55.481) A ship held in a tractor beam cannot fire hyperdrones at any unit except the one operating the tractor beam (G7.943).
(E55.482) Hyperdrones cannot be tractored, even if they remain on the map during an impulse (E55.323).

(E55.49) ESGs: If a Hyperdrone hits an ESG field, this is resolved as contact between the field and an object which takes six damage points to destroy.

END OF SECTION E, MODULE C4

(FD51.0) FRAX CATFISH DRONES

Frax Submarines, simulating 'wet navy' U-boats, use a cloaked drone, often launched under cloak by ballistic targeting. It is purely a 'simulator' weapon and cannot be used by any non-simulator race.

Players may elect to use Hidden Movement (G13.61) for the Submarines and Catfish drones, at the cost of much greater complexity.

Catfish drones are an (FD10.53) Frame Cost Addition, and are neither a frame nor a module.

(FD51.1) CONSTRUCTION

(FD51.11) FRAME: A Catfish drone can be built on a type-I, -II, -IV, or -V drone frame. This costs five BPV points (FD2.22). The warhead capacity is unchanged. Type-VI and type–III drones cannot carry cloaks.

(FD51.111) The Catfish drones already have elements of ATG; this cannot be added. Extended range and speed improvements can be added as normal.

(FD51.112) Catfish drones are General Availability drones. Only Frax Submarines can carry them (FD51.14).

(FD51.12) PERMISSIBLE MODULES: Catfish drones can only hold explosive, internal armor, Spearfish (after Y175), or null modules. No external armor can be carried. The use of ECM modules is defined in (FD51.313). Any new modules added to Star Fleet Battles will note in their rules description if they can be carried on this drone frame. If not noted, they cannot be carried.

Other modules can be carried by Catfish drone frames if both sides agree to their use before play begins since this is a simulator drone.

(FD51.13) AVAILABILITY: The Catfish drone is purely a 'simulator' weapon and cannot be used by any non-simulator ship, and only by Frax Submarines in the simulator.

(FD51.14) LAUNCHERS: Catfish drones can only be launched by Frax Submarines. They cannot be launched from "Missile" racks (FD52.0). They cannot be used by fighters or placed in scatter-packs. They cannot be launched by non-Submarine Frax warships.

(FD51.15) EXCEPTION: Note that Catfish drones are an exception to the prohibitions on the launching of seeking weapons by cloaked units as provided in (D19.21) and (G13.133). It does not create an exception to those rules allowing non-Frax cloaked units to fire or launch other weapons. [Frax Submarines can launch other drones while under cloak.]

(FD51.2) OPERATIONS

(FD51.21) LAUNCHING: A Catfish drone is launched, already cloaked, on a ballistic course under the provisions of (FD5.252), to find a target.

(FD51.211) The drone must be launched on a ballistic course. It MUST travel in as straight a line as possible. It can sideslip, but it cannot turn. This restriction is canceled if the drone is activated (FD51.24).

(FD51.212) The drone MUST use this procedure, even if the launching unit is uncloaked. It cannot operate as a normal drone.

(FD51.213) TARGET SELECTION: At the time of launch, the target type must be specified, using the procedures for a type-III 'Tame Boar' drone (FD5.252). This can be by size class or TacIntel hull type, as per (FD5.256).

(FD51.214) Any unit may attempt to gain a lock-on to the drone at the instant of launch, using the formula in (G13.333). Note that the Speed Factor (FD51.311) is +4.

(FD51.2141) If using Hidden Movement (G13.61), only allow such an attempt (hence announcing the existence of the drone) if such an attempt could succeed or if the drone is within four hexes of any unit with active fire control. Note that without ECCM, this lock-on attempt will surely fail. The drone can be located as usual on Impulses #8 and #24 (G13.612).

(FD51.215) A Catfish drone will not begin trying to acquire a target until it has moved four hexes from the point of launch.

(FD51.22) ACQUIRING A TARGET: When the drone is within two hexes of an eligible uncloaked target in its FA arc, it will turn and pursue that target as though a normal drone. It will not uncloak. It can turn and HET.

(FD51.221) If the drone is ever more than four hexes from the target, or if the target is outside the drone's FA arc, the drone loses tracking and is removed from the map. Note that this might occur because the target was able to outrun the drone, the target or drone was displaced, the drone was held in a tractor by another unit, or a variety of other reasons.

(FD51.2211) Targets are acquired and lost in the Lock-On Stage of the Impulse Activity Segment (6B3).

(FD51.222) A wild weasel will distract the drone normally if it has accepted the protected ship as its target. Any Catfish drones that attempt to target a unit protected by an unvoided wild weasel (including a weasel in its explosion period) will accept the weasel if it is also within detection range.

(FD51.2221) If the wild weasel is voided, the drone will attempt to revert to the original target. If that target is outside the four-hex range and FA arc of the drone, the drone is removed from the map.

(FD51.2222) If the weasel is outside the Catfish drone's detection range, the drone will still ignore the protected ship, although it will not pursue the weasel unless the weasel is itself subsequently detected by the Catfish drone.

(FD51.223) If the wild weasel is launched before the drone acquires a target, the drone will treat the wild weasel as a ship of the appropriate size and hull type.

(FD51.224) If the target cloaks, the drone may attempt to retain lock-on as though a type-III or ATG drone (i.e., with a sensor rating of 6). Note that it has no ECCM.

(FD51.23) CONTROL: The drone is under its own control at all times. It cannot be controlled by the launching ship or any other unit. It cannot gain ECCM from the launching ship.

(FD51.24) ACTIVATION: Catfish drones which have missed, or which might miss, their targets can be "activated" by the launching unit. (Even a cloaked Submarine can activate its Catfish drones.) Catfish drones cannot be activated until they have moved at least four hexes from their point of launch (FD51.215).

(FD51.241) Only the launching unit can order a Catfish drone to become active, and this is done in the Cloaking Device Stage (6B2) of the Sequence of Play in the Deactivate Cloaking Device Step.

(FD51.242) A Catfish drone which becomes active loses all benefits of its cloak, but functions from that point as an ATG drone using "Tame Boar" (FD5.252) targeting. The owning player (the weapon is not under "control") may order it to begin turning left or right; it will continue turning at its minimum turning radius, in effect circling, until it finds an accept-

able target within acceptable range (i.e., eight hexes) or runs out of fuel.
(FD51.243) An "activated" Catfish drone can accept any target, based on its original programming as defined in (FD51.213) that is within eight hexes of itself and within its forward (FA) arc.
(FD51.244) If more than one acceptable target is within eight hexes and in the FA arc of an "activated" Catfish drone, the drone will engage the closest target. If more than one acceptable target is at the same range and in arc, the Frax player must designate each target and assign a number or letter to them. Counters with the appropriate numbers or letters are then placed in a cup, and one is drawn by the Frax player to determine the actual target. This counter must be shown to the opposing player when the drone hits the target or is identified, e.g., by labs or aegis systems. If more than one Catfish drone might engage two or more equidistant targets, each will have to have its own record chit provided.

(FD51.25) TERRAIN: Catfish drones function in all terrain types as standard drones, with the exception that some terrain types might void the drone's cloaking device in addition to damaging or destroying it.

(FD9.26) CONTROL: Uncontrolled (G2.20) ships cannot launch Catfish drones.

(FD51.3) FIRING AT CATFISH DRONES

(FD51.31) CLOAKED: The drone is cloaked. Thus, the usual penalties apply to all direct-fire weapons which are fired at the drone. [Exception: ADD. See (FD51.312) below.] Seeking weapons and tractors require a lock-on as usual.
(FD51.311) The Speed Adjustment Modifier (SF) used in (G13.331) and (G13.333) for all speeds of Catfish drone is +4.
(FD51.312) ADDs can fire if the firing unit has a lock-on to the drone. One is added to the die roll. Use the true range. The table in (G13.37) is not used: a hit destroys the drone.
(FD51.313) Due to the cloak, the Catfish drone cannot be accompanied by an ECM drone (which cannot lock-on to it). A Catfish drone might have its own ECM module (which will not become effective until the drone "goes active") and will benefit from that module as would a scout lending itself ECM under (G24.28).
(FD51.314) The cloaking device cannot be removed.
(FD51.315) Unless stated otherwise in its description, monsters treat the cloak on a Catfish drone the same as a cloaked ship. In most cases, this will mean that the monster considers the Catfish drone to not be a cloaked target. If the monster has MCIDS, this system is unaffected totally by the Catfish drone's cloaked status, even if the monster cannot normally penetrate a cloaking device with its "sixth sense".
(FD51.316) Positional stabilizers (G29.0) create a distortion in space which causes Catfish drones within three hexes of the base to void their cloaking devices. Ships are able to avoid this voiding effect by adjusting their cloaks, but the small computer minds of Catfish drones are not able to perform this adjustment.

(FD51.32) MINES: Due to the cloak and the small size of the drone, a Catfish drone will only trigger a mine on a roll of one or two. This is an exception to (G13.551).

(FD51.33) IDENTIFYING CATFISH DRONES: Scouts, labs and full aegis systems use the normal procedure, but the effective range will be increased for the cloak. This effectively limits the system to a range of zero except for scouts (G24.25).

(FD51.34) SCOUTS: Scouts can use various scout functions on Catfish drones.
(FD51.341) Breaking Lock-ons (G24.22) and Attracting Drones (G24.23) can be achieved if the drone has acquired a target (not if still ballistic) and if the effective range is 15 or less. For these functions the scout does not have to be in the Catfish drone's FA arc and does not require a lock-on to a Catfish drone which has acquired a target.
(FD51.342) Identifying Drones (G24.25) can be achieved subject to the range penalty for the cloak.

(FD51.4) IMPACT

(FD51.41) EFFECT: The drone impacts the target normally, exactly as though it were a conventional drone.

(FD51.42) ELECTRONIC WARFARE: The drone (being cloaked) has no ECCM (unlike an ATG drone) and cannot receive ECCM. It is affected by all ECM as though it were a normal drone (D6.36).

(FD51.5) X-CATFISH

X-Catfish drones are created by adding the X-Catfish modification to the type-VII or type-VIII drone frames for five BPV points per drone so modified. In addition, the X-Catfish drones gain the (XG13.44) ECM benefit of an X-cloak. Type-IX drones cannot carry cloaks.

Catfish Drones were designed by James K Davies of the UK.

(FD52.0) FRAX MISSILE RACKS

The larger Frax Submarines and some other Frax warships (e.g., Missile Destroyer) used "missile racks" (hit on "best" drone rack) to increase their firepower.

(FD52.1) DESIGNATION

(FD52.11) TYPE: Missile racks are a type of drone rack and, in fact, are often referred to as type–M drone racks.

(FD52.12) CAPACITY: Missile racks hold four Type–IV drones. They cannot hold any other type of drone, except for Type–Vs in the appropriate years. All modules available to type–IV drones can be used in drones loaded into a missile rack. [The Frax use the Klingon drone percentages (FD10.6).] Note that while a type-IIIXX drone is nominally a two-space drone, it cannot be launched from a missile rack.

(FD52.13) RELOADING: There are no spare or reload drones for a missile rack. The rack can only be reloaded by a base or Submarine tender (the FCR performs this duty) docked to the ship. Note that "surface" warships can also reload their missile racks from a "Submarine tender" (FCR).

This reloading is done by (G25.3) directly into the missile rack. The missiles do not first go to an intermediate storage facility (as there isn't one).

(FD52.14) TECHNOLOGY: Missile racks are simulator technology and cannot be used outside of the simulator.

(FD52.2) OPERATIONS

(FD52.21) BASIC: A ship equipped with missile racks can launch one "missile" (i.e., a drone from a missile rack) every impulse (one total, not one per rack). It can launch subsequent drones from the same or different missile racks. In effect, a unit equipped with missile racks can empty all of its racks in a number of impulses that is four times the number of racks on the ship.

(FD52.22) CLOAKED SHIPS (i.e., Frax Submarines) can launch ATG-drones from their missile racks even while cloaked. Only missile racks can launch ATG drones from cloaked ships. All Frax Submarines have ATG for all of their drones at no cost; see (R51.N1).

(FD52.3) X-MISSILE RACKS

(FD52.31) X-missile racks function identically to standard missile racks except that they can launch type-VIII drones. This type of rack will only be found on Frax X-missile units.

Missile Racks were designed for SFB by Stephen V Cole.

(FD53.0) SUBSPACE-GUIDED MISSILE

The Subspace-Guided Missile was an outgrowth of the actual probe drone module. Unlike that module, the Subspace-Guided Missile was programmed in the simulators to remain under control of the Qari ship irrespective of the presence of enemy ships.

(FD53.1) CONSTRUCTION

(FD53.11) ONE-SPACE: Subspace-Guided Missiles are one space drones. They can carry any warhead module that a single space drone can carry. (This would allow the SGM to mimic the explosive/penetrating effects of the Kinetic Cannon by using standard explosive or Spearfish warheads.)

(FD53.12) AVAILABILITY: Subspace-Guided Missiles are used only by the Qaris and only in simulations. They are not available to any other race. They first became available to the Qaris in simulations in Y156 and cannot be used prior to that date. All drones on a given Qari ship can be Subspace-Guided Missiles.

(FD53.13) CARRIAGE: This drone is available to Qari ships, including bases, but not to fighters. It cannot be used in a scatter-pack except as a standard ATG drone.

(FD53.14) BPV ADJUSTMENT: For each drone converted to a Subspace-Guided Missile, the Qari player must pay two BPV points. These points are added to the BPV of the ship (but do not increase the available Commander's Option Points) and do not include any speed upgrades or modules, but do include ATG. This cost does include reload drones.

(FD53.15) RECORDS: Whether or not a given drone is a Subspace-Guided Missile must be recorded as with any other drone loaded into a drone rack or held in reload storage.

(FD53.2) OPERATIONS

(FD53.21) TARGETING: A Subspace-Guided Missile can be maneuvered like a probe drone (FD6.22), although it must be given a legal target at the time of launch. It can be maneuvered behind a target and then released to operate as an ATG drone. The Subspace-Guided Missile operates as any other launcher-controlled drone with the following specific exceptions unless released to its own terminal guidance.

(FD53.211) A Subspace-Guided Missile that has not been released to its own tracking will not be distracted by a wild weasel (J3.0), is not affected by the ECM status of its target (D6.36), cannot have its lock-on broken by a special sensor (G24.22), and cannot be attracted by a special sensor (G24.23).

(FD53.212) A Subspace-Guided Missile operates against a cloaked target as a standard drone if the controlling unit retains lock-on to the cloaked unit.

(FD53.213) A Subspace-Guided Missile that is being controlled by one ship cannot be transferred to the control of another unit.

(FD53.214) A Subspace-Guided Missile is affected under (D6.36) by any ECM encountered by the guiding unit, such as a poor crew (G21.111) and offensive electronic warfare (G24.219).

(FD53.215) If released to its own guidance, a Subspace-Guided Missile operates in all ways as a drone with an ATG system.

(FD53.22) TARGETS: A Subspace-Guided Missile can be targeted on anything that a standard drone can be targeted on except units smaller than size class 5. The Subspace-Guided Missile can be brought to within five hexes of such a size class 6/7 target, but must then be released to its own guidance. Note that this means that the Subspace-Guided Missile cannot be used to sweep mines in the command guidance mode.

(FD53.23) RESTRICTIONS: The use of a Subspace-Guided drone places the controlling unit under some limitations.
(FD53.231) All normal seeking weapon control rules apply to the ship controlling the Subspace-Guided Missile, e.g., it cannot use erratic maneuvers.
(FD53.232) Because of the intense focus needed to control a Subspace-Guided Missile, a ship must use two seeking weapon control channels to control one. No ship may control more than three at one time, even if nominally capable of controlling more. Exception: Ships with special sensors can control one additional Subspace-Guided Missile by using a special sensor in seeking weapon control mode (G24.24). A unit can control seeking weapons normally with its remaining control channels, i.e., a ship able to control a number of seeking weapons equal to double its sensor rating could control three Subspace-Guided Missiles and six normal drones at the same time.
(FD53.233) A ship that is uncontrolled (G2.2) cannot control a Subspace-Guided Missile.
(FD53.234) If communications are disrupted due to Sunspots (P11.1), including such an effect in an Ion Storm (P14.3), any Subspace-Guided Missiles not previously released to their own guidance are destroyed and removed from the board.

SSGMs were designed for SFB by Stephen V Cole.

(FD54.0) SCUD MISSILES

The Scud missile is a large bombardment weapon which the Qaris were programmed to use. It was relatively rare, but capable of immense damage and difficult to destroy.

(FD54.1) CONSTRUCTION

(FD54.11) DESIGN: The Scud is a unique seeking weapon. It is essentially a very large drone with numerous built-in defensive systems, making it very difficult to destroy. There is a limited ability to exchange warhead capability to increase the missile's defensive ability.

(FD54.12) IMPROVEMENTS: Scuds were upgraded in their speeds over the years that they were used in the simulators. The BPVs, which increase as speed increases, are added to the BPV of the launching platform for each Scud carried.
(FD54.121) Scuds are moderate speed (speed-12) missiles until Y166, BPV 0.
(FD54.122) Scuds are medium speed (speed-20) missiles from Y166 until Y179, BPV 8.
(FD54.123) Scuds are fast speed (speed-32) from Y179, BPV 16.

(FD54.13) DESTRUCTION: A Scud is normally destroyed when it has accumulated 24 damage points; however, the Qari player may adjust this by rules (FD54.132), (FD54.23), and (FD54.32) below before a given scenario begins.
(FD54.131) Each Scud missile carried by a Qari ship (capable of launching Scuds) must be individually accounted for in writing as to the strength of its warhead and any adjustments to its defensive capabilities. These records must be completed in writing before the scenario begins; the opposing player may inspect the records after the scenario is over. When loading or reloading a Scud launcher, the specific Scud being loaded from storage must be noted.
(FD54.132) The Qari player may increase the number of damage points required to destroy a Scud missile by reducing the warhead. For every four points of reduction on the warhead's strength [see (FD54.21), 96 points], the Scud gains one more point towards survival. This reduction cannot exceed 50% of the warhead and is cumulative with any points deducted for tractor defense (FD54.24) and endurance (FD54.23).

EXAMPLE: If the Qari player reduced the warhead of a Scud missile by 16 points, that missile would now require 28 (4 + 24) damage points to be destroyed.

(FD54.14) EMPLOYMENT: Scud missiles are mounted only on certain support ships and on some Qari bases.
(FD54.141) Ships equipped with Scud missiles are available only in limited numbers. They are never deployed alone, and each one always has two other (non-Scud) ships in the same squadron with it.
(FD54.142) No more than one ship equipped with Scud missiles can be in any force except when attacking a base of size class 3 or larger, in which case a maximum of two such ships can be employed.

(FD54.15) SCUD LAUNCHERS: Each Scud launcher on a given unit represents the ability to launch one Scud missile. See (FD54.25) for reloads.
(FD54.151) Scud launchers are destroyed on "drone" damage points. If the launcher is destroyed while a Scud is loaded in it, the Scud is destroyed and the ship takes 25 additional damage points as a separate volley.

(FD54.152) Scud missiles cannot be carried by any other units.
(FD54.153) Scud missile launchers are repaired for three points. They cannot be hastily repaired.
(FD54.154) Scud missile launchers can only carry and launch Scud missiles.

(FD54.2) OPERATIONS

(FD54.21) WARHEAD: The warhead of a Scud missile will nominally score 96 points of damage if it hits its target. This damage may be reduced due to the weapon's inaccuracy.
(FD54.211) A Scud missile operates as if it has four points of natural ECM operating against it at all times. This is true even if the target of the Scud missile has no ECM of its own.
(FD54.212) A Scud missile has no ECCM and cannot be lent ECCM by any means.

(FD54.22) BALLISTIC LAUNCH: The Scud missile is almost totally ballistic. This makes it devastating against ground targets, bases, and slow moving units on predictable courses, but less useful against ships.
(FD54.221) It is launched on a preset course using the "Tame Boar" procedures outlined in (FD5.252). However, the Scud cannot lock-on to any target more than one hex away from itself. The Scud cannot be guided in any way except by itself under (FD5.252). Scuds cannot be distracted or affected by wild weasels (J3.0), PF scouts (K1.756), or wild SWACs (J9.24). They cannot be attracted (G24.23) or deactivated (G24.22) by special sensors.
(FD54.222) Scud missiles will not accept targets that are 10 hexes or closer to their launch hex, but once they have accepted a target, they can pursue that target anywhere within the restrictions of other rules. It will retain that lock-on so long as it remains within 12 hexes of the target. If, at any point, the target is more than 12 hexes away, lock-on is lost.
(FD54.223) The Scud missile has a unique ability to accept other targets. If a Scud loses its current target (by the target or the Scud being displaced, the target cloaking, or the target simply moving out of the Scud's detection range by the end of a movement segment), it will continue on its current trajectory (no turns or sideslips) until it finds another target or it runs out of endurance.

(FD54.23) ENDURANCE: Scud missiles have a maximum endurance of 50 hexes. The Qari player may increase the endurance of a Scud missile by reducing the warhead. For every two points of reduction on the warhead's strength, the Scud gains four hexes of endurance. This reduction cannot exceed 50% of the warhead and is cumulative with any points deducted for tractor defense (FD54.24) and increased durability (FD54.132). You cannot reduce the warhead by one point to gain two hexes of range. The only allowable exchanges are two points of warhead reduction for four hexes of range. Time spent held in a tractor beam counts against the Scud's endurance, just as it would for a drone. Time spent in stasis does not count against endurance, again just as would be the case for a drone.

EXAMPLE: If the Qari player reduced the warhead of a Scud missile by 16 points, that missile would gain 32 hexes of endurance for a total of 82.

(FD54.24) TRACTORS: The Scud was obviously vulnerable to being tractored. To counter this, the Scud has a built-in anti-tractor field with a strength of one point of negative tractor. This can be increased by reducing the warhead. For every two points of reduction on the warhead's strength, the Scud gains a point of negative tractor. This reduction cannot exceed 50% of the warhead and is cumulative with any points deducted for Endurance (FD54.23) and increased durability (FD54.132). The negative tractor energy lasts for the entire life/flight of the Scud.

EXAMPLE: If the Qari player reduced the warhead of a Scud missile by 16 points, that missile would now have nine points (total) of negative tractor.

(FD54.25) RELOADING: Each Scud missile launcher is provided with two reload Scud missiles. The reloading of a Scud missile launcher must be recorded and requires three turns. If the launcher is destroyed while it is being reloaded, the Scud missile being loaded into it is lost, but no extra damage is scored against the ship (FD54.15). The reloads cannot be destroyed by damage to the ship.

(FD54.26) LAUNCHING: A Scud missile is launched under all of the conditions and procedures as a normal drone except that the launch must be a ballistic one (FD54.22).
(FD54.261) The launching unit must have active fire control to launch a Scud missile and cannot be uncontrolled (G2.2).
(FD54.262) A Scud missile moves as a drone and has the turn mode of a drone, i.e., one at all speeds.
(FD54.263) No Scud unit can launch two Scuds within 16 impulses of each other.

(FD54.27) IDENTIFICATION: A successful identification of a Scud missile by any of the procedures listed in (F1.4) will reveal the size of the warhead, the target (if the Scud has locked onto one), the Scud's total endurance, how much negative tractor it has available, how many total damage points are required to destroy it, and how many damage points have been scored against it to that point (if not previously known).

(FD54.3) DAMAGING SCUDS

(FD54.31) DAMAGE DETERMINATION: Scud missiles were programmed to use a special jamming capability that existed only within the simulator. This had the effect of making them very difficult to destroy as it became virtually impossible to predict how many weapons would be needed to do enough damage to destroy any given Scud missile.
(FD54.311) Every weapon fired at a Scud missile must, after determining damage, roll one six-sided die and subtract the result from the damage scored. An individual die is rolled for each weapon. Weapons that fire more than once per impulse (such as gatling phasers) have one die rolled per shot fired by the weapon, not one die for each weapon. If the die roll indicates more reduction than the damage scored by that specific weapon, that damage is reduced to 0 and none of the reduction from that die roll is applied to any other damage scored on the Scud. The player must announce which part of any given damage element he is rolling reduction for before he rolls the die for that element. If two or more elements scored the same amount of initial damage, the player could roll a number of dice for each element that is the same amount of damage, but he must announce that he is doing so before the dice are rolled.
(FD54.312) For narrow salvoes, each weapon must roll its own reduction die after determining if the salvo hit the Scud missile. This die is rolled individually for each weapon, not for the entire narrow salvo.
(FD54.313) An ADD hit on a Scud missile will do one point of damage with no reduction die roll.
(FD54.314) ESGs operate against Scud missiles normally with no reduction.
(FD54.315) Plasma torpedoes and drones must also roll one die and subtract the resulting number from the damage that they have nominally scored against the Scud missile.

(FD54.316) The damage reduction is also applied to damage from mines triggered by a Scud missile or that are triggered by other units when the Scud missile is in the explosion radius of the mine. Note that the damage to non-Scud units is not reduced.

(FD54.317) EXAMPLE: A Federation FFA moves to within two hexes of a Scud missile moving at medium speed and uses its aegis system to gain information on it. This reveals that the Scud missile has a warhead of 48 points, takes 36 points to destroy, and has no increase in its endurance or tractor defense. Unfortunately, the FFA does not have any battery power available, having used a mid-turn speed change to intercept the Scud missile, and has no power allocated to its tractors. The FFA captain is confident, however, that his ship's weapons will be more than adequate to the task of destroying the Scud missile.

The FFA fires one of its phaser-Gs and two of its phaser-1s at the Scud missile from two hexes range. The phaser-G rolls 1, 3, 4, and 6, scoring respectively 4, 4, 3, and 1 points of damage. The phaser-1s roll a 3 and a 4 for, respectively, 5 and 6 points of damage, at this point a nominal total of 23 damage points. For each of the phaser shots, the Federation captain must now roll one die for reduction. He rolls only three dice for the phaser-G, since the lowest possible roll is a one which means that the last shot by the phaser-G automatically scored no damage. For the other three shots he rolls, respectively, a 3, 4, and 1, resulting in a total of (4 - 3 = 1; 4 - 4 = 0; 3 - 1 = 2) 3 points of damage. The Federation captain then rolls two dice for damage reduction on the phaser-1 shots, rolling, respectively, a 6 and a 1. The 6 is more reduction than the 5 points that were scored, which means no damage is scored for that shot, but there is no additional reduction applied to any other damage. The 1 is subtracted from the 6 leaving 5 points of damage from the second phaser-1 shot. A total of 8 points of damage has been scored at this point, and the FFA's captain is just a little rattled.

On the following impulse, the FFA turns to bring its offside weapons into arc, reducing the range to one hex, and fires its remaining phaser-G and phaser-1 as a narrow salvo, rolling a 3. The result of this die roll is, nominally, that the phasers score (4 + 4 + 4 + 4 + 5 =) 21 points of damage, but a damage reduction die must be rolled for each element of the salvo. The Federation captain will roll a total of five dice for reduction, announcing before each roll which part of the damage he is rolling for. The Federation captain first takes four dice and announces that he is rolling for the four phaser-G shots. He rolls the dice scoring a 2, 3, 4, and 5. The 4 and 5 result in those two elements scoring no damage, the 3 leaves one point of damage, and the 2 leaves two points of damage, for a total of 5 points. He then rolls one die for the phaser-1 damage, rolling a 1 and leaving 4 points of damage. The result of the narrow salvo is thus 9 points of damage. Added to the 8 points scored on the previous impulse, this results in a total of 17 damage points. The FFA's captain is now getting desperate.

The Federation captain now fires two of his G-racks in ADD mode as the Scud begins to move away. The third G-rack is used to launch a type-I fast drone. Over four impulses, before the Scud is out of range, the FFA fires a total of eight shots at ranges of 1, 2, and 3 hexes, hitting the Scud five times. Each ADD hit adds one point to the total damage on the Scud, with no reduction. These five extra points are added to the previous damage as it is scored, with the Scud finally leaving the FFA's ADD engagement range with a total of 22 damage points having been scored.

The fast drone launched from the third G-rack on the FFA now impacts the Scud, simultaneously triggering a T-bomb previously dropped by the FFA (the Federation captain was not a complete fool, and had dropped the T-bomb as a precaution). The drone nominally scores 12 points of damage, but is subject to a damage reduction roll. The die is rolled, resulting in 6 points of damage reduction. A second die is rolled for the T-bomb (another 6, this is not the Federation captain's best day), resulting in 4 more points of damage. The Scud missile now has a total of 32 damage points accumulated and continues on its course, leaving the FFA and its frustrated captain behind.

(FD54.32) TERRAIN: The Scud missile is not immune to terrain effects. It operates versus all terrain types as a normal drone.

(FD54.321) There is no damage reduction (FD54.31) for asteroid collisions (P3.32), Nebula (P6.73), Gravity Waves (P9.312), or Dust Clouds (P13.2).

(FD54.322) Units might follow a Scud missile through an asteroid field (P3.23).

(FD54.33) WEB: A Scud missile has no damage reduction (FD54.31) if it impacts a web, but note that only a very badly damaged Scud missile would be destroyed by such an impact, and it might force its way through a weak web and eventually hit the units behind it.

(FD54.34) MCIDS: The monster close-in defense system treats a Scud missile as any other drone. One hit will destroy the Scud missile.

Scud Missiles were designed for SFB by Stephen V Cole.

(FD54.4) SCALEBOARD

This advanced weapon is a Scud missile fitted with the sensor-guided drone control package. Including the control package reduces the Scud's warhead by 24 points prior to any other modifications and is part of the 50% maximum reduction in (FD54.132). The Scaleboard modification costs two points (for the SGM package).

Scaleboard Missiles were designed for SFB by Scott Moellmer.

END OF SECTION FD, MODULE C4

(FP51.0) TYPE-A MULTI-PURPOSE PLASMA TORPEDO LAUNCHER

From Y165, the larger Triaxian ships used a modified version of the plasma-S torpedo known to the Gorns as the type-A. The type-A torpedo launcher is not a new plasma torpedo, but a simulator weapon capable of launching the standard type-S torpedo in new and different ways.

Prior to Y165, Triaxian DNs and CAs used standard plasma-G torpedoes, with the two new firing modes described here. Prior to Y165, reduce the BPV of a Triaxian ship by 10 points for each plasma-A launcher.

Except where noted otherwise, type-A torpedoes operate the same as normal non-X plasma torpedoes.

(FP51.1) GENERAL

(FP51.11) DESIGNATION: Type-A launchers are designated Plasma-A or PL-A on the SSD.

(FP51.12) AVAILABILITY: The type-A launcher is used exclusively by Triaxian ships. It is not available to other races (including the Orion Pirates).

(FP51.13) REPAIR: The cost to repair a type-A plasma launcher is 18 points. It could be hastily repaired as a type-S, type-G, or type-F torpedo launcher.

(FP51.14) TECHNOLOGY: Type–A plasma torpedoes are simulator technology and cannot be used outside of the simulators.

(FP51.2) ARMING

(FP51.21) ENERGY: Plasma-A launchers are armed over a three-turn period in the same manner as a plasma-S torpedo, i.e., two points of power are allocated on the first turn, two on the second, and four on the third.

(FP51.22) DOWNLOADING: The launcher can be downloaded as a type-F or type-G torpedo by paying the normal energy cost for that weapon.
(FP51.221) RESTRICTIONS: If armed as a download, the Plasma–A could fire a Plasma–GL or Plasma–GS. There are no short-range or long-range versions of the Plasma–F.
(FP51.222) CAPABILITIES: A downloaded type-G torpedo can be enveloped or shotgunned.

(FP51.3) OPERATIONS

A type-A plasma launcher has advanced control over the warhead it contains.

(FP51.31) ENERGY ALLOCATION PHASE: At the moment the launcher is completely armed (i.e., in the Energy Allocation Phase of the final arming turn), the player must decide which of the options below will be used and pay any additional energy required to arm the torpedo in that mode.
(FP51.311) If arming is completed during the turn through rolling delay and reserve power, the torpedo will be a standard plasma-S torpedo.
(FP51.312) Prior to Y165, the torpedoes will be various modes of the type–G torpedo. From Y165, the Plasma-A can be armed with either type–S (SS, SL) or type–G (GS, GL) torpedoes. The rules are written for the standard type–S types.

(FP51.32) STANDARD: A standard plasma-S torpedo can be loaded with no added cost. This torpedo can be enveloped (FP5.0) or shotgunned (FP7.0) as per the standard rules (i.e., if armed as either of those options, the torpedo must be launched during that turn as they cannot be held; extra energy cost must be paid). If not enveloped or shotgunned, it can be held for two points of energy like any other plasma-S torpedo.

(FP51.33) LONG-RANGE: A "long-range" plasma-S torpedo can be loaded for a cost of one additional point of energy during the Energy Allocation Phase. The modified torpedo is termed a plasma-SL. Plasma-SLs have an extended range but a smaller warhead, as shown on the Triaxian Plasma Warhead Strength Table (FP51.5). [If downloaded as a plasma–GL, it would cost one point more than a plasma–G.]
(FP51.331) DURABILITY: Plasma-SL torpedoes were programmed to have more stable warheads, although they sacrificed strength for durability. It takes three points of phaser damage (FP1.6) to reduce the warhead strength by one point. It was not possible to create a real torpedo with this capability. A PA mine (M10.0) would drain the warhead exactly as if it were a normal torpedo.
(FP51.332) BOLT: If a plasma-SL is bolted, the damage is caused normally, but the player gains a bonus of -1 to his die roll to hit. Note that this can make the Plasma-SL a very effective sniping weapon.
(FP51.333) TACTICS: Triaxians typically use Plasma-SLs in long-range duels and sniping battles, especially when attacking bases. Range 21–25 is very effective for bolting, and it will take 36 points of phaser energy to destroy a seeking warhead from this distance.
(FP51.334) LIMITATIONS: Long-range torpedoes cannot be prepared as shot-guns or EPTs.

(FP51.34) SHORT-RANGE: A "short-range" Plasma-S torpedo can be loaded for a cost of two additional points of energy during the Energy Allocation Phase. The modified torpedo is termed a Plasma-SS. Plasma-SSs have a very short range and an unstable, but powerful, warhead as shown on the Triaxian Plasma Warhead Strength Table (FP51.5). [If downloaded as a Plasma–GS, it would cost two points more than a Plasma–G.]
(FP51.341) DURABILITY: Due to the instability of their expanded warheads, Plasma-SSs are reduced in strength by one point for every point of phaser damage (FP1.6) they suffer. A PA mine (M10.0) would drain the warhead exactly as if it was a normal torpedo.
(FP51.342) BOLT: If a Plasma-SS is bolted, the damage is caused normally, but the player suffers a penalty of +1 to his die roll to hit. For this reason, Plasma-SSs are rarely used in this manner.
(FP51.343) DETONATION: Plasma-SS torpedoes are dangerously unstable. If the launcher containing an armed Plasma-SS is destroyed, the weapon explodes in the damaged tube, causing an additional three points of internal damage (treated as a separate volley). Ignore phaser directional hit limitations when resolving this damage. Note that the warhead is destroyed by this detonation and cannot be later launched under (FP1.71).
(FP51.344) TACTICS: Triaxians use the heavy crunch power of the Plasma-SS to deliver a hammer blow to any opponent. The weapon is extremely vulnerable to phaser fire, and a smart enemy will keep a few phasers available to fire on any potential Plasma-SS.
(FP51.345) LIMITATIONS: Short-range torpedoes cannot be prepared as shotguns or EPTs.

(FP51.35) HOLDING: Plasma-SLs and Plasma-SSs cannot be held. A torpedo armed in a prior turn and held cannot be converted to either of these modes (just as it could not be converted to a shotgun or enveloping type).

(FP51.4) PSEUDO-PLASMA TORPEDOES

The type-A torpedo launcher can be loaded with either a pseudo-S, pseudo-SL or pseudo-SS torpedo. The decision must be made before the scenario begins and recorded in secret. Each type-A launcher on the ship can have a different PPT (if desired). The SSD provides a place to record this data.

(FP51.5) TRIAXIAN PLASMA TORPEDO TABLE

TYPE	RANGE 0–5	6–10	11–12	13–14	15	16–18	19	20	21–23	24	25	26–30	31–34	35
S	30	30	22	22	22	15	15	15	10	5	1	0	0	0
SL	16	16	16	16	16	16	16	16	12	12	12	6	3	1
SS	48	24	12	12	12	6	3	1	0	0	0	0	0	0
G	20	20	15	15	15	10	5	1	0	0	0	0	0	0
GL	10	10	10	10	10	8	8	8	4	2	1	0	0	0
GS	32	16	8	4	1	0	0	0	0	0	0	0	0	0
F	20	15	10	5	1	0	0	0	0	0	0	0	0	0
D	10	8	5	2	1	0	0	0	0	0	0	0	0	0
BOLT	1–4	1–3	1–2						1			0		

NOTE: Do not use this plasma torpedo table for any race other than the Triaxians.

The Plasma-A was designed for SFB by Bruce Graw.

(FP52.0) WIRE-GUIDED PLASMA TORPEDOES

The Sharkhunters were provided with a limited form of guidance for their plasma torpedoes which Federation analysts immediately dubbed "wire-guided". The term is obviously in error; no wire exists, and while the technology (which exists only in a simulator) was never actually defined, it can be presumed that some form of subspace link was used.

Wire-Guided Torpedoes are simulator technology and cannot be used by any race other than the Sharkhunters.

(FP52.1) CONSTRUCTION

(FP52.11) SIZE: Various Sharkhunter ships were fitted with all of the known types of plasma torpedoes, from type–F through type–R. Type–D plasma torpedoes were never fitted with wire guidance.

(FP52.12) DAMAGE: Wire-Guided Plasma torpedo launchers are damaged in the same manner as standard plasma torpedo launchers.

(FP52.13) CARRIAGE: Wire-Guided Plasma torpedoes are carried by Sharkhunter ships and bases. They cannot be carried by shuttles, fighters, captor mines, or defense satellites.

(FP52.14) REPAIR: Wire-Guided Plasma torpedo launchers require two more repair points (over the cost of non-wire types) under (D9.7) or (G17.0) to be fully repaired with the ability to launch Wire-Guided Plasma torpedoes. They can be hastily repaired without the ability to launch Wire-Guided Plasma torpedoes or as smaller launchers, e.g., a Wire-Guided type-S launcher could be fully repaired for 17 points, hastily repaired as a standard type-S launcher for 15 points, hastily repaired as a Wire-Guided type-F launcher for 7 points, or as a standard type-G launcher for 10 points.

(FP52.15) TECHNOLOGY: Wire-guided plasma torpedoes are simulator technology and cannot be used outside of the simulators.

(FP52.2) OPERATIONS

(FP52.21) TARGETING: The Wire-Guided Plasma torpedo operates as any other launcher-controlled plasma torpedo with the following specific exceptions unless released to its own terminal guidance (FP52.218).

(FP52.211) A Wire-Guided Plasma torpedo can only be controlled by the ship that launched it. A ship equipped with such launchers can, however, launch non-wire torpedoes, which behave in all ways as standard plasma torpedoes and can be controlled normally by the launching ship, transferred to the control of another ship, or released to their own guidance as per the normal rules.

(FP52.212) The torpedo can be moved (within the restrictions of the movement rules for plasma torpedoes, e.g., they cannot HET more than once, use emergency deceleration, or TAC) anywhere the owning player wishes.

(FP52.213) The torpedo's target can be designated during any impulse at the end of the Launch Seeking Weapons Step. Unless a target is designated, the Wire-Guided Plasma torpedo cannot detonate against any target. [It would detonate if it hit a planet, but the impact would not damage any surface installations not designated as its target. It would count as general damage (P2.311) however.]

(FP52.214) A Wire-Guided Plasma torpedo that has not been released to its own tracking (FD52.218) will not be distracted by a wild weasel (J3.0) or Chaff Throwers (G53.1) and is not affected by the ECM status of its target (D6.36). The launching ship can retain control (by the wire) to the point of impact.

(FP52.215) A Wire-Guided Plasma torpedo operates against a cloaked target as a standard plasma torpedo even if the controlling unit does not retain a lock-on to the cloaked unit. The plasma will be affected under (G13.37).

(FP52.216) A Wire-Guided Plasma torpedo that is being controlled by one ship cannot be transferred (F3.5) to the control of another unit. Releasing a torpedo to its own control is, in effect, a transfer, and a torpedo cannot be transferred to another ship (or controlled by the ship that launched it) after it is released.

(FP52.217) A Wire-Guided Plasma torpedo is affected under (D6.36) by any ECM encountered by the guiding unit [except as provided under (FP52.211) above], such as a poor crew (G21.111) and offensive electronic warfare (G24.219).

(FP52.218) A Wire-Guided Plasma torpedo can be released to its own guidance at the end of any Seeking Weapon Launch Step (6B6). If released to its own guidance, a Wire-Guided Plasma torpedo operates in all ways as a normal plasma torpedo. The target of the Wire-Guided Plasma torpedo must be designated at the time of release if it was not designated before. If using secret targeting, this data must be recorded in writing. Note that due to the time of release of a Wire-Guided Plasma torpedo, it is possible that a ship might be destroyed while still controlling them. If this happens, the torpedo is lost, not released to its own guidance unless it has been assigned a target (FP52.213). A Wire-Guided Plasma torpedo might be released (FP52.218) to prevent its loss due to: range (FP52.237), the anticipated destruction of the controlling ship (FP52.218), anticipated use of a wild weasel by the controlling ship (FP52.231), or other causes. It could also be released for any of a number of other reasons.

(FP52.219) Wire-Guided Plasma torpedoes move last, after all other seeking weapons, in the Order of Precedence (C1.313).

(FP52.22) TARGETS: A Wire-Guided Plasma torpedo can be targeted on anything that a standard plasma torpedo can be targeted on except units smaller than size class 5. The Wire-Guided Plasma torpedo can be brought to within five hexes of such a size class 6/7 target, but must then be released to its own guidance. Note that this means that the Wire-Guided Plasma torpedo cannot be used to sweep mines in the command guidance mode.

(FP52.23) RESTRICTIONS: The use of a Wire-Guided Plasma torpedo places the controlling unit under some limitations.

(FP52.231) All normal seeking weapon control rules apply to the ship controlling the Wire-Guided Plasma torpedo, e.g., it cannot use erratic maneuvers.

(FP52.232) Because of the intense focus needed to control a Wire-Guided Plasma torpedo, no ship may control more than two at one time, even if nominally capable of controlling more than two seeking weapons. This restriction includes shotgun loads (G93.236). Exception: Ships with special sensors can control one additional Wire-Guided Plasma torpedo by using a special sensor in seeking weapon control mode (G24.24). (It should be noted, however, that ships with special sensors and more than two plasma torpedo launchers are very rare, effectively limiting this control ability to shotgun loads.)

(FP52.233) A ship that is uncontrolled (G2.2) cannot control a Wire-Guided Plasma torpedo.

(FP52.234) If communications are disrupted due to Sunspots (P11.1), including such an effect in an Ion Storm (P14.3), any Wire-Guided Plasma torpedoes not previously released to their own guidance are destroyed and removed from the board.
(FP52.235) Guidance of Wire-Guided Plasma torpedoes is not blocked by webs or the imposition of any terrain feature so long as the guiding ship has a line of sight to the torpedo and its target.
(FP52.236) If a shotgun load is launched by a ship capable of wire guidance, the ship can control the individual warheads of that shotgun load up to the limits of its allowed control ability (FP52.232). Any plasma-Fs from the shotgun in excess of the control ability of the ship are immediately lost (effectively, most ships will only employ plasma-G shotguns). A ship could control a single warhead from a shotgun and one other plasma torpedo, forfeiting the other plasma-Fs. (Note that Scouts can control three warheads.)
(FP52.237) A ship cannot control a Wire-Guided Plasma torpedo from more than 20 hexes range. If the torpedo is more than 20 hexes from the ship at the end of any movement segment and has not previously been released, it is lost unless it has had a target designated (FP52.213).
(FP52.238) If a Wire-Guided Plasma torpedo is displaced, it loses all tracking and is removed from play.
(FP52.239) Note that while outstanding crews will increase the range that a plasma torpedo can travel (G21.214), this does not increase the range under which a Wire-Guided Plasma can be controlled (FP52.237). Poor crews, whose plasmas lose range (G21.114), can control Wire-Guided Plasma torpedoes to the maximum range in (FP52.237).

(FP52.24) PLASMA TORPEDO: Unless otherwise stated in these rules, Wire-Guided Plasma torpedoes are otherwise identical to standard plasma torpedoes, e.g., they are armed for the same energy cost, can be enveloped, downloaded, etc.

(FP52.25) ANNOUNCEMENT: Due to the intense focus needed to control a Wire-Guided Plasma torpedo, a player must announce that a given plasma torpedo is wire-guided and must announce when a given plasma is released from control. If using Tactical Intelligence, see (FP52.26).

(FP52.26) TACTICAL INTELLIGENCE: Due to the focus of control, any Wire-Guided Plasma torpedo is identified as such on launch out to Tactical Intelligence Level B. Launchers capable of launching Wire-Guided Plasma torpedoes are identified as such at Level I.

(FP52.27) PSEUDO-PLASMAS: The Pseudo-Plasma Torpedoes of Sharkhunter ships can operate as Wire-Guided Plasma torpedoes under all the provisions of these rules.

(FP52.28) ORIONS AND WYNS: The Wire-Guided Plasma torpedo is not available to these races in real space, but may be experimented with in a simulator only. Use the standard rules for placing plasma torpedoes in the Option Mounts of these ships, but increase the cost of the torpedo by 50% of the value stated in Annex #8B.

Wire-guided plasmas were designed for SFB by Stephen V Cole.

END OF SECTION FP, MODULE C4

(G51.0) TRANS-MORTAR

The Qaris were programmed to use a long-range transporter to deploy what amounted to small mines at considerable ranges. The Trans-Mortar was used only by certain support units, not by mainline Qari combat ships.

The Trans-Mortar fires its M-bomb (mortar bomb) at a hex, not at a specific unit. Because of this, many of the common rules regarding weapons fire do not apply.

(G51.1) DESIGNATION

(G51.11) SSD: Each "TM" box on the SSD represents one Trans-Mortar. Each Trans-Mortar is recorded and fired separately.

(G51.12) USE: Trans-Mortars can only be used to employ M-bombs (G51.4). They cannot be used as transporters or to move other objects. They can never be used to "pick up" items and bring them back to the ship. They can never be used to move personnel. They can never be used to move objects (even M-bombs) between two units.

(G51.13) DESTRUCTION: Trans-Mortars are destroyed by "drone" hits.

(G51.14) CLASSES: There are various classes of ships fitted with Trans-Mortars, but there is only one type of Trans-Mortar, and all Trans-Mortars fire the same (G51.4) type of M-bomb. The heavier Trans-Mortar ships simply have more Trans-Mortars installed.

(G51.15) EMPLOYMENT: Trans-Mortars are mounted only on certain support ships and on most Qari bases.

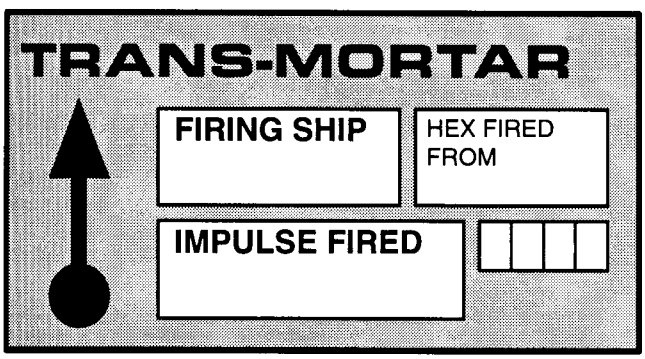
(G51.151) Ships equipped with Trans-Mortars are available only in limited numbers. They are never deployed alone, and each one always has two other (non-mortar) ships in the same squadron with it.

(G51.152) No more than two ships equipped with Trans-Mortars can be in any force except when attacking a base, in which case a maximum of four such ships can be employed.

(G51.16) REPAIR: The repair cost of a Trans-Mortar is five points.

(G51.17) FIRING ARC: The firing arc of all Trans-Mortars is 360°. Many are mounted in turrets (replacing kinetic cannons) but can still fire in any direction regardless of the turret orientation.

(G51.18) TECHNOLOGY: Trans-mortars are simulator technology and cannot be used outside of the simulators.



(G51.2) ARMING PROCEDURE

(G51.21) PROCEDURE: Each Trans-Mortar is armed with one point of power. Trans-Mortars cannot be held; see (G51.25).

(G51.22) SOURCE: Energy to use Trans-Mortars can come from any power source on the ship. This can be allocated or reserve power.

(G51.23) FIRING POINT: Trans-Mortars are fired during the Operate Transporters Step in 6B7 Marines Activity Stage of any impulse.

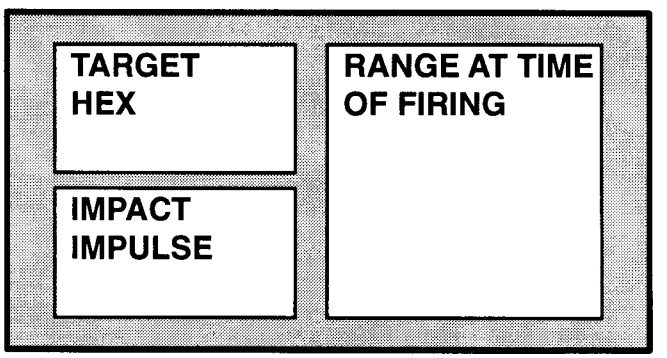
SEQUENCE OF PLAY EXTRACT

6B7: MARINES ACTIVITY STAGE
- Mutiny Step: First die roll for mutiny (G6.20).
- Operate Shields Step: Drop shields; restore shields dropped previously (D3.5).
- Operate transporters (G8.0), including the laying of T-bombs (M3.22) and the firing of Trans-Mortars. Block boarding by (G8.23). Resolve "hit-and-run" raids (D7.8) conducted by transporter.
- Reactive guard assignments are made (D7.86).
- Crew unit transfers under (C13.471), (C13.951), and (G19.28) are made. Transfer of cargo under (G25.23) is conducted.
- Mines laid two impulses previously by transporter (M3.22) become active if the laying ship is out of detonation range (M3.32).
- Resolve damage caused by the arrival of Trans-Mortar bombs fired in previous impulses and which arrived in their target hex on this impulse.

(G51.24) FIRING RATE: A given Trans-Mortar may not be operated more than once per turn. A given Trans-Mortar may not be fired twice within a period of 8 consecutive impulses over two consecutive turns.

(G51.25) NO HOLDING: Armed Trans-Mortars cannot be held for use on a later turn. If energy is allocated to fire a Trans-Mortar and it is not used on the turn of arming, the energy is lost and cannot be regained. This discharge does not constitute firing the weapon and does not delay firing the weapon (with different energy) on the next turn.

(G51.26) OVERLOADS: There is no overload function for the Trans-Mortar.



(G51.3) FIRING PROCEDURE

(G51.31) PROCEDURE: The player controlling the firing unit designates which of his ships is to fire a Trans-Mortar and which of its Trans-Mortars is to be fired. He also writes down the specific hex that the mortar bomb is targeted on.
(G51.311) The written record is then placed face down where the player has no further access to it until the impulse when the mortar bomb reaches its target. [As a practical matter, the player who fired the Trans-Mortar can look at the record any time he wishes, but he cannot write on the same sheet of paper once he has declared the firing record complete. For this reason, each Trans-Mortar shot must be recorded on a separate piece of paper. A suggested record format is provided.]
(G51.312) Upon the Operate Transporters Step of the impulse it is scheduled to arrive in the target hex, the written record is revealed and the effects of the weapon are determined as per (G51.42).
(G51.313) There is no counter placed on the map to indicate the travel of a Trans-Mortar.

(G51.32) RANGE: The maximum range of the weapon is 40 hexes; the minimum range is 6 hexes. The farther the range, however, the longer it will take the mortar bomb to arrive at the target hex.

(G51.33) FIRE CONTROL: The firing ship must have active fire control. It must have a "lock-on" to the target hex unless using Indirect Fire (G51.51).

(G51.34) TIME OF TRANSPORT: Because of the very long range, it takes one or more impulses for the M-bomb to arrive by transporter at its target hex.

Range 0–5 hexes	Not allowed
Range 6–10 hexes	1 impulse delay
Range 11–20 hexes	2 impulse delay
Range 21–30 hexes	3 impulse delay
Range 31–40 hexes	4 impulse delay
Range 41 or more hexes	Not allowed

For example, if a Trans-Mortar is fired on Impulse #6 at a target 27 hexes away, the M-bomb will arrive and detonate on Impulse #9.

(G51.35) EFFECT OF EW: Electronic warfare cannot cause a Trans-Mortar to miss, but can cause it to lose target lock, in which case it will not fire.
(G51.351) Most ECM does not affect Trans-Mortars.
(G51.3511) The following sources of ECM do NOT count for any purpose regarding Trans-Mortars: ship-generated ECM (D6.3141), ECM received from lending (D6.3144), small target modifiers (E1.7), weapons fired at drones (FD1.52), terrain except as listed in (G51.3512).
EXCEPTION: Units with active positional stabilizers count their self-generated ECM, any ECM received from lending or self-defense jamming, and six free points of "natural ECM" that apply only to Trans-Mortars.
(G51.3512) The following sources of ECM jamming DO apply to Trans-Mortar fire: nebula (P6.2), offensive EW (D6.3145), poor crew (G21.111). The current scanner rating is added to the ECM; it does not affect the range.
(G51.3513) ECCM generated by the ship firing a Trans-Mortar, including that from outstanding crews (G21.211), legendary weapons officers (G22.71), and received from lending (D6.3144), can offset the effects of those types of ECM which apply to Trans-Mortars.
(G51.352) After determining the EW-shift (D6.34) resulting from any ECM (of applicable types) and ECCM, roll one die and add the shift to the result.
If the result is 1–6, the Trans-Mortar fires normally.
If the result is 7 or more, the Trans-Mortar does not fire at all; the energy allocated to fire it is lost. The weapon is considered to have fired for purposes of (G51.24).

(G51.36) ERRATIC MANEUVERS: If a ship is conducting erratic maneuvers (C10.52), it cannot fire Trans-Mortars. The use of EM by units in or near the target hex has no effect.

(G51.37) WEBS do not block Trans-Mortar fire.

(G51.38) ESGs do not block Trans-Mortar fire.

(G51.39) TERRAIN does not block Trans-Mortar fire if the Trans-Mortar can gain a line-of-sight and a lock-on to the target hex or uses Indirect Fire (G51.5).
(G51.391) Radiation Zones will limit the maximum range of a Trans-Mortar to 25 hexes (P15.6). This includes Ion Storms (P14.1), Novae and Super-Novae (P12.5), Solar Flares (P11.4), and Neutron Stars (P15.5).
(G51.392) Planets (P2.32), Black Holes (P4.23), and Pulsars (P5.32) can block the line-of-sight and, therefore, the line-of-fire of a Trans-Mortar unless using (G51.5).

(G51.4) MORTAR BOMBS

(G51.41) DEFINITION: The projectile transported (a.k.a. "fired") by a Trans-Mortar is known as a "mortar-bomb" or "M-bomb". The M-bomb acts in all ways as a small mine with the exceptions stated in the rules below:

(G51.42) EFFECT: An M-bomb explodes as a mine, producing 5 damage points in the hex of impact only (G51.44). The explosion is treated in all ways as a mine explosion. The specific shield hit is determined by (G51.45).
(G51.421) If the target hex includes a planet or asteroid, nothing on the planet or asteroid can be damaged by the M-bomb.
(G51.422) The explosion of an M-bomb ignores all EW effects, just as all exploding mines and T-bombs do.
(G51.423) If a cloaked unit is in the target hex, the cloak provides no benefit from the effects of the Mortar-bomb.

(G51.43) TIME OF EFFECT: Mortar-bombs explode immediately upon their arrival in the hex. They do not need a target unit to trigger them.

(G51.44) AREA OF EFFECT: An M-bomb affects only the hex it is transported into, and no other hexes. (This is obviously a much smaller area than other mines.) It damages everything in the hex (as a mine would) with the same exceptions as mines, e.g., it will not damage another mine (M2.54) or anything on a planet or asteroid (G51.421).

(G51.45) FACING: The actual shield to be damaged on any unit in a hex where a Trans-Mortar-bomb has exploded is determined randomly for each unit in the hex. This is irrespective of the relative facing of such units, i.e., it is entirely possible that two ships that are facing one another's #1 shields could be damaged on their #4 shields. This is obviously a simplification, but can be rationalized that the Trans-Mortar-bomb actually detonated at some point while the various units were maneuvering through the area of space.

(G51.46) AMMUNITION: Ships equipped with Trans-Mortars have a limited quantity of ammunition, as is shown on their SSDs. This ammunition is handled as explosive ordnance (G25.3). Additional rounds can be purchased with Commander's Option Points at a cost of 1 point per round. A given ship

cannot purchase more Trans-Mortar ammunition than it originally has.

(G51.47) EMPLOYMENT AS MINES: M-bombs cannot be employed as traditional mines. They cannot be dropped from a hatch or laid by transporter.

(G51.43) INTERCEPTION: Mortar-bombs cannot be intercepted by any means between the time they are fired and their "explosion" upon reaching their target hex.

(G51.5) INDIRECT MORTAR BOMBS

(G51.51) DEFINITION: Trans-Mortars have a unique ability to place their ordnance in hexes that they cannot "see" by utilizing data provided by another ship.

(G51.52) RESTRICTIONS: In order to place a Mortar-bomb in a hex that the Trans-Mortar unit cannot see, the following restrictions must be met:
(G51.521) The Trans-Mortar unit must have its own fire control active and have a line-of-sight and lock-on to another Qari unit which has its fire control active and has a line-of-sight and lock-on to the target hex. Low-powered fire control (D6.7) is not sufficient for this purpose.
(G51.522) The target hex must be within 40 hexes of the Trans-Mortar unit and within 40 hexes of the Qari ship which has a line-of-sight to it.
(G51.523) The Qari ship providing the targeting data to the Trans-Mortar unit must be within 40 hexes of the Trans-Mortar unit, cannot be performing erratic maneuvers at the time (G51.54), and cannot be docked to a larger unit.
(G51.524) The two Qari ships involved in the indirect-fire mission must both meet the above requirements for at least four impulses before any given Mortar-bomb may be fired. If less than four impulses has passed, no Mortar-bomb may be fired by this method. If a second ship assumes the targeting function, it cannot provide targeting data until it has met the four-impulse requirement. More than one Qari ship can provide the targeting data, but whichever Qari ship is doing so, it must meet the four-impulse requirement.
(G51.525) The four-impulse requirement in (G51.524) is four continuous impulses. Once a Qari ship has met that requirement, it can provide targeting data on any subsequent impulse so the above conditions are met.
(G51.526) One Qari ship can provide targeting data to more than one Trans-Mortar unit, so long as it meets the above requirements for each Trans-Mortar unit separately. More than one Qari ship can provide targeting data to one Trans-Mortar unit, so long as each ship doing so has met the above targeting requirements.
(G51.527) Units smaller than size-class 4 cannot provide targeting data. Exception: Ground Warning Stations.
(G51.528) Neither ship can be suffering from the effects of a breakdown (C6.5) or fire control disruption (D6.68). If either ship is uncontrolled (G2.2), this procedure cannot be used.
(G51.529) If Sunspot activity results in communications being jammed (P11.3), this procedure cannot be used.

(G51.53) ELECTRONIC WARFARE: The Trans-Mortar ship ignores all electronic warfare for purposes of indirect-fire. The ship providing the targeting information is affected by electronic warfare as if it were the Trans-Mortar unit, i.e., it rolls under (G51.352) to determine if the firing data it is providing is clear enough to allow the Trans-Mortar to be fired.

(G51.54) ERRATIC MANEUVERS: If a ship providing targeting information begins erratic maneuvers (C10.52), it can no longer provide targeting information. The period of erratic maneuvers is treated as if the ship were more than 40 hexes from the Trans-Mortar unit, i.e., the ship must meet the conditions of (G51.52) for four impulses after it stops using erratic maneuvers.

(G51.6) OTHER RULES

(G51.61) ORION AND WYN: No Orion or WYN ship can be equipped with a Trans-Mortar, except in a simulation.

(G51.62) CREW AND OFFICER QUALITY: Trans-Mortars are unaffected by crew and officer quality except as noted in (G51.3512) and (G51.3513), with the added exception that a Legendary Weapons Officer or Engineer might be able to repair one.

(G51.63) MINES: Trans-Mortars have no effect on mines or minefields.

(G51.64) DUMMIES: There are no dummy M-bombs.

Trans-Mortars were designed for SFB by Stephen V Cole.

(G52.0) TURRETS

Qari ships have their primary weapons (and some of their phasers) mounted in a rotating turret. The weapons have a limited firing arc, and the turret has a limited rotation rate. The turret must be rotated to generally face the target in order to bring the weapons to bear on that target.

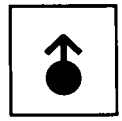
(G52.1) DEFINITION

(G52.11) LOCATION: Those weapons contained within the turret of a Qari ship are grouped together within a circular or elliptical outline in the middle of the ship. As this is the only internal subdivision (by outline) on the SSD, those weapons which comprise the turret are easily identified.

(G52.12) LIMITATION: Turrets as defined by this rule are used only by the Qaris. They may be defined for use by other races in future products.

(Players might experiment by placing the FX and RX weapons on Frax ships into "turrets" and using these rules. Frax turrets would still be limited to the published firing arcs. All adjacent/connected boxes of a group would comprise a single turret. Thus, a Frax CA would have turret #1 with two disruptors, turret #2 with four phaser-1s, turret #3 with two phaser–1s, and turret #4 with two disruptors.)

(G52.13) FACING: The facing of the turret (which will quite possibly be different from the facing of the ship) is designated by a "turret counter" which is placed with the respective ship.



(G52.2) LIMITATIONS

(G52.21) WEAPONS: All turret-mounted phasers and kinetic cannons have a 120° firing arc, centered on the shield which the turret is facing. The turret will always be directly facing a specific shield. Because of this, the firing arcs of turret-mounted Qari weapons, including any phasers in the turret, are not noted on the ship portion of the SSD, but a note will be present on the SSD referring to this rule.

(G52.22) OTHER systems, including labs, special sensors, drone racks, etc., which normally have 360° operating arcs continue to have these arcs even if mounted in a turret. Note that when using a probe launcher mounted in a turret as a weapon (G5.3), the firing arc in (G5.33) will be defined by the facing of the turret.

(G52.3) ROTATION

(G52.31) ROTATION LIMIT: The turret on a Qari ship can be rotated to face any of the six shields. It is rotated 60° (i.e., to the adjacent shield in either direction) at a time.
(G52.311) This will require the player to keep track of the current facing of the turret, relative to the ship, in terms of the shield number the turret is facing. A special record track is provided for this purpose on Qari SSDs.
(G52.312) The turret facing of a given Qari ship is in relation to the direction that ship is traveling. If the ship were to turn, the turret facing after the turn would change with the turn of the ship, and in the same direction. Thus, if a Qari ship traveling in direction A with its turret facing in direction C were to turn and begin moving in direction B, this turn would result in its turret now facing direction D. The turret might then rotate 60° normally if it was able to. This same procedure is used if the ship were to perform an HET.

(G52.32) ROTATION RATE: Two 60° incremental rotations cannot be performed within EIGHT impulses of each other.
(G52.321) This will require the player to keep track of the impulse of the last turret rotation so that he will know when the next rotation is possible. The turret record track on Qari SSDs includes a column for this purpose.
(G52.322) If a Qari ship suffers a breakdown, the turret cannot rotate until four impulses after the ship has recovered from the effects of the breakdown (C6.5).
(G52.323) Rotation rate is not affected by emergency deceleration.
(G52.324) If using Plotted Movement (C1.32), the Qari player must record his intention to rotate each specific turret, together with the direction of the rotation, four impulses in advance. This is required for all plotting levels from C to E (C1.33).

(G52.33) SEQUENCE OF PLAY: The Qari player rotates the turret of any ship that he desires, and which is able to do so under the provisions of (G52.32) above, during the Ship Systems Functions Stage (6B4) after pods have been dropped (or attached) and before labs attempt to identify seeking weapons.

(G52.34) ENERGY COST: There is no power cost to rotate the turret.

(G52.35) PHASER DIRECTIONAL DAMAGE: Phaser directional damage restrictions (D4.321) are based, for turret-mounted phasers, on the current facing of the turret.

(G52.36) DIRECTED-TURN MODES: Qari turrets cannot, and do not, use Directed Turn Modes (C3.8). When a turret is able to rotate under the provisions of (G52.32) above, and the Qari player desires to rotate it, he does so in either direction at that point as he desires. He is not required to "accumulate" left turn or right turn points in order to be able to rotate the turret.

(G52.37) NON-EFFECT: There is no game function that has any effect on turret rotation unless noted here.
(G52.371) A Qari ship that is executing erratic maneuvers (C10.0) cannot rotate its turret while performing erratic maneuvers. It can rotate its turret immediately after, or immediately before, assuming erratic maneuvers if it has met the requirements of (G52.32) above.
(G52.372) An uncontrolled Qari ship (G2.2) can only rotate its turret once in every 16 impulses.
(G52.373) You cannot tractor (G7.0) the turret of a Qari ship to prevent the turret from rotating [although tractoring the ship will impose the restrictions of (G7.91)], or perform a hit-and-run raid (D7.8) on the traversing mechanism, or claim that a Poor Crew (G21.1) should rotate the turret at a slower rate.
(G52.374) There is no way to cause a turret to rotate faster than allowed by these rules, including the use of a super-intelligent computer (G11.0), Outstanding Crew (G21.2), or Legendary Officers (G22.0).

(G52.38) VOIDING: The rotation of a turret does not void a wild weasel (J3.0) or cloak (G13.0) or reveal a hidden unit (D20.0).

(G52.39) TACTICAL INTELLIGENCE can detect the facing of a turret at level A.

(G52.4) TURRET ARMOR

(G52.41) DIRECTION: The turrets of most Qari vessels have some armor. This armor, however, covers only the "forward" arc of the turret, i.e., only blocks damage that comes from the 60° shield arc that the turret is facing the impulse that the damage is received.

(G52.42) ALLOCATION: When a point of damage [from a volley meeting the restrictions of (G52.41)] is allocated by the DAC, and then by the player, to a system which is in the turret, that point of damage must be applied instead to the turret armor. Note particularly that as many Qari ships have "center hull" inside the turret, these hull boxes cannot be given up as damage without first giving up the turret armor.
(G52.421) If the player could, within the rules, allocate the damage point to either a system in the turret or a system in the remainder of the ship, the player may take his choice (as always), but if the turret-mounted system is selected, the damage will strike the turret armor (rather than the system), and if the non-turret system is selected, it cannot be scored on turret armor.
(G52.422) In the case of enveloping weapons which penetrate a shield that is protected by the armor and one or more shields that are not, the Qari player has the option of scoring any damage point that could be scored against a system in the turret against the armor. If the shield which the turret is facing is not penetrated, then enveloping weapon damage cannot be scored against the armor.
(G52.423) It is possible that a given Qari ship could be destroyed with its armor intact if the damage striking the ship came from directions that were not protected by the armor.

(G52.43) ONE-TIME HITS: Damage scored on turret armor counts as an Armor hit, not as a hit on the system in question. This applies in cases of "Bold-Underlined" hits on the DAC (the hit scored on turret armor would not count as the one hit that could be scored on that result in that volley) and the "best weapon" rules (the hit scored on turret armor would not count for that purpose at all).

(G52.44) OTHER: Other than as defined above, the armor in Qari turrets functions as normal armor, i.e., it will not block transporter operations.

Qari turrets were designed for SFB by Stephen V Cole.

(G53.0) CHAFF THROWERS

Sharkhunter ships are fitted with Chaff Throwers for defense against enemy attack. They provide the ship with self-protective ECM for a short period of time.

(G53.1) DESCRIPTION

(G53.11) DEFINITION: A Chaff Thrower is a system which ejects a large quantity of charged particles into the warp bubble of a starship, creating the effect of ECM jamming for a short period of time.

Chaff Throwers use a different system than Chaff (D11.0) and, despite the similarity in name, are not related in any way. Nothing about Chaff can be used to define Chaff Throwers and vice versa.

(G53.12) AMMUNITION: Each Chaff Thrower is provided with five charges.
(G53.121) Charges can be created by energy from the ship's engines, but it takes 20 turns (at 1/10 of an energy point per turn) to create a single charge. This energy can come from any source. The energy must be applied continually; if charging is stopped for any reason or period of time, the partial charge is lost. This energy is applied during Energy Allocation; the chaff charge is completely energized at the end of the Record Keeping Phase of the 20th turn of charging. A ship can simultaneously prepare as many Chaff Thrower charges as it has empty charge holding spaces.
(G53.122) Charges cannot be transferred between ships.

(G53.13) EMPLOYMENT: Chaff Throwers are installed on all Sharkhunter ships, including bases and PFs. In general, size-2 ships have six, size-3 ships have four, size-4 ships have two, and size-5 PFs have one, but there are exceptions.

(G53.14) DAMAGE: Chaff Throwers are damaged on drone damage points. See Annex #7E for damage priority.

(G53.15) REPAIR: Chaff Throwers cost eight points to repair under (D9.7) or (G17.0).

(G53.16) TECHNOLOGY: Chaff Throwers are simulator technology and cannot be used outside of the simulators.

(G53.2) ACTIVATION

(G53.21) ENERGY: Deploying one chaff charge from a Chaff Thrower costs 1/4 point of energy. This energy can come from any source. Note that the Chaff Thrower must have a prepared charge in it or it cannot accept arming energy for its own operation.

(G53.22) HOLDING: Charges in a Chaff Thrower can be held in an armed condition indefinitely. The arming energy for the Chaff Thrower itself can be held indefinitely, and the Chaff Thrower can begin the scenario armed if the ship is at WS–III.

(G53.3) OPERATIONS AND EFFECT

(G53.31) EMPLOYMENT: A Chaff Thrower can be fired during the Electronic Warfare Benefits Step of the Direct-Fire Consequences Stage (6D5) of any impulse. A given ship can fire some or all of its Chaff Throwers on any given impulse.

(G53.31) FIRING RATE: A Chaff Thrower can function only once in any given turn and cannot be fired within 1/4-turn of firing on the previous turn. It cannot be charged on a turn it has deployed a chaff charge.

(G53.33) EFFECT: The effect of a chaff charge deployed by a chaff launcher is to provide the specific ship which fired the Chaff Thrower with four points of "natural" ECM for a period of four impulses. The protected ship is also penalized by this same ECM, which is applied to seeking weapons it controls, direct-fire weapons it employs, and any other system affected by EW (e.g., transporters). Chaff cannot damage anything, including ESG fields or Andromedan PA panels. Note that the use of multiple chaff charges by a single ship is cumulative, i.e., two chaff charges would provide eight points of natural ECM.

(G53.34) LIMIT OF EFFECT: The chaff charges launched by a Chaff Thrower affect only the ship which fired it, although they will also protect and affect any ship(s) or base(s) to which it is docked.

(G53.35) FIRE CONTROL: A unit does not need active fire control to employ a Chaff Thrower.

(G53.4) SPECIAL CASES

(G53.41) ERRATIC MANEUVERS: Chaff Throwers cannot be used by ships that are under erratic maneuvers, and the effects of a Chaff Thrower are lost immediately with the announcement of the assumption of erratic maneuvers in Stage (6A4).

(G53.42) TACTICAL INTELLIGENCE: The presence of Chaff Throwers on a given unit is detected at Level F. The use of a Chaff Thrower by a given unit is detected at Level A.

(G53.43) WEAPON: Chaff Throwers are considered a weapon for purposes of (D18.0) and are not loaded.

(G53.44) CONTROL: An uncontrolled (G2.2) ship can use Chaff Throwers normally.

(G53.45) SYSTEMS: Chaff cannot be tractored (G7.0), transported (G8.0), placed in stasis (G16.0), or displaced (G18.0) away from the protected ship. Its use is not affected by ESGs (G23.0) or webs (G10.0).

Cloaked ships can employ Chaff Throwers without voiding their cloaks.

If a ship separates sections (G12.0) during the protected period, the effects of Chaff are lost immediately.

If a ship is displaced (G18.0), its Chaff is displaced with it and remains effective.

If a ship is placed in stasis (G16.0), its Chaff protection is placed in stasis with it and resumes its effective period after the ship is released from stasis.

(G53.46) EXPLOSIONS: The Chaff effect is not reduced as a result of mine or ship explosions.

(G53.47) TERRAIN: Chaff will not work in highly charged energy fields such as Radiation Zones (P15.0), Ion Storms (P14.0), Solar Flares (P11.4), or near Neutron Stars (P15.5). They will not function while the ship's warp engines are recovering from passage through the WYN Radiation Zone (P7.1), although such passage does not affect the charged status of Chaff Throwers any more than other weapons. Note that Novas and Supernovas (P12.0) include the effects of Radiation Zones. In all other terrain types, Chaff Throwers operate normally.

(G53.48) ORIONS AND WYNS: The Chaff Thrower is not available to these races, but may be experimented with in a simulator only. The cost to include a Chaff Thrower in an optional weapons box is 2 points.

Chaff Throwers were designed for SFB by Stephen V Cole.

END OF SECTION G, MODULE C4

(J51.0) HELOSHUTTLES

All administrative shuttles on Sharkhunter ships are, in fact, Heloshuttles. These shuttles have two differences from the usual type of shuttles: their ability to move in any direction and their ability to drop flashbombs.

(J51.1) GENERAL RULES

(J51.11) DEPLOYMENT: All Sharkhunter ships have Heloshuttles in place of all of their administrative shuttles.

(J51.12) COST: Heloshuttles cost 3 BPV.

(J51.13) ABILITIES: Heloshuttles have the same abilities as administrative shuttles, including the ability to function as wild weasels or suicide shuttles. In addition, Heloshuttles have the special movement rules shown in (J51.2) and can carry and deploy flashbombs (J51.3). [The Sharkhunters do not have drones and, hence, cannot arm scatter-pack shuttles. In an "open rules simulation" where Heloshuttles and drones might be available on the same ship, the shuttle cannot use Heloshuttle movement while loaded with drones.] Shuttles on seeking trajectories [e.g., suicide shuttles (J2.22)] or on a preset course [e.g., wild weasels (J3.11)] cannot use Heloshuttle movement even if capable of it.

(J51.14) OTHER SHARKHUNTER SHUTTLES: Sharkhunter MRS, GAS, HTS, MSS, MLS, and HAS shuttles have the movement abilities of Heloshuttles (J51.2) but do not carry the flashbombs (J51.3) unless provided in the rules.

Sharkhunter fighters cannot use Heloshuttle movement, but they can carry flashbombs in place of their plasma-D torpedoes.

(J51.15) TACTICAL INTELLIGENCE: The fact that a given shuttle is capable of Heloshuttle movement is revealed at Tactical Intelligence Level H if it has not been previously revealed by the shuttle's own movement.

(J51.16) REPAIR: Heloshuttles are repaired exactly as normal shuttles. There is no increase in difficulty.

(J51.17) TECHNOLOGY: Heloshuttles are simulator technology and cannot be used outside of the simulator.

(J51.2) HELOSHUTTLE MOVEMENT

(J51.21) GENERAL: Heloshuttles do not use the normal facing and turn mode rules of almost all other units. During any impulse in which a Heloshuttle is scheduled to move, it can move in any direction (of the six available). None of these movements is considered to be an HET for any reason. A Heloshuttle can change its facing by one hexside each time it moves. Whether or not a Heloshuttle is doing erratic maneuvers has no effect on this movement. Note that the facing of a standard Heloshuttle is irrelevant for all purposes, but the facing of other Sharkhunter shuttles (such as the MRS) may need to be tracked due to the firing arcs of some weapons.

Heloshuttle movement cannot be used by ships, including PFs.

(J51.22) OTHER: Heloshuttles perform all other movement functions exactly as administrative shuttles do.

(J51.23) WARP BOOSTER PACKS interfere with the Heloshuttle movement system. Consequently, no shuttle can use both warp booster packs and Heloshuttle movement during the same turn. If a Heloshuttle without booster packs has moved in any direction except directly forward during a turn, it cannot activate its warp booster packs on that turn. If a Heloshuttle has used its warp booster packs during a turn, it cannot use Heloshuttle movement unless it actually drops the warp booster packs.

(J51.24) DEATH-DRAGGING: While Heloshuttle movement might appear to allow a shuttle to break a tractor link (G7.55) and thereby escape death-dragging (G7.54), this is not the case.

(J51.25) TERRAIN: While using Heloshuttle movement, a Heloshuttle rolls for possible terrain damage, e.g., asteroid collision, at its stated speed. A player cannot claim that the shuttle is obviously moving slower than speed 8 (in the case of an MRS) since he moved direction A the last time it moved, and is now moving in direction D, and therefore does not have to roll for asteroid damage.

(J51.3) FLASHBOMB CARRIAGE

(J51.31) CARRIAGE: A Heloshuttle carries two flashbombs.
(J51.311) Flashbombs are loaded or removed from shuttlecraft at the same cost in deck crew actions as loading a one-space drone or type–D plasma torpedo onto a fighter or SP. No ready rack is necessary to load flashbombs.
(J51.312) A Heloshuttle used as a WW, SP, or suicide shuttle cannot carry flashbombs. These must be removed before such use becomes possible.
(J51.313) The presence or absence of flashbombs loaded on Heloshuttles must be specified (secretly and in writing) by the owning player at the start of a scenario. One bomb may be loaded at WS–II and two at WS–III. Note that under the Weapon Status rules, the number of shuttles that can be armed is limited. Choosing to have one or two shuttles armed with flashbombs at the start of a given scenario will count against shuttles that might be prepared as wild weasels or suicide shuttles. Players should carefully consider this and the fact that (J4.814) limits the number of deck crews most ships will have available to load flashbombs.
(J51.314) For purposes of (D12.0), a Heloshuttle armed with one or more flashbombs is considered to be an "armed shuttle" (D12.12).
(J51.315) As per (E54.34), there is a virtually unlimited supply of flashbombs on any Sharkhunter ship. Even if the ship does not have Bomb Throwers, it will have flashbombs to arm its shuttles.
(J51.316) Flashbombs cannot be dropped by a shuttle or fighter involved in a dogfight (J7.22).

(J51.32) DROPPING FLASHBOMBS: Flashbombs are dropped during the Shuttle Movement Step (C1.313-4) of the Voluntary Movement Stage (6A2) of the Sequence of Play, before the shuttle actually moves. They detonate as the last step of the Direct Fire Weapons Stage (6D2). A Heloshuttle can drop no more than one flashbomb in any two-impulse period.

Heloshuttles were designed for SFB by Stephen V Cole.

(J52.0) MULTI-ROLE SHUTTLES *(Simulator Races)*

(J52.1) THE RACES OF MODULE C4

The races presented in Module C4 have access to Multi-Role Shuttles as follows:

Race	Standard Equipment Included
Frax, Qari	1xPh–3 (360°) + ADD (6 rounds) + 2 spaces of drones
Flivver	2xPh–3 (360°) + 2 spaces of drones (can use Hyperdrones)
Britanian, Canadi'en	2xPh–3 (360°) + ph-2 (360°) (subject to future elaboration if new weapons are added in Module C4F)
Sharkhunter	2xPh–3 (360°) + ph-2 (360°) + Flashbomb
Triaxian Y150-Y167	2xPh–3 (360°) + ph-2 (360°)
Triaxian Y165 and after	2xPh–3 (360°) + 2xPlasma–D
Barbarian	Use the MRS shuttle appropriate to the race being simulated or the technology being used.
Deltan	1xPh–3 (360°) + ADD (6 rounds) + 4 type–VI drones (subject to future elaboration if new weapons are added in Module C4F)

END OF RULE SECTION J, MODULE C4

(K0.0) FAST PATROL SHIPS

(K5.2) WEAPONS SPECIFICATION CHART (C4)

RACE/PF	A	B	C
FRAX	Disr/Drone	Phaser-3	Phaser-1
QARI	KKL	Drone	Phaser-1
TRIAXIAN	Plasma	Phaser-3	Phaser-1

—Provided by John Berg

END OF RULE SECTION K, MODULE C4

(R51.0) THE FRAX BATTLE LINE

(R51.1A) HISTORY: The Frax are a creation of the Klingon Deep Space Fleet, intended to train captains in dealing with an unknown enemy. The Frax were the most extensively developed of all of the simulator races used by the Klingons, perhaps reflecting that the Klingons used "wet navy" warships at some point in their own history, creating the same fascination among their starship officers as similar ships did for the Federation Star Fleet.

(R51.1B) GEOGRAPHY: Given their armament (disruptors and drones), the Frax should be used against the "Western Powers" (Klingons, Kzintis, Lyrans), and possibly the Feds and Hydrans. To use them in your campaign, you can install them in the Kaltic Freestates (the four northernmost provinces of the Klingon Empire on the F&E map). This is where the Klingons assigned them in the annual fleet wargames known as "The Frax Wars".

(R51.1C) WEAPONS: The Frax use disruptors, type-B drone racks, phaser–1s, and phaser–3s. They use the same Y175 refit as everyone else (and in fact were the "first" units to receive it, as early as Y172!). The Frax also have an AFD refit (E52.0). Drone speeds will be appropriate to the year.

Armament options could be considered. You could replace the disruptors with photons, but this is not recommended because the firing arcs will not work well with the slower rate of fire. You could also replace the disruptors with plasma torpedoes (S-torps with FP arcs replacing the FX disruptors, and F-torps with RP arcs replacing the RX disruptors), but this will dramatically change the operating characteristics.

The Frax use Klingon drone percentages.

(R51.1D) GENERIC UNITS: The Frax use the Klingon version of the generic units (bases, armed freighters, monitors, Q-ships, FRD); delete the security stations.

NOTE: The original Frax warships were designed by Stephen V Cole. The second group (starting with R51.17) were designed by a collaborative effort by Stephen V Cole and Steven P Petrick. The later Frax ships, starting with R51.26, were mostly designed by Steven P Petrick. Some ships were designed by specific individuals noted in the rules below.

FRAX WARSHIPS

(R51.2) DREADNOUGHT (DN): This ship is dangerous from any direction! The unified hull provides a significant "seventh shield" against penetrating damage. Unlike most Frax ships, which must divert phaser–1s to drone defense due to the lack of ADDs, the dreadnought has enough phaser–3s to take care of itself, and the AFD refit makes it invulnerable to all but the most determined attacks. Maneuverability is very good, which is a good thing because of the unusual weapons arcs.

SSD and counter are provided in Module C4.

(R51.3) HEAVY CRUISER (CA): The powerful forward phaser battery is a force to be reckoned with. Reserve power and unified hull make this one solid and dependable ship.

SSD and counters are provided in Module C4.

(R51.4) WAR CRUISER (CW): This was the original Frax ship and is still one of the best balanced. It is very maneuverable, but a bit short of power. The small number of hull boxes is offset by unification. Note the large shuttle capability compared to other CWs. Pentagonal shields (#2–#3–#4–#5–#6 are equal) are a requirement of the weapons arcs.

SSD and counter are provided in Module C4.

(R51.5) WAR CARRIER (CWV): Extremely fast, albeit due to a lack of heavy weapons. The ship can zip in, deposit the fighters, then get (and keep) out of the way. Without its fighter group, this ship is grossly undergunned. It has double seeking weapon control.

YEAR	ESCORTS	FIGHTERS
Y170-175	CWE, DWE	Demon 1 or 2
Y176-Y179	CWA, DWA	Demon 3
Y180+	CWA, DWA	Demon 4

SSD and counter are provided in Module C4.

(R51.6) PF TENDER (PFT): A variant of the CW and typical of the breed.

Designed by Ken Burnside.

SSD and counter are provided in Module C4.

(R51.7) WAR CRUISER ESCORT (CWE): A fairly standard conversion based on the experience of the Klingons. Has limited aegis fire control.

SSD and counter are provided in Module C4.

(R51.7A) WAR CRUISER AEGIS ESCORT (CWA): The same ship as the CWE, but with full aegis. Note that full aegis was not available earlier in the simulators than in reality, lending credence to the theory that full aegis technology did indeed develop virtually overnight across the entire galaxy.

SSD is combined with the CWE. Use the CWE counter.

(R51.8) BATTLESHIP (BB): This ship was actually used in the simulators of the Klingon War College for the original combat tests of the B10! Has double seeking weapon control.

SSD and counter are provided in Module C4.

(R51.9) COMMAND CRUISER (CC): One of the larger Frax ships, the command cruiser shows the traditional improvements over the heavy cruiser class and something extra (at Warrior Level): the AFD system!

SSD and counter are provided in Module C4.

(R51.10) WAR DESTROYER (DW): Adequate power and a fair turn mode make this a solid war destroyer, but not a brilliant one. The lack of redundant command facilities is a hidden Achilles' Heel.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counters are provided in Module C4.

(R51.11) WAR DRONE DESTROYER (DWD): An unexceptional drone bombardment platform, its best use is as a drone-defense unit for the entire fleet. Against an enemy without drones, it provides a useful offensive punch.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

Players might experiment with a rule that prohibits this ship from launching a drone unless the target is within the FX (or RX as appropriate) "firing arc" of the launcher.

SSD and counter are provided in Module C4.

(R51.12) WAR DESTROYER SCOUT (DWS): Like most small scouts, the lack of adequate power prevented it from getting full use of its sensors. The number of sensors was, itself, inadequate, but there was not power for more.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counter are provided in Module C4.

(R51.13) WAR DESTROYER MINEHUNTER (DWM): Typical for the size class, but with fewer mine racks than most other races. Capable of defending itself in moderate actions, like most small hulls, it is vulnerable in a fleet battle.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counter are provided in Module C4.

(R51.14) WAR DESTROYER ESCORT (DWE): Phasers and their firing arcs make this a superb drone defense unit. The AFDs used in advanced simulation levels made this ship devastatingly effective.

The ship has limited aegis.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counters are provided in Module C4.

(R9.14A) WAR DESTROYER AEGIS ESCORT (DWA): The same ship as the DWE, but with full aegis.

SSD is combined with the DWE. Use the DWE counters.

(R51.15) MISSILE DESTROYER (DMW): This unit is the same as the DWD, except that the added drone racks are replaced by (FD52.0) Missile Racks.

SSD and counter are provided in Module C4.

(R51.16) WAR DESTROYER LEADER (DWL): Slight increases in shielding, phasers, power, and labs marked this as an unimpressive improvement over the standard DW.

SSD and counter are provided in Module C4.

(R51.17) COMMANDO WAR DESTROYER (DWG): A variant with extra transporters and marines. It has GAS and HTS shuttles. The 28 BPs include two heavy weapon squads and two commando teams. There are two GCVs in storage.

SSD and counter are provided in Module C4.

(R51.18) CARRIER (CVS): Built on the hull of a heavy cruiser, the CVS gave up all of its heavy weapons but retained the phasers. The huge hangar amidships has four hatches to allow quick launches and recoveries.

YEAR	ESCORTS	FIGHTERS
Y170-175	CWE, DWE	Demon 1 or 2
Y176-Y179	CWA, DWA	Demon 3
Y180+	CWA, DWA	Demon 4

SSD and counter are provided in Module C4.

((R51.19) TUG (TG): Built on a heavy cruiser hull (or rather, on a simulated version of one), the tug carried standard Klingon pods (actually, simulations thereof). [As it is a simulation, it could theoretically be configured to carry (a simulation of) ANY pod for purposes of training and testing, although the image of Gorn pods under such a ship is rather humorous. Such an "experiment" could only be done with the permission of the opponent.] Note that the shuttle bay includes one HTS.

SSD and counter are provided in Module C4.

(R51.20) FRIGATE (FF): Fast and maneuverable, the Frax frigate can undertake independent patrols and give a good account of itself against even destroyers. In a fleet battle, the firing arcs make this unit superb at the job all size-4 units are supposed to be doing in fleet battles: killing things that dare to get close to the bigger and more important ships and taking care of small details to free larger ships for larger tasks.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counters are provided in Module C4.

FRAX SUBMARINES

(R51.N1) The Frax submarines continued the testing process with something theoretically impossible: launch weapons while cloaked! The Frax submarines can launch drones (and fire Axion torpedoes) while cloaked, using the passive fire control rules. All Frax submarine drones have ATG at no cost. Drones can be controlled normally if the ship is not cloaked. Scatter-packs cannot be launched while cloaked.

(R51.21) SUBMARINE FRIGATE (SFF): The smallest of the subs, it was used to train small warships and police ships for convoy escort situations.

SSD and counters are provided in Module C4.

(R51.22) SUBMARINE DESTROYER (SDD): This was the primary Frax submarine used in "The Frax War" (the annual Klingon command training exercise).

SSD and counter are provided in Module C4.

(R51.23) SUBMARINE WAR CRUISER (SCW): Large enough to give a good fight against a real warship, the SCW was the most common duel opponent. A tough opponent for a destroyer, and still a challenge for a war cruiser.

SSD and counter are provided in Module C4.

(R51.24) SUBMARINE MISSILE CRUISER (SMC): This large submarine was designed for a specific purpose: attacking bases! The huge (albeit one shot) missile wave was enough to overwhelm the defenses of a fully armed battle station.

SSD and counter are provided in Module C4.

(R1.25) SUBMARINE LIGHT CRUISER (SCL): This submarine was designed to provide a true "dueling opponent" able to fight a standard warship on even terms. It must, of course, surface to fire the disruptors, but when it comes up to fight, be ready for it!

SSD and counter are provided in Module C4.

FRAX MAJOR WARSHIPS

(R51.26) HEAVY CARRIER (CVA): A variant of the DN which retained the entire weapons suite, including the AFD system. Two full squadrons of fighters are carried in a single bay, but that bay is fitted with four hatches! It can control a number of seeking weapons equal to double its sensor rating.

YEAR	ESCORTS	FIGHTERS
Y174-175	CWE, DWE, FFE	Demon 1 or 2
Y176-Y179	CWA, DWA, FFA	Demon 3
Y180+	CWA, 2xDWA	Demon 4

SSD and counter are provided in Module C4.

(R51.27) SPACE CONTROL SHIP (SCS): Another DN variant that retained the full firepower of its progenitor. The bay now holds only one squadron, but still has four hatches! It can control a number of seeking weapons equal to double its sensor rating.

YEAR	ESCORTS	FIGHTERS
Y179	CWA, DWA, FFA	Demon 3
Y180+	CWA, 2xDWA	Demon 4

SSD and counter are provided in Module C4.

(R51.28) HEAVY BATTLE CRUISER (BCH): Typical of the breed and used for the first combat tests of the C7, the Frax BCH has the improved battery, power, and weapon systems of the class.

SSD and counter are provided in Module C4.

(R51.29) BATTLE CARRIER (BCV): Retaining all of the weapons of the BCH, the BCV adds a full fighter squadron with a "tunnel deck" hatch system (one on each side). It can control a number of seeking weapons equal to double its sensor rating.

YEAR	ESCORTS	FIGHTERS
Y179	CWA, DWA	Demon 3
Y180+	CWA, DWA	Demon 4

SSD and counter are provided in Module C4.

(R51.30) BATTLE CONTROL SHIP (BCS): Retaining the weapons of the BCH, the BCS gained the typical PF flotilla, half-squadron of fighters (still with two hatches), and repair facilities. It can control a number of seeking weapons equal to double its sensor rating.

YEAR	ESCORTS	FIGHTERS
Y180+	CWA, DWA	Demon 4

SSD and counter are provided in Module C4.

(R51.31) SURVEY CRUISER (SR): Designed to test Klingon survey ships in duels in remote areas, the Frax SR retained more weapons than most galactic SRs, losing only a pair of phasers to gain its special sensors. It was somewhat underpowered, having given up APRs for additional lab spaces, a typical Klingon feature.

SSD and counter are provided in Module C4.

FRAX WAR CRUISER VARIANTS

(R51.32) STASIS WAR CRUISER (ACW): Used to test stasis field tactics, the ACW traded in its rear-arc disruptors (which would have been all but useless) for drone racks. Despite its limited drone suite, it can control a number of seeking weapons equal to double its sensor rating.

SSD and counter are provided in Module C4.

(R51.33) COMMANDO WAR CRUISER (CWG): Designed to carry a good complement of marines with excellent support facilities, this ship was unmatched in its ability to land troops. Its defensive capabilities, however, were considered inadequate. It is of interest to note that this ship was not an LTT-capable unit like the Klingon D5G that it was matched against.

SSD and counter are provided in Module C4.

(R51.34) LIGHT TACTICAL TRANSPORT (LTT): This ship lacked the heavy weapons of the Klingon D5H, but unlike that ship, it retained its drone racks, giving it more power to use when engaged in combat.

SSD and counter are provided in Module C4.

(R51.35) WAR CRUISER MINESWEEPER (CWM): A fairly standard variant of the CW, the Frax minesweeper could sweep mines fore-and-aft and count on drones and phasers to destroy them.

SSD and counter are provided in Module C4.

(R51.36) WAR CRUISER MAULER (MCW): One of several Frax mauler variants, this one was unusual in that the mauler cannons were aligned along the centerline firing forward in contravention of all Frax tactics. Players might wish to experiment with this ship, assigning the maulers to the side firing arcs used by the Canadi'en maulers.

SSD and counter are provided in Module C4.

(R51.37) DRONE WAR CRUISER (CWD): With drones replacing the disruptors, the CWD is not only a typical drone cruiser but escapes from the limited engagement arcs of other Frax ships. Players might experiment with a rule that prohibits this ship from launching a drone unless the target is within the FX (or RX as appropriate) "firing arc" of the launcher.

SSD and counter are provided in Module C4.

(R51.38) WAR CRUISER SCOUT (CWS): Typical of the war cruiser scouts across the galaxy. The special sensors, having 360° arcs, effectively ignore the limitations of Frax weapons arrangements. Players might experiment with limiting the operating arcs of Frax special sensors to the FX or RX arcs of the weapons which they replaced.

SSD and counter are provided in Module C4.

(R51.39) WAR CRUISER LEADER (CWL): As with other CWLs across the galaxy, this CW variant gained phasers, power, and shields over its stablemates.

SSD and counter are provided in Module C4.

FRAX SMALLER WARSHIPS

(R51.40) WAR DESTROYER CARRIER (DWV): One of the earliest Frax carriers, the DWV lost its heavy weapons (but retained its drone racks) to gain a small squadron of fighters. The bay has two hatches ("tunnel deck") and is arranged laterally. The ship can control a number of seeking weapons equal to double its sensor rating.

YEAR	ESCORTS	FIGHTERS
Y167-175	DWE	Demon 1 or 2
Y176-Y181	DWA	Demon 3
Y180+	DWA	Demon 4

SSD and counter are provided in Module C4.

(R51.41) POLICE CORVETTE (POL): Used for convoy escorts and border patrols, the Police Corvette had all of the usual abilities of a police ship, including a limited cargo capability.

SSD and counter are provided in Module C4.

(R51.42) DRONE FRIGATE (FFD): The original Frax drone ship, it remained in use through the end of the war due to its high survivability when used in standoff missions. The Frax often used this ship to simulate Kzinti drone bombardment squadrons (adding cargo boxes in the simulation). It can control a number of seeking weapons equal to double its sensor rating. The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

Players might experiment with a rule that prohibits this ship from launching a drone unless the target is within the FX (or RX as appropriate) "firing arc" of the launcher.

SSD and counter are provided in Module C4.

(R51.43) ESCORT FRIGATE (FFE): Unlike most small frigates, this ship remained deadly against seeking weapons throughout the War due to the provision of *four* anti-fighter defense systems *(four gatlings!)* although those systems were useless against ships. This ship has limited aegis and provisions to reload fighters.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD and counters are provided in Module C4.

(R51.43A) AEGIS FRIGATE (FFA): The FFE was upgraded to full aegis in Y175, becoming the FFA.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

SSD is combined with the FFE. Use the FFE counters.

(R51.44) FAST CARRIER RESUPPLY SHIP (FCR): The Frax used this ship both to resupply carriers during a campaign and as a submarine tender to reload missile racks (FD52.0).

SSD is provided in Module C4. Use any convenient frigate counter.

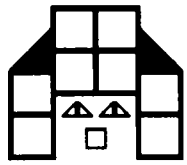
(R51.45) FRIGATE LEADER (FFL): Minor improvements in phaser firepower, shields, and other systems marked this unremarkable frigate leader.

The shuttle bay extends across the ship with two hatches in a transverse "tunnel deck".

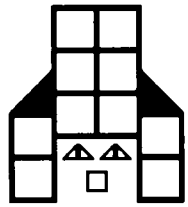
SSD and counter are provided in Module C4.

FRAX FIGHTERS

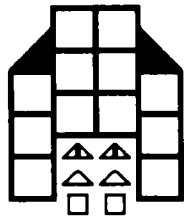
(R51.F1) DEMON–1 FIGHTER: The first (and least effective) of the Frax fighters, the Demon–1 was little more than an armed shuttle mounting two type–I drones.



(R51.F2) DEMON–2: This fighter could take more punishment than the Demon-1 and was faster, but was no better armed.



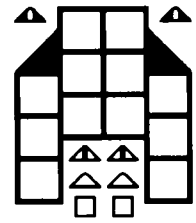
(R51.F3) DEMON-3 FIGHTER: The SSDs show this fighter, which is, obviously, in the same class as the Kzinti TAAS and the Klingon Z–Y, finally giving the Frax a true combat fighter.



The Demon–3C replaced the two type–VI drones with anti-ship type–Is for increased assault firepower.

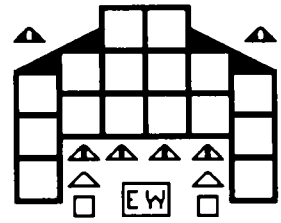
The Demon–3C type became available in Y183 at an increased cost of 10 points (one more than the standard Demon–3).

(R51.F4) DEMON–4: The Demon–4 has two "special" rails for type–III drones in addition to the Demon–3 rails. It is sometimes described as a refit for the Demon–3.



The Demon–4C replaced the two type–VI drones with anti-ship type–Is for increased assault firepower. This type became available in Y183 at an increased cost of 12 points (one more than the standard Demon–4).

(R51.F5) DEMON–H HEAVY FIGHTER: Fitted with its own internal EW systems and enough drones to fight an all-day battle, the Demon–H blazed a trail that Frax PFs were soon to follow.



FRAX FAST PATROL SHIPS

(R51.PF1) FAST PATROL SHIPS (PF): The Frax PFs, like their warships, emphasized the FX/RX firing arcs and engaged an enemy to one side, rather than head on. They are dangerous opponents in a PF duel due to their all-around weapons arcs.

Designed by Ken Burnside, who refused to accept the original idea that the Frax did not need their own PF.

Flotilla SSD and counters are in Module C4.

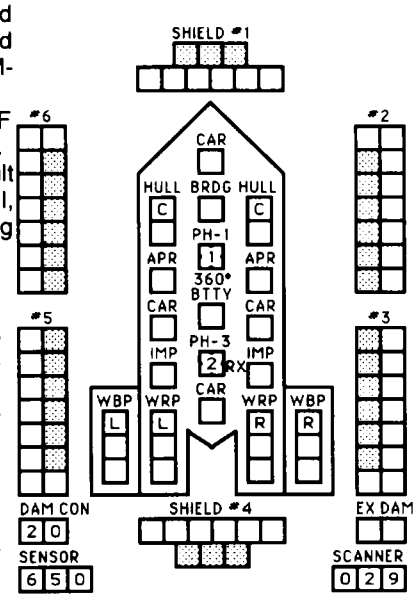
Versions included the C-cargo, G-ground assault, F-ficon, and M-mine warfare types.

The Cargo PF (PFC) is shown at right.

The ground assault PF (PFG) is identical, with barracks replacing the cargo.

The mine warfare PF (PFM) is identical, except that mine racks replace cargo and both APRs are replaced by mech-tractors w/ mine-sweeping shuttles.

The Fi-Con PF (PFF) has four fighter mech links with fighters replacing the PFC's cargo and a tractor replacing one APR.



(R51.PF2) DRONE PF (PFD): A drone-armed variant of the PF, it was integrated into some Frax PF flotillas. It replaced the two disruptors with type–B drone racks.

The SSD is included with the standard PFs on the flotilla SSD sheet.

(R52.0) THE QARIS

(R52.1) QARI BACKGROUND: The Qaris† were a simulator race created by the Federation for purposes of combat training. They were based on late 20th Century mechanized ground combat, a concept seemingly irrelevant to space combat but which, in fact, provided a cohesive structure for a reasonably complete race with unique weapons.

† Qar as in "car" (automobile) and ris as in "reeze" ("freeze" without the "f").

(R52.1A) GENERIC UNITS: The Qaris use the Klingon version of the generic units (bases, armed freighters, monitors, Q-ships, FRD); delete the security stations. On bases, replace the disruptors with KKHs. On other units, replace the disruptors with KKMs.

NOTE: The Qaris and their weapons were invented by Stephen V Cole, who did the basic hull types. Steven P Petrick created many of the variants of those basic hull types.

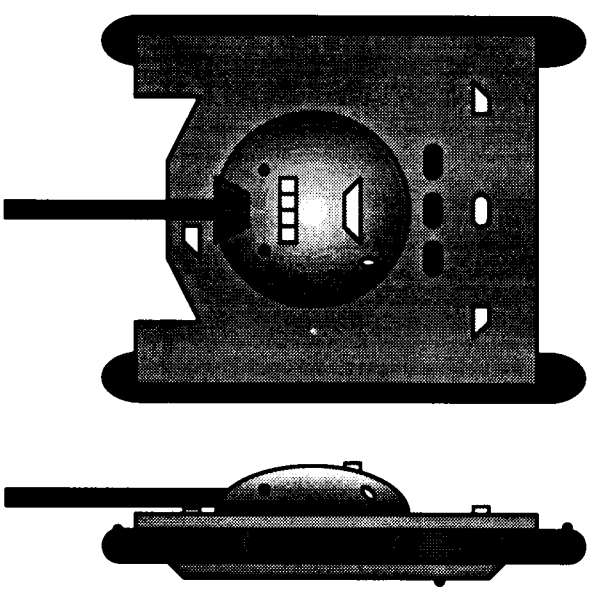
QARI DREADNOUGHT

(R52.2) T10 DREADNOUGHT: The largest Qari warship in the original design series. It was powerful and deadly with two coaxial kinetic cannons which fired independently (although they could not fire on the same impulse).
SSD and counter are in Module C4.

QARI CRUISERS

(R52.3) T90 HEAVY BATTLECRUISER: A later addition to the Qari stable, with the coaxial cannon concept pioneered by the T10. It was introduced along with the BM3.
SSD and counter are in Module C4.

(R52.4) T80 COMMAND CRUISER: Introduced about Y168 in the first serious attempt to "modernize" the Qari designs for improved combat training. It was introduced simultaneously with the T72, BM2, and BR8.
SSD and counters are in Module C4. Illustration below.



(R52.5) T64 HEAVY CRUISER: The original Qari heavy cruiser. It was later supplanted in duels by the more powerful T80 and nearly replaced by the more efficient T72.
SSD and counter are in Module C4.

(R52.6) T83 HEAVY SCUD CRUISER: A variant of the T80 command cruiser, the T83 carried the devastating Scud missiles in a row of launchers amidships. It was used only in base or planetary assaults.
SSD and counter are in Module C4.

(R52.7) T72 WAR CRUISER: A more powerful (and slightly faster) medium warship. After its introduction, the T55 virtually disappeared from the simulators.
SSD and counters are in Module C4.

(R52.8) T70 WAR CRUISER SCOUT: The scout variant of the T72 series, with the kinetic cannon replaced by special sensors.
SSD and counter are in Module C4.

(R52.9) T73 LIGHT SCUD CRUISER: A variant of the T72 with a battery of the deadly Scud missiles replacing the turret. It was used only in base or planetary assaults.
SSD and counter are in Module C4.

(R52.10) T55 LIGHT CRUISER: The original Qari light cruiser and a stablemate to the T64. In simulations after Y168, the T55 was supplanted by the more powerful T72.
SSD and counter are in Module C4.

QARI DESTROYERS

(R52.11) BM3 WAR DESTROYER: The second upgrade of the destroyer, with the destroyer's light kinetic cannon replaced by a much more effective medium kinetic cannon.
SSD and counters are in Module C4.

(R52.12) BMS WAR DESTROYER SCOUT: A variant of the destroyer, with special sensors replacing kinetic cannon.
SSD and counter are in Module C4.

(R52.13) BM2 DESTROYER LEADER: The first upgrade of the destroyer, with slightly increased firepower.
SSD and counter are in Module C4.

(R52.14) BM1 DESTROYER: The basic Qari destroyer.
SSD and counters are in Module C4.

(R52.15) BMD TRANS-MORTAR DESTROYER: A variant of the destroyer with Trans-Mortars in place of the kinetic cannon. This was used as a squadron support unit, but only one can be used except in base assaults.
SSD and counters are in Module C4.

QARI FRIGATES

(R52.16) BR8 FRIGATE LEADER: A variant of the frigate, with slightly improved firepower.
SSD and counter are in Module C4.

(R52.17) BR6 FRIGATE: The standard Qari frigate.
SSD and counters are in Module C4.

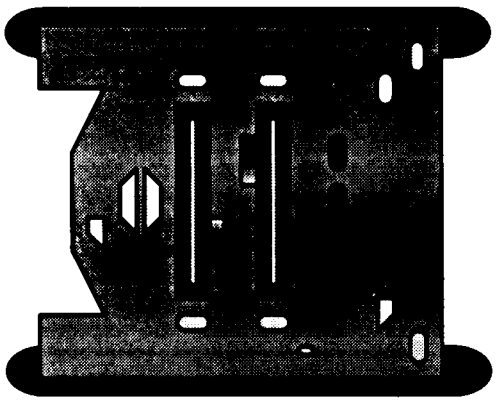
(R52.18) BR7 DRONE FRIGATE: A variant of the frigate, with drone racks (fitted with subspace guided drones) in place of the kinetic cannon.
SSD and counters are in Module C4.

QARI CARRIER AND ESCORTS

(R52.19) T87 CARRIER: A variant of the T80 command cruiser, the T87 was a fully-capable fleet carrier, although it would probably be classified as a medium carrier due to the lack of offensive heavy weapons. The ship has extensive lab and tractor facilities. The shuttle bay has two hatches.

YEAR	ESCORTS	FIGHTERS
Y168-Y170	2xBME	12xMiG–21
Y171-Y174	T78, BME	12xMiG–23
Y175-Y180	T78A, BMA	12xMiG–23
Y181+	T78A, BMA	12xMiG–29

SSD is combined with the BME and T78. Counter is in Module C4.



(R52.20) T78 ESCORT WAR CRUISER: A variant of the T72 war cruiser, with phasers replacing the kinetic cannon. The turret rotation rate, however, severely limited their effectiveness. It is provided with limited aegis.

SSD is combined with the T87 and BME. Counter is in Module C4.

(R52.20A) T78A AEGIS WAR CRUISER: The T78s in the simulators were provided with full aegis at the time it became generally available to all fleets (Y175), becoming T78As.

The SSD is combined with the limited aegis T78; use the same counter.

(R52.21) BME ESCORT WAR DESTROYER: As with the T78, the BME is provided with extra phasers to replace the kinetic cannons. The turret rotation problem was even more acute than on the T78 due to the provision of fewer hull-mounted phasers.

SSD is combined with the T78 and T87. Counters are in Module C4.

(R52.21A) BMA ESCORT WAR DESTROYER: The BMEs in the simulators were provided with full aegis at the time it became generally available to all fleets (Y175), becoming BMAs.

The SSD is combined with the limited aegis BME; use the same counters.

(R52.22) T79 PF TENDER: Another variant of the T72, the T79 was fitted to carry six PFs. It has extensive repair capacity, perhaps giving a hint as to what the Federation doctrine regarding PFTs would have been.

SSD and counter are in Module C4.

(R52.PF) QARI FAST PATROL SHIPS

(R52.PF1) P76 FAST PATROL SHIP: The Qari PF was a fast combat ship with a light kinetic cannon.

Flotilla SSD and counters are in Module C4.

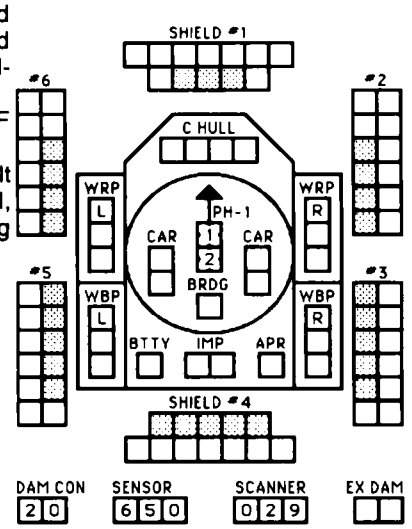
Versions included the C-cargo, G-ground assault, F-ficon, and M-mine warfare types.

The Cargo PF (P7C) is shown at right.

The ground assault PF (P7G) is identical, with barracks replacing the cargo.

The mine warfare PF (P7M) is identical, except that mine racks replace cargo and the APR is replaced by a mech-tractor with a mine-sweeping shuttle.

Turret rotation has no effect on cargo, barracks, fighter mech links, or mine racks.



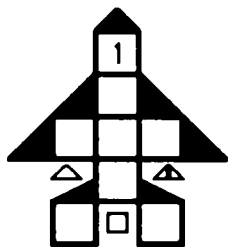
The Fi-Con version (P7F) has four fighter mech links holding fighters replacing the P7C's cargo and a tractor replacing the APR.

(R52.F) QARI FIGHTERS

(R52.F1) MiG–21 FIGHTER:

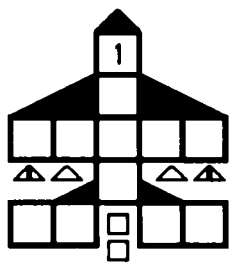
The original Qari fighter, the MiG–21, carried only two drones: one standard type–I and one warp-seeking type–VI.

Its single phaser-3 and chaff pack were quickly outclassed.



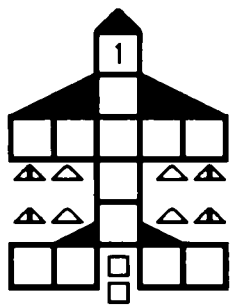
(R52.F2) MiG–23 FIGHTER:

Intended as a "standard" fighter equivalent to the Federation F–18. It carries two type–I and two type–VI drones. This is the fighter shown on the carrier group SSD.



(R52.F3) MiG–29 FIGHTER:

Intended as a superiority fighter, the MiG–29 has a copious supply of drones, but the same phaser armament as the MiG–23. It was curious that the Federation did not provide it with the same gatling phasers that their own superiority fighters carried.



(R53.0) THE TRIAXIAN ALLIANCE

The Triaxians are another simulator race, this one developed by the Gorns. The objective of the Gorns was to create a simulator race which employed essentially the same weapons with which they were familiar, but to use them in different ways (FP51.0).

Part of the simulation program enabled the Triaxians to move in unusual directions (C51.1).

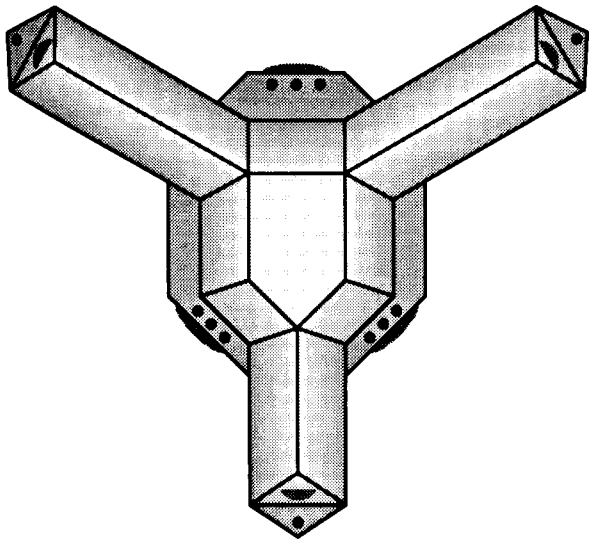
Preliminary observations have shown that Triaxian tactics revolve around their ability to fly in whatever direction suits the situation. After stopping to use a wild weasel, the ship simply accelerates in the direction that best matches their shield and weapon status, keeping any weaknesses facing away from the enemy. Alternatively, the ship can use a High-Energy Direction Change (HEDC) to change direction at any time.

The Triaxians and their weapons were designed by Bruce Graw, who also created the first three ships. The later ships were created by Steven P. Petrick. The PFs were created by Ken Burnside.

TRIAXIAN WARSHIPS

(R53.2) DREADNOUGHT (DN): Capable of launching a tremendous amount of plasma, the Triaxian DN was a truly formidable opponent.

SSD and counter are in Module C4.



(R53.3) HEAVY CRUISER (CA): The mainstay of the Triaxian forces, it did not have the single-volley crunch power of the Gorn CCF, but had better defenses.

SSD and counters are in Module C4.

(R53.4) DESTROYER (DD): Too small for plasma-A launchers, this ship relied on a triumvirate of plasma-Fs to keep enemies at bay.

SSD and counters are in Module C4.

(R53.5) SCOUT (SC): A variant of the destroyer, the Triaxian scout provided electronic warfare support.

SSD and counter are in Module C4.

(R53.6) PF TENDER (PFT): Another variant of the destroyer, the PFT carried the Triaxian PFs into battle.

SSD and counter are in Module C4.

(R53.7) WAR CRUISER (CW): A late addition to the Triaxian forces, designed to help train captains against the new class of ships entering service in the galaxy.

SSD and counters are in Module C4.

(R53.8) STRIKE CARRIER (CVS): The CVS, a variant of the CA, was a very efficient carrier due to the launch and recovery rates of its three shuttle bays. The ready racks can hold one plasma-F torpedo and two plasma-D torpedoes at any given time, but only one type of torpedo can be loaded onto a fighter at a time.

SSD is combined in a squadron with the CWE and DE in Module C4. Counter is in Module C4.

(R53.9) ESCORT CRUISER (CWE): A typical CW escort variant. Note that the fighter service stations are present only in two of the three bays.

SSD is combined in a squadron with the CVS and DE in Module C4. Counter is in Module C4.

(R53.9A) AEGIS CRUISER (CWA): The Triaxians received full aegis in Y175 (just like real races), turning the CWE into a CWA. The SSD is combined with the CWE. Use the CWE counter.

(R53.10) DESTROYER ESCORT (DE): Another typical escort class used for combat training.

SSD is combined in a squadron with the CVS and CWE in Module C4. Counter is in Module C4.

(R53.10A) AEGIS DESTROYER (DEA): The DE received full aegis in Y175 along with the CWA.

The SSD is combined with the DE. Use the DE counters.

TRIAXIAN FAST PATROL SHIPS

(R53.PF1) FAST PATROL SHIP (PF): Vicious antagonists for any full-size ships, the Triaxian PFs combined powerful all-around armament with incredible maneuverability.

Flotilla SSD and counters are in Module C4.

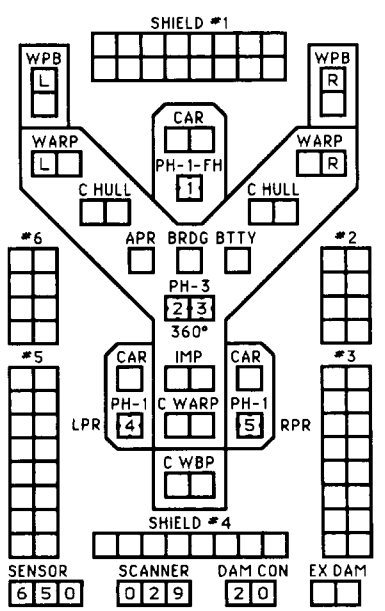
Versions included the C-cargo, G-ground assault, F-ficon, and M-mine warfare types.

The Cargo PF (PFC) is shown at right.

The ground assault PF (PFG) is identical, with barracks replacing the cargo.

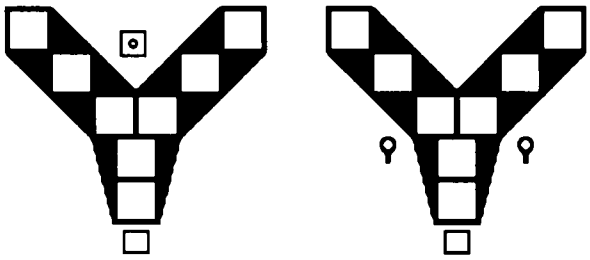
The mine warfare PF (PFM) is identical, except that mine racks replace cargo and the APR is replaced by a mech-tractor with a mine-sweeping shuttle.

The Fi-Con version (PFF) has mech links holding fighters replacing the PFC's cargo boxes and a tractor replacing the APR.



TRIAXIAN FIGHTERS

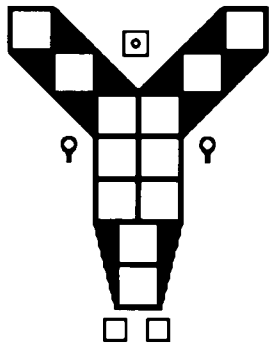
(R53.F1) TRIAXIAN CALTROP–1 FIGHTER: While triangular in shape, the Caltrop moves only straight ahead (turning at the standard fighter rates) and does not use the triaxial movement system.



The Caltrop–1 was originally designed to carry a single type–F plasma torpedo. When the type–D plasma torpedo was invented a few years later, the original Caltrop–1 was designated as the Caltrop–1F and a new design, the Caltrop–1D, was created to carry two type–D plasma torpedoes. Each carrier could carry a mix of the two types, or its entire squadron could be of either type.

(R53.F2) TRIAXIAN CALTROP–2 FIGHTER: While triangular in shape, the Caltrop moves only straight ahead (turning at the standard fighter rates) and does not use triaxial movement.

The Caltrop–2 can be fitted with either a single type-F *or* two type-D torpedoes. It cannot carry both of these options at the same time, but can switch between them each time it reloads. A given fighter can be loaded with either weapon at any time. Converting a fighter loaded with plasma-Ds to one loaded with a plasma-F would require deck crew actions to unload the plasma-Ds before the plasma-F could be loaded, and vice versa. Fighters loaded before the scenario begins must be designed before Turn #1. Fighters loaded during the scenario are marked at the time loading begins.



SPECIAL TRIAXIAN WEAPONS RULES

(R53.R1) TYPE-D PLASMA RACKS: Prior to Y165, the Gorns did not know they would develop plasma-racks. As such, the technology was not incorporated into the Triaxian simulation until that year. Due to the unique nature of the Triaxians (i.e., their being a simulator race), the Gorns were able to program their ships to use some unique weapons arcs with this system not available to the Gorns themselves. These firing arcs are indicated on the SSDs of the Triaxian ships and do not create exceptions for other races to employ these arcs on their own ships. Prior to Y165, delete the plasma-D racks and reduce the BPV of the Triaxian ship by 10 points for each deleted rack.

(R53.R2) TRIAXIAN PHASER ARCS: Being a simulation, the Triaxians are able to employ unusual phaser arcs. These are noted on the SSDs as being identical to the plasma arcs. The phasers can fire into any hex within the "tracking arc" of that "plasma arc", i.e., into the gray hexes on the diagrams in (D2.34) and (D2.36).

(R53.R3) PLASMA–A TORPEDOES: Prior to Y165, limit the plasma-A launchers to type–G/GS/GL/F torpedoes and reduce the BP by 10 points per plasma-A.

(R54.0) SHARKHUNTERS

(R54.1) BACKGROUND: The Sharkhunters are a simulator race developed by the Romulans. Their existence (such as it is) became known to the Federation after the capture of a Romulan ship operating in Klingon space, which had a copy of the Sharkhunter software on board for simulator combat training.

The Sharkhunters (the actual Romulan term refers to a small group of Romulan fishermen who specialized in hunting the dangerous *Rukholah Fish* on the seas of Remus) were designed to be a Romulan captain's worst nightmare. They have systems that can find cloaked ships, make themselves almost invulnerable to plasma torpedoes, and guide plasma torpedoes directly to cloaked ships.

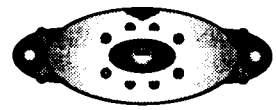
The Sharkhunter ships and weapons were designed by Stephen V Cole to be the Romulan's worst nightmare.

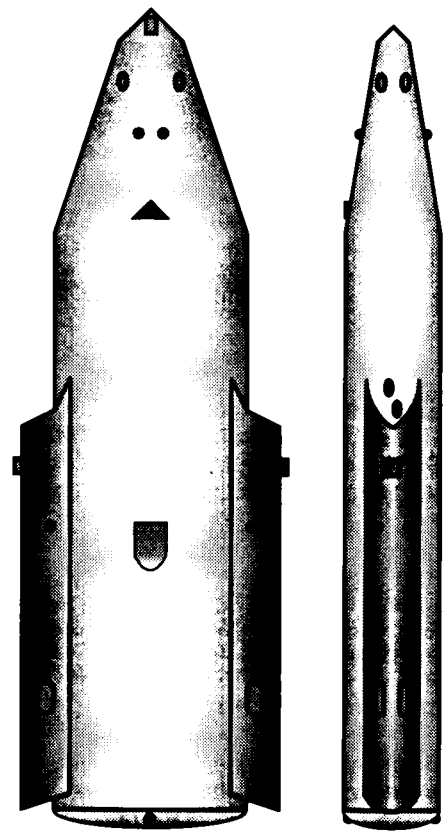
(R54.1A) GENERIC UNITS: The Sharkhunters use the Gorn version of the generic units (bases, armed freighters, monitors, Q-ships, FRD). Units with specific Sharkhunter technology may be provided in a future product.

SHARKHUNTER WARSHIPS

(R54.2) HEAVY CRUISER (CA): A powerful opponent in any circumstances, any cloaked ship facing the Sharkhunter CA is in severe danger. This ship has enough systems to expose the cloaked ship, and enough firepower to badly damage it before it can uncloak. The torpedo armament, comprising a mix of type-Ss and type-Gs, gives it the ability to engage cloaked ships from a stand-off distance if necessary.

SSD and counters are in Module C4.





(R54.3) WAR CRUISER (CW): The Sharkhunter CW is a dangerous opponent, like most war cruisers. It was added to the Sharkhunter fleet about Y168 to train captains to face the new class of warships coming into service across the galaxy. Their key feature is the torpedo armament, comprised entirely of type–G weapons. This gives it a slight edge over most CWs and works well with the guidance capabilities of the ship.

SSD and counters are in Module C4.

(R54.4) WAR DESTROYER (DW): Designed to fight the various destroyer classes, the Sharkhunter DW has type-G torpedoes which provide an edge against the F-armed SkyHawks.

SSD and counters are in Module C4.

(R54.5) FRIGATE (FF): These ships were designed not so much for hunting cloaked frigates as they were to operate in groups against larger ships.

SSD and counters are in Module C4.

(R54.6) WAR CRUISER SCOUT (CWS): Designed to provide electronic warfare support for a Sharkhunter fleet, the CWS retained the bomb throwers of the original CW. This was in keeping with the primary purpose of the race — hunting cloaked Romulans!

SSD and counter are in Module C4.

(R54.7) STRIKE CARRIER (CVS): A variant of the CA, the strike carrier deployed an entire squadron of the deadly Harpoon fighters while retaining the cruiser's entire torpedo armament. This ship (along with the escorts it normally deployed with) was an impossible opponent for a single Romulan ship, although some did manage to escape!

YEAR	ESCORTS	FIGHTERS
Y172	CWE, DWE	12xHarpoon
Y175	CWA, DWA	12xHarpoon

SSD and counter are in Module C4.

(R54.8) WAR CRUISER ESCORT (CWE): Typical of the breed, the CWE gave up the cloak-hunting bomb throwers and wire-guided torpedoes for defensive weapons (phaser–3s and plasma-Ds, respectively). This made Sharkhunter carrier groups fully capable of dealing with non-cloaked enemies and allowed the Romulans to simulate attacks on the new Gorn and Federation carrier groups. This ship has limited Aegis.

SSD and counter are in Module C4.

(R54.8A) AEGIS CRUISER (CWA): The Romulans provided their Sharkhunter sparring partners with full aegis even before they were able to deploy the system themselves, turning the CWE into the even more effective CWA.

The SSD is combined with the CWE. Use the CWE counter.

(R54.9) DESTROYER ESCORT (DWE): As with the CWE, the DE gave up its ability to hunt cloaked ships in order to better defend its carrier. This ship has limited Aegis.

SSD and counter are in Module C4.

(R54.9A) AEGIS DESTROYER (DWA): This was the full-aegis version of the DWE. The SSD is combined with the DWE. Use the DWE counter.

(R54.10) DREADNOUGHT (DN): While most DNs (in the real universe) never operated alone, the Sharkhunter DN was often used as the single opponent for a Romulan cruiser captain who was just a bit too confident in his own abilities. It was one of very few ships (and perhaps the only DN) to mount *two* of the massive type–R plasma torpedoes. (Of course, it never really existed.)

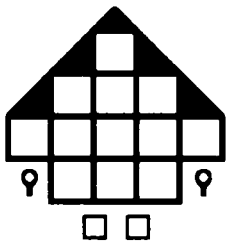
SSD and counter are in Module C4.

(R54.11) HEAVY BATTLECRUISER (BCH): Another of the heavy battlecruisers which came into service about Y180, the Sharkhunter BCH had improved performance and a full battery of type–S plasma torpedoes.

SSD and counter are in Module C4.

SHARKHUNTER FIGHTERS

(R54.F1) HARPOON FIGHTER: Designed for dogfighting (Heloshuttles were adequate for cloak-hunting tasks), the Harpoon fighter was typical of the excellent mid-war fighters.



NOTE: See (J51.0) for Sharkhunter Heloshuttles.

(R55.0) BARBARIANS

(R55.1) BARBARIAN BACKGROUND: The Barbarian simulator race was developed by the ISC to simplify their combat testing. As Veltressai traders spread across the galaxy, sending home reports on the dozen warring races that the ISC felt compelled to pacify, the ISC quickly found that the programming of so many races in such short order was excessively difficult. Their solution was to design a single race (which they dubbed the Barbarians) which could, through the application of various optional weapons and other systems, be configured to reflect ANY race in the entire galaxy (excepting, perhaps, the Andromedans and the larger Jindarian ships).

The reflection was not perfect, of course, due to the need to standardize so many systems. All Barbarian ships, for example, are two-engine designs, while it could be argued that at least 30% of the ships in the galaxy had three engines or more. A future product may include an alternative three-engine design for advanced testing.

Players may find the Barbarians useful for testing new weapons of their own creation.

The Frax use the generic units (bases, armed freighters, monitors, Q-ships, FRD) of the race they are simulating.

(R55.1A) BARBARIAN OPTIONAL WEAPONS (OPT): Each ship is fitted with forward and side optional weapons boxes, and many also have 360° optional weapon boxes. These can be treated as Orion option mounts with the following exceptions:

One-half of the total Opt–F and Opt–L/R boxes can be non-phaser weapons; the rest must be phasers. The non-phaser boxes can hold phasers. See special Kzinti rule below.

The side boxes on the left side must be identical to the side boxes on the right side.†

The 360° boxes can be only phasers, ESGs, or drones. (Note that in an exception to the normal rules, ESGs on Barbarian ships only take a single option box, but they can only be placed in 360° option boxes.)

Phaser-G replaces two ph–3s; Ph–Gs cannot be put in optional weapon boxes.

Plasma torpedoes of type–G, F, or D can be put into any box. Plasma torpedoes of type–S can be used in only half of the non-phaser optional weapon boxes. A single type–R torpedo can replace two Opt-F boxes, uses up the ship's quota for type–S torpedoes, and is limited to the FA firing arc.

If simulating a Kzinti ship, drones may be placed in the Opt-L and Opt-R boxes normally assigned to phasers, but if this is done, the Opt–360° boxes must be used for phasers.

FIRING ARCS:

Opt-F weapons have FA arcs for phasers, FP for plasma torpedoes (FA for type–R), and FA for heavy weapons.

Opt-L weapons have LS for phasers (and plasma-Ds), LP for plasma torpedoes, and LF+L for heavy weapons. Plasma-Fs could be LS or LP or even LPR.

Opt-R weapons have RS arcs for phasers, RP for plasma torpedoes, and RF+R for heavy weapons. Plasma–Fs could be RS or RP or even RPR.

Firing arcs can be further restricted to simulate a specific race or for special training purposes.

NOTES:

All of the weapons must come from the types available to a single race (U7.26).†

The Optional Weapon Boxes can hold anything that will fit in a non-weapon option (R55.1C) box.

† These restrictions can be set aside if you are playing a "just for fun" scenario rather than trying to create a specific racial analog or an entirely new race.

(R55.1B) BARBARIAN POWER OPTIONS (PO): These boxes (relatively few in number on each ship) can be any type of power system, including warp, APR, AWR, Impulse, or battery. These were used to fine-tune the basic ship to reflect whatever race was being simulated. If creating an entirely new race, these could be used to vary the power curve and weapons arming rates. Non-Option APR boxes can be replaced with AWR to configure the power to the weapons of the owning race at a cost of 1 BPV point each.

These boxes could also be used to hold any non-weapon system instead of the increased power. Special sensors are considered to be weapons for this purpose.

Warp engine boxes can be designated by the owning player as Center Warp, or they can be divided evenly between Left Warp and Right Warp as appropriate to the race being simulated.

(R55.1C) BARBARIAN NON-WEAPON OPTIONS (NWO): These can hold any system available in Annex #8B *except* power systems or weapons (as defined in Annex #7D). Special sensors are considered to be weapons for this purpose. Fighters and shuttles are not considered to be weapons for this purpose.

(R55.1D) OTHER BARBARIAN VARIANTS

(R55.1D1) CLOAK: A Barbarian ship can be equipped with a cloaking device. The procedure to accomplish this is to first select systems for the ship's various options and then multiply the completed ship's BPV by 0.15, adding the result of this to the completed ship's BPV to determine its total BPV. The cloaking cost of the ship is one-third of its total generated power if it is size-class 4, and one-half of its total generated power if it is size-class 3 or larger. PFs would pay a cloaking cost of 1/2 of their non-warp pack power.

(R55.1D2) CARRIER: If at least one-half of the total option boxes on the ship are used for fighters, the ship qualifies as a carrier (J4.61), (J4.7). This provides it with certain aspects:

One deck crew per fighter.

Drone storage is 12 spaces per drone-armed fighter.

Plasma–D storage is 6 per fighter so armed.

Note that the cost of the fighters and ready racks must be paid for as an exchange against the shuttles.

(R55.1D3) ESCORT: To be used as an escort, no heavy weapons can be installed, the power options must be used for shuttles (with fighter ready racks), and aegis is installed at a cost of 1 point per weapon controlled for limited aegis and 2 points per weapon controlled for full aegis.

(R55.1D4) COMMANDO: For every option box used as a barracks, the ship earns the right to buy 10 BPs (one of which can be a heavy weapon, commando, engineer, or other special type) in addition to those allowed by Commander's Options.

(R55.1D5) MINESWEEPER: Barbarian CWs, DWs, and FFs can simulate minesweepers. The procedure is to increase the forward shield to 35 boxes and install tractors in any Opt-F boxes, phaser-3s in any Opt-L or Opt-R or Opt-360° boxes, and mine racks in any NWO boxes. Power options can be impulse or APR only. Races with drone racks could install them in the Opt–360° boxes. Races with plasma racks could install them in the Opt–360° boxes, but each rack can have only a 180° arc, and the racks cannot overlap.

(R55.1D6) SEEKING WEAPON CONTROL: Any Barbarian ship with more than six seeking weapons, or more than five fighters, is assumed to have an ability to control a number of seeking weapons equal to double its sensor rating. All others have the ability to control a number of seeking weapons equal to their sensor ratings.

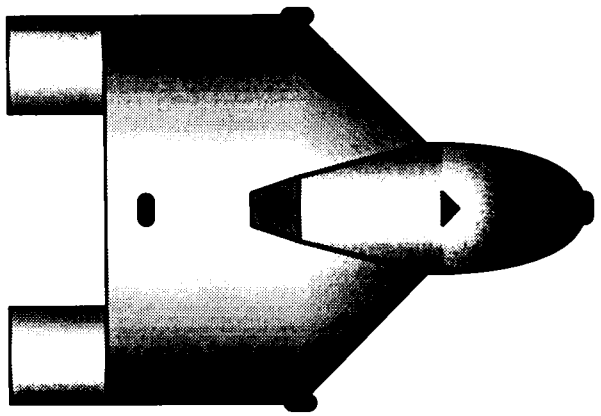
(R55.1D7) VOID: Option boxes can be left empty for any reason and, in such cases, are ignored for all purposes.

BARBARIAN WARSHIPS

(R55.2) DREADNOUGHT (DN): The heaviest of the original Barbarian ships, the dreadnought combined heavy firepower, plenty of phasers, and a solid hull.
SSD and counter are in Module C4.

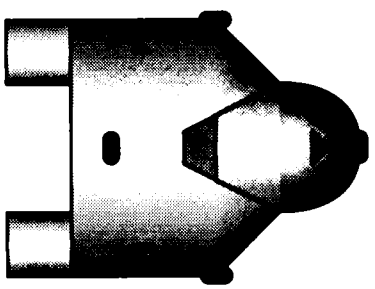
(R55.3) HEAVY BATTLECRUISER (BCH): A late addition to the Barbarian stable, the heavy battlecruiser was an enlarged version of the standard cruiser.
SSD and counter are in Module C4.

(R55.4) HEAVY CRUISER (CA): The original Barbarian ship, the cruiser was designed to simulate any cruiser-sized opponent. Note the flag bridge, which effectively made this a command cruiser.
SSD and counters are in Module C4.



(R55.5) LIGHT CRUISER (CL): Another late addition to the Barbarian fleet, the CL was known to be both fast and dangerous. Note that this is a war cruiser in everything but name, since the ISC never built a war cruiser of their own and did not truly understand the concept at this point.
SSD and counters are in Module C4.

(R55.6) DESTROYER (DD): Probably the second Barbarian ship to be programmed into the simulator, although one source insists it was actually the first. The destroyer has the power curve of a late-war DW when the Power Options are used as such. When they are used for non-power systems, the ship more nearly simulates a standard pre-war destroyer.
SSD and counters are in Module C4.



(R55.7) FRIGATE (FF): Fast and deadly, the bantam-weight Barbarian frigate was the scourge of the ISC gunline and often the first opponent of young commanders being trained for independent patrol actions.
SSD and counters are in Module C4.

EXAMPLES OF HEAVY CRUISER CONFIGURATIONS

	ABCD	EF	GH	JK	NWO	PO
Fed	Photon	Ph–1	Ph–1	Ph–1 or drone	Lab	AWR
Kling	Disr	Ph–2	Ph-2	drones	Trans	APR
Rom	2xPl-S 2xPh1	Plas-F Ph–1	Plas-F Ph–1	Ph–1-RX	Tran Hull	Warp
Kzinti	Disr	Drone	Drone	Ph–1	Tran	APR
Gorn	Ph–1	Plas-S Plas–F	Plas-S Plas–F	Ph–1-RA	Shuttle	Warp
Thol	2xDisr 2xPh–1	Disr Ph–1	Disr Ph–1	Snare LS/RS	Void	Void
Hyd‡	Ph–2	Fusion	Fusion	Fighter	Fighter	Fighter
Hyd	Ph–2	HB	HB	APR	Fighter	APR
Lyran	Disr	Ph–1	Ph–1	ESG	C Hull	APR
WYN Fish	Disr	Ph-1	Ph-1	Drone	2xTrac 2xFTR	APR
ISC	2xPPD 2xPl–S	Ph-1	Ph-1	Plas-F-AP	2xShtle 2xHull	Warp
LDR‡	Disr	Ph–1	Ph–1	ESG	C Hull	APR
Selt	PC	Ph–1	Ph–1	WB-FA	Tran	Warp
Jind Strike	Ph–1	Ph–1 MRG	Ph–1 MRG	MRG-RA	Opt	APR

‡ Replace each pair of Ph-3s with one Ph–G.
Jindarian size-3 Strike Cruisers (non-rock hulls) are in Module R6.

EXAMPLES OF DESTROYER CONFIGURATIONS

	AB	C	D	EF	NWO	PO
Fed	Photon	Ph–1	Ph–1	Ph–1 or drone	Lab	AWR
Kling	Disr	Ph–2	Ph-2	drones	Trans	APR
Rom	2xPlas-F	Ph–1	Ph–1	Ph–1	Trac, Shuttle	Battery
Kzinti	Disr	Drone	Drone	Ph–1	Tran	APR
Gorn	Ph–1 Plas-G	Plas–F	Plas–F	Ph–1-RA	Shuttle	APR
Thol	Ph–1	Disr	Disr	Snare LS/RS	Void	Void
Hyd‡	Fusion	Ph–2	Ph–2	Ph–1	Fighter	Fighter
Hyd	HB	Ph–2	Ph–2	Ph–1	APR	APR
Lyran	Disr	Ph–1	Ph–1	ESG	C Hull	APR
WYN Fish	Disr	Ph-1	Ph-1	Drone	Trac	APR
ISC	2xPl–F	Ph-1	Ph-1	Plas-F-AP	2xShtle 2xHull	APR
LDR‡	Disr	Ph–1	Ph–1	ESG	C Hull	APR
Selt	PC	Ph–1	Ph–1	WB-FA	Tran	APR
Jind	Ph–1	LRG	LRG	LRG-RA	Opt	APR

‡ Replace each pair of Ph-3s with one Ph–G.

SMALL RACES

These four small races are both special purpose scenario opponents and a preview of full-scale races yet to come. Each is provided only with two ships. All were designed by Stephen V Cole, along with their weapons. They will be presented more fully in a future product. Until then, they do not require generic support units.

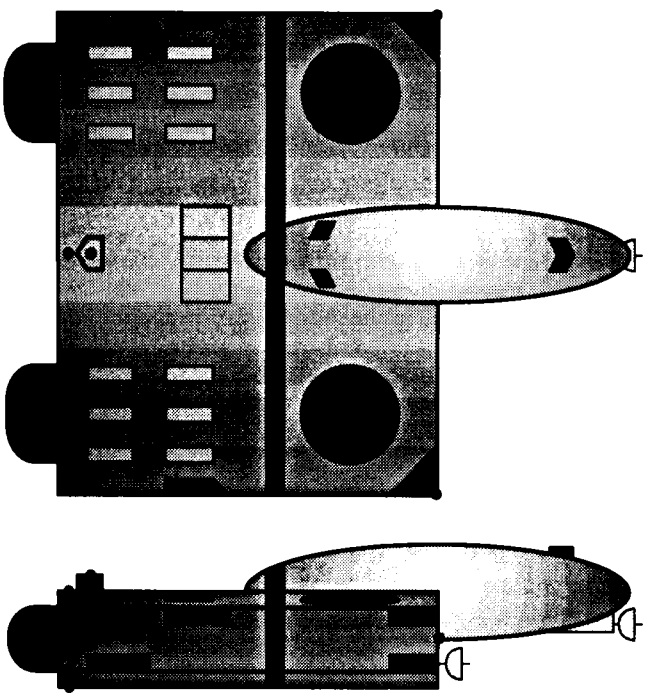
(R56.0) FLIVVERS

(R56.1) BACKGROUND: The Flivvers were a simulator race based on two key items of technology: the Hyperdrone (which fits in somewhere between seeking and direct-fire weapons) and Hoverwarp technology (which allowed Flivver ships to move sideways and backwards at will, keeping their Hyperdrone launchers aimed at the enemy).

The Flivvers were originally developed by the Klingons, but during the early stages of the Klingon invasion, a copy of the software was captured (along with a Klingon ship) during a counter-attack and (after Star Fleet Intelligence was convinced that the file did not describe a new Klingon weapon), it was adapted by the Federation for dissimilar combat training.

(R56.2) HEAVY CRUISER (CA): Designed to duel with typical cruisers and stand in the battle line during fleet engagements, the Flivver CA has two central "hover" engines and four Hyperdrone racks. The cargo boxes each hold 50 spare Hyperdrones. Transferring these to the magazines for the launchers is done by (FD2.445). Cargo is destroyed on "flag" bridge hits for this ship.

SSD and counter are in Module C4.



(R56.3) WAR DESTROYER (DW): Designed to duel smaller ships and protect the cruisers in a battle formation. The Flivver DW relies on a single Hoverwarp engine for its special maneuvers. The two cargo boxes each hold 50 spare Hyperdrones, which can be transferred to the magazines for the Hyperdrone racks by (FD2.445). Cargo is destroyed on "flag" bridge hits for this ship.

SSD and counter are in Module C4.

(R57) DELTANS

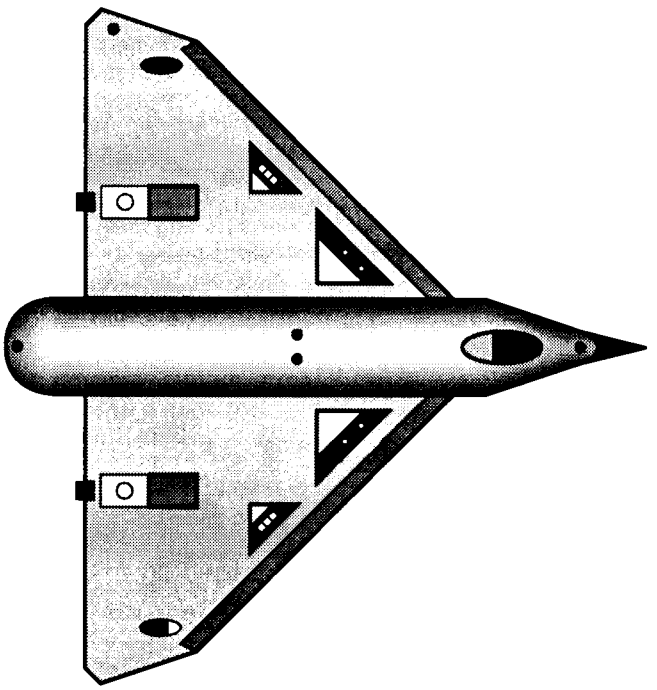
(R57.1) BACKGROUND: The Deltans were a Federation-designed simulator race intended for a single mission: attacking bases or slow moving targets, such as convoys or crippled ships. Deltan ships were very fast and powerfully armed, but their maneuverability was severely restricted. In theory, any prospective Federation captain who could defend a base against a Deltan attack was very good at his job, since the Deltans were the most dangerous enemies in such a situation.

(R57.1A) TURN MODES: All Deltan ships have a turn mode of four at all speeds, regardless of any other circumstances, including crew quality, computer control, or legendary officers. Deltan ships always move first within Step 2 of the Order of Precedence (C1.313).

(R57.2) B-58 HUSTLER HEAVY CRUISER (CA): The Deltan Heavy Cruiser, with its high speed and four photon torpedoes (which it could overload and hold while moving at nearly incredible speeds), was an "in your face" opponent of unmatched ferocity. The ADDs were intended to protect the ship from its most dangerous (Federation) threat: head-on drone attacks.

SSD and counter are in Module C4.

In the graphic below, note the photons (inboard) and the ADDs at midwing in structures. The shuttles are carried in "garages" on top of the wings, with landing areas (not balconies) and tractor beams to the rear.



(R57.3) B-66 HELLHOUND WAR CRUISER (CW): With virtually the same firepower as the Hustler CA, the Hellhound CW was often used in the preliminary stages of training against this race. The ship is actually more effective (if less survivable) than the CA due to the more efficient movement cost. It is as fast as an Orion with better weapons, a tighter turn mode, and no engine damage from doubling.

SSD and counter are in Module C4.

(R58.0) BRITANIANS

(R58.1) BACKGROUND: The Britanians were based on 18th Century sailing ships of war, with side-firing weapons and virtually no fore-and-aft armament (or shielding).

One unique rule used only by the Britanians was that their disruptors could be held for no power cost, obviously something possible only in the simulators. Their ships began every scenario with disruptors armed (overloaded at the captain's option).

Britanian ships were fitted with UIMs which never burned out but which could be destroyed by hit-and-run raids.

NOTE: Because of their very weak #1 and #4 shields, the Britanians will be quickly defeated by enemies with enveloping weapons, such as EPTs, hellbores, and PPDs. Because the result of such a battle is predictable and inevitable, it is recommended that you not pursue that matchup (except, perhaps, as a specific tactical challenge using other factors to balance the obvious problems).

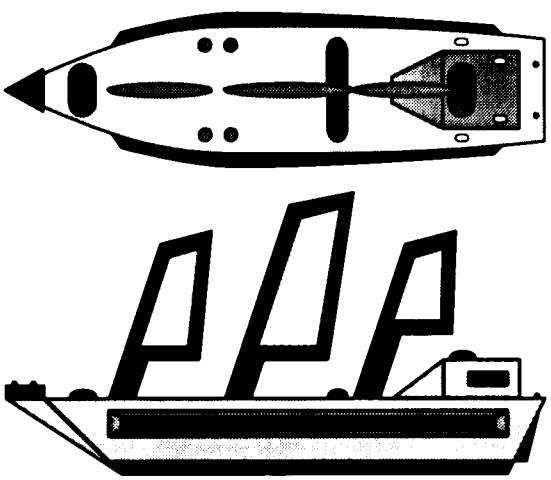
(R58.1A) SPECIAL MOVEMENT RULE: Britanian ships cannot HET. This is the standard (official) rule.

(R58.1B) ALTERNATIVE MOVEMENT RULE: Britanian ships can sideslip but cannot turn. They can make one free 120° HET per game turn, not within eight impulses of a previous HET. —*Jeff Laikind*

(R58.1C) ALTERNATIVE MOVEMENT RULE: Britanian ships can HET normally but cannot fire their disruptors within four impulses of making an HET. — *William Wells*

(R58.2) HEAVY CRUISER (CA): With four disruptors and five phaser-1s (not counting the FX phasers) in each broadside, the Britanian heavy cruiser was a deadly opponent for any cruiser. It could exchange equal salvoes with an opponent, then quickly turn and bring the held-overloads of its offside battery to bear.

SSD and counters are in Module C4.



Graphic by SVC based on a concept by Virgil Chambers.

(R58.3) DREADNOUGHT (DN): A larger version of the CA, the DN increased firepower and warp drive by 50%. In a mixed fleet battle, this ship was a powerful base of fire for the entire Britanian force, but it was extraordinarily vulnerable to fire from directly ahead and behind.

SSD and counters are in Module C4.

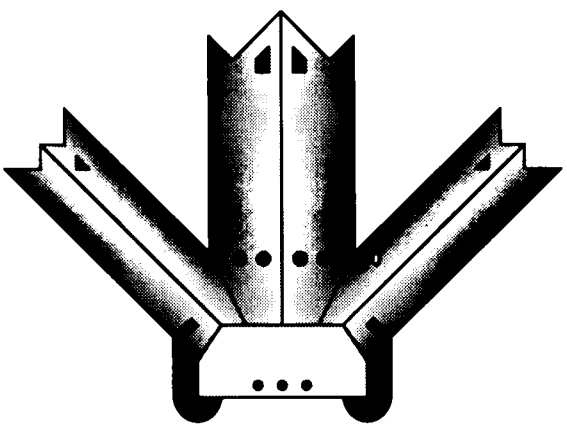
(R59.0) CANADI'ENS

(R59.1) BACKGROUND: An example of the whimsical nature of some of the simulator races, the Canadi'en ships were based on the "maple leaf" design of the 20th Century Canadian flag. (Apparently, some Star Fleet officers of Canadian extraction were having their own private joke, pulling the leg of the rest of the Academy.)

In this product, we present the two most popular ships from the Canadi'en file, the two maulers.

(R59.2) MAPLE LEAF MAULER CRUISER (CAM): This ship provided a unique challenge given the devastation its primary weapon was capable of at close range and the unusual (for a mauler) firing arcs that were available to it. The oblique approach was possible for this unit. This enabled it to maneuver freely, and if things went badly, it could (as could any mauler) forego the use of its batteries offensively to reinforce its shields. The fact that maulers could be recharged faster than photons created an additional dynamic in engaging the ship, particularly if the previous photon volley had missed! The shaded box in the middle of the battery array is a conduit passage through the batteries, not a battery. Battery groups #1, #3, and #4 have 10 boxes each.

SSD and counter are in Module C4.



(R59.3) OAK LEAF WAR MAULER (MCW): Possessing the same intrinsic capabilities as the Maple Leaf, the Oak Leaf was a faster ship in exchange for reduced offensive capabilities.

SSD and counter are in Module C4.

END OF SECTION R, MODULE C4

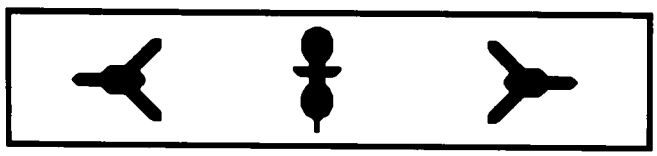
SCENARIOS FOR MODULE C4

In one sense, there is no real need for scenarios in this module, as the ships and races never existed (so there are no historical scenarios), and players do not need any further information just to include these ships in General Scenarios of their choosing (or making). Every ship in this product will work quite well in Scenario (SG1.0).

And yet, in another sense, scenarios are vital to show just what these simulator ships and races were intended to do, and they're fun to play in their own regard.

Other scenarios are included because they are simulator scenarios (even if they don't include any of the new races).

(SG64.0) AXES TO GRIND



by Scott Moellmer, Colorado

One of the Triaxian simulations involved an uneven contest between two Command candidates. Each takes a turn being surrounded and outnumbered, and whichever player lasts the longest against the odds wins!

(SG64.1) NUMBER OF PLAYERS: 2; the Gorn player and the Triaxian player.

(SG64.2) INITIAL SET UP

TERRAIN: The map is surrounded by a Tournament Barrier (P17.0).

GORN: CMX (or other ship with a BPV of 240) in 2215, heading at the option of the Gorn player, speed 10, WS–III.

TRIAXIAN: CA in 2201, heading D, speed 10, WS–III.
CA in 2229, heading A, speed 10, WS–III.

YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y184 is assumed if no other year is selected.

(SG64.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, or captured.

(SG64.4) SPECIAL RULES

(SG64.41) MAP: The map is fixed; it does not float. The map is surrounded by a Tournament Barrier. It is not possible to disengage by any means.

(SG64.42) SHUTTLES AND PFs: In this scenario, no shuttles, fighters, or PFs are used, and none can be purchased as options. The lack of shuttles is to eliminate the use of wild weasels and encourage the players to use speed and maneuver.

(SG64.43) COMMANDER'S OPTION ITEMS

(SG64.431) Each ship can select additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions.

(SG64.432) The races that are involved in this scenario do not use drones. In a variation where a drone-armed race is used, drone speeds will depend on the year selected for the scenario.

Each drone-armed ship can select special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG64.433) Prime Teams (G32.0) are not available in this scenario.

(SG64.44) REFITS are available depending on the year selected. The cost of any refit is included in the total BPV used to purchase the non-Triaxian ship in (SG64.2) above.

(SG64.45) SURVIVAL: This scenario is designed as a survival test. Players should play it twice, alternating sides. Write down the Turn #, Impulse #, and Step in the Sequence of Play where the Gorn ship is destroyed (unless some Legendary Captain can pull off a Victory!). Also record the number of damage points in excess of those required to destroy the ship at that point for use as a tie-breaker.

(SG64.5) VICTORY CONDITIONS: After playing each side, the victor is that player who lasted longest when playing the center ship. If a tie in Turn #, Impulse #, and Step, determine which player's ship was hit by the most damage in the step that actually caused its destruction that was excess to the amount needed to destroy it. If the situation is still a tie, play again.

(SG64.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG64.61) Change the ships to those of another race; similar tests occurred in many command schools.

(SG64.62) For a faster battle, replace the Triaxian CAs with DNs.

(SG64.63) For a smaller and faster battle, change the CMX to a BDX and replace the Triaxian CAs with DDs.

(SG64.7) BALANCE: By playing each side, balance is included as written.

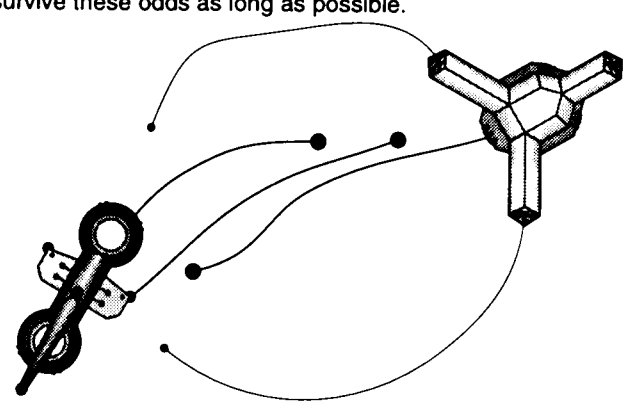
(SG64.8) TACTICS

GORN: The X-phaser's ability to weaken plasma, especially short-range Plasma-S torpedoes, will be a big help, as will the fast torpedo loading capabilities.

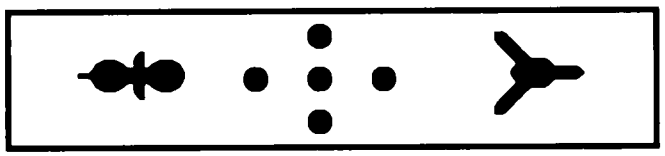
TRIAXIAN: Use a High Energy Direction Change as an 'instant retrograde' for one ship if the Gorn charges it.

(SG64.9) PLAYTESTERS COMMENTS: While this would seem to be a traditional two-on-one battle, the unique Triaxian movement abilities make it a totally new challenge.

(SG64.X) DESIGNER'S NOTES: This was intended as a challenge between players of similar skills. It is also a good way to help newer players by having a more experienced player playing the single ship first and showing how to try to survive these odds as long as possible.



(SG65.0) THE TRI-ANGLE



by Scott Moellmer, Colorado

In their simulator engagements with the Triaxians, some Gorn command students added a completely unauthorized 'video game' to relax the tensions of the Academy. This proved popular and was kept by the staff, and similar versions appeared in many Academies.

(SG65.1) NUMBER OF PLAYERS: 2; the Gorn player and the Triaxian player. While written for Gorns and Triaxians, this scenario can be played by any race or races.

(SG65.2) INITIAL SET UP
TERRAIN: Targeting Buoys in 1415, 2207, 2215, 2223, and 3015.
GORN: CCH (or other ship with a BPV of 171) in 1206, heading C, speed 10, WS–III.
TRIAXIAN: CA in 3224, heading F, speed 10, WS–III.
YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y181 is assumed if no other year is selected.

(SG65.3) LENGTH OF SCENARIO: The scenario continues until one player simultaneously controls four of the five buoys.

(SG65.4) SPECIAL RULES
(SG65.41) MAP: The map is fixed; it does not float. Any unit leaving the map has disengaged and cannot return.
(SG65.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.
(SG65.421) MRS shuttles are not used in this scenario.
(SG65.422) There are no fighters in this scenario. In a variant in which fighters are present, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.
(SG65.423) There are no PFs in this scenario.
(SG65.43) COMMANDER'S OPTION ITEMS
(SG65.431) Each ship can select additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions.
(SG65.432) The races that are involved in this scenario do not use drones. In a variation where a drone-armed race is used, drone speeds will depend on the year selected for the scenario.
Each drone-armed ship can select special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.
(SG65.433) Prime Teams (G32.0) are not available in this scenario.
(SG65.44) REFITS are available depending on the year selected. The cost of any refit is included in the total BPV used to purchase the non-Triaxian ship in (SG65.2) above.
(SG65.45) TARGET BUOYS: The object of the game is to control four of the five buoys. Buoys are size class 6.
(SG65.451) Control is achieved by doing 10 points of damage to a buoy. An opponent doing 10 damage points AFTER that reverses control of the buoy.
(SG65.452) Each buoy is surrounded by a variable shield of a strength equal to 2D6, rolled either when a buoy is hit or when a ship makes a successful lab identification or probe use. Whatever strength is determined at that time remains constant for that particular buoy for the remainder of that turn and subsequent turns until the buoy is damaged. If damaged, the shield regenerates over the next turn break to a new variable strength. When the shield is penetrated and 10 points further damage done, the buoy changes colors to those of the attacking race (use other counters of that race to indicate control). If reversed, change to the other player's colors.
(SG65.453) In this simulation, buoys are not affected by anything except damage inflicted by the ships. This includes immunity to terrain effects, tractors, transporters, SFGs, etc. Buoys may not be moved by displacement devices. They may not be boarded or destroyed. T-bombs will damage buoys if detonated adjacent to or in the same hex as the buoy(s).
(SG65.46) RESTRICTIONS: The ships may NOT damage each other. This is a test of skill and weapons finesse, not straight combat. Players MAY fire on each other's class 6 and 7 units.

(SG65.5) VICTORY CONDITIONS: Whichever player manages to control any four of the five buoys simultaneously, at any point in the Sequence of Play, Wins. Best two of three was often played at the Academy.

(SG65.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:
(SG65.61) Substitute any ships of roughly equal BPV for the two ships.
(SG65.62) Vary the number and configuration of the buoys, or their shield strength.
(SG65.63) If desired, allow combat between the ships. This often resembles Space Hockey in that crippled foes find it hard to win.

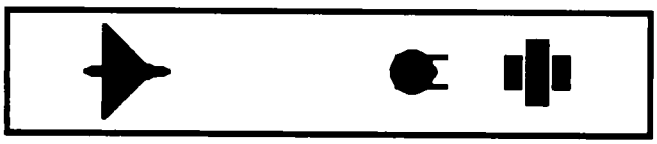
(SG65.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:
(SG65.71) Change the CCH to a CCF or BCH.
(SG65.72) Allow the weaker player an automatic additional point of damage for each weapon that hits a buoy.

(SG65.8) TACTICS: This is a finesse scenario. Usually it's best to bypass a given buoy or two and control it with rear weapons. Sooner or later you will need to attack a foe's buoy, but be careful of him doing the same thing to yours! The row of three buoys in the middle is a tempting target for an attack run (for both sides). Different races have different good/bad points to exploit here.

(SG65.9) PLAYTESTERS COMMENTS: A fun, thinking man's scenario. Requires you to look ahead by about two turns of maneuver to make it work.

(SG65.X) DESIGNER'S NOTES: I desired to make a simple scenario to showcase the HEDC and flexible plasma arcs of the Triaxians.
Editor's Note: This is an example of the advantage of the simulators. Totally arbitrary and "unrealistic" victory conditions can be established in order to provide a new tactical challenge. It's not unrealistic that real navies would provide such training, as impossible-to-predict new situations could create similar, seemingly arbitrary, victory requirements when patrolling the depths of space.

(SG66.0) DELTAN ATTACK



by Stephen V Cole, Texas

The Federation was concerned about the security of their border bases and the vulnerability of those bases to a surprise raid. Such a raid might be the prelude to a full-scale war or a major Orion smuggling operation.

One scenario used in the training simulators was to assign a ship to defend a small base and send an attack force to destroy it. As an ultimate challenge for this scenario, one threat team developed the Deltan race, which operated extremely fast ships that, seemingly, were designed only for the base attack mission. The scenario can, of course, be used for any race or pair of races.

(SG66.1) NUMBER OF PLAYERS: 2; the Defending (Federation) player and the Attacking (Deltan) player.

(SG66.2) INITIAL SET UP

TERRAIN: Various types of terrain were used to make the scenario interesting and challenging.

FEDERATION: NCL+ in 2215, WS–III, heading E, speed 10. SAMs in 4015, WS–I, heading A, speed 0. The SAMs has two Cargo Modules.

DELTAN: Hustler CA enters the map anywhere on the 01xx map edge on Impulse #2, Turn #1, WS–III, heading B or C.

YEAR: The players must select a year for this scenario. The year selected will determine the availability of warp booster packs, special drones, refits, and other items. If no year is selected, Y165 is assumed.

(SG66.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged. The Deltan units are considered destroyed (by arriving reinforcements) if they are still within 30 hexes of the base on Impulse #1 of Turn #7.

(SG66.4) SPECIAL RULES

(SG66.41) MAP: Use a floating map. The Federation units cannot disengage. The Deltan units can only disengage in directions E or F. Units which disengage in unauthorized directions or areas are considered destroyed.

(SG66.42) SHUTTLES AND PFs: No shuttles or PFs have warp booster packs.†

(SG66.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SG66.431).

(SG66.422) There are no fighters in this scenario. In a variant in which fighters are present, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.

(SG66.423) There are no PFs in this scenario.†

(SG66.43) COMMANDER'S OPTION ITEMS

(SG66.431) Each ship can select additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions.

(SG66.432) All drones are "slow", i.e., speed–8. Type-II and type-V drones (speed 12) are available for purchase as special drones.†

Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG66.433) If players wish to use the optional rules for Prime Teams (G32.0), the Hustler CA will normally carry one such team while the Defender can be given 25 additional Commander's Option Points to distribute among his forces as desired or to purchase additional units.

(SG66.44) REFITS: The availability of refits is determined by the year selected for the scenario.

(SG66.5) VICTORY CONDITIONS: The Deltan (Attacking) ship is assigned to destroy the base.

If the base is destroyed and the Deltan ship escapes from the board before the end of Turn #6, the Deltan player wins.

If the base is destroyed and the Deltan ship is destroyed, the Federation commander wins.

If the base is not destroyed, the Federation commander would be promoted immediately after the battle (if he survived), irrespective of the status of his own ship and the Deltan ship.

If the base is destroyed and the Deltan ship is crippled, the scenario is a draw.

(SG66.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG66.61) Obviously, any races could be used.

(SG66.62) Use any light cruiser or war cruiser, or any variant thereof, and use tactical intelligence.

(SG66.63) For a smaller scenario, use the Hellhound CW and any DW or DD as the defender.

(SG66.64) For a larger scenario, use one Deltan CA and two CWs, change the SAMs to a base station, and use 200 BPV of defending size-4 ships.

(SG66.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG66.71) Change the NCL to a CA or DD or FFG.

(SG66.72) Replace one of the cargo modules on the SAMs with a Hangar Module, and allow it to deploy one or two fighters as part of its defenses.

(SG66.73) Assume (without actually creating it) that there is a minefield in every hex that is exactly 8 hexes from the SAMs (keeping the Deltan out of overload range). These hexes then become a "no go" area for all ships and shuttles; any unit entering such a hex is immediately destroyed. (Deploy any on-station fighters outside of the mine belt.)

(SG66.74) Replace one of the SAMs' cargo modules with an energy module.

(SG66.75) Reduce the number of turns before reinforcements arrive for the defender. This will limit the tactical options available to the attacker.

(SG66.8) TACTICS

DELTAN: You know why you are here, and so does he. Your only real decision is whether to spend your first volley (or two) wrecking the defending ship, or if you will try to evade or survive his volley and hit the SAMs.

FEDERATION: You have to stop the Deltan from getting within effective photon range of the SAMs. Interpose yourself between him and the SAMs, hit him with your best shot, and try to grab him with a tractor beam. Use suicide and scatter-pack shuttles for additional firepower.

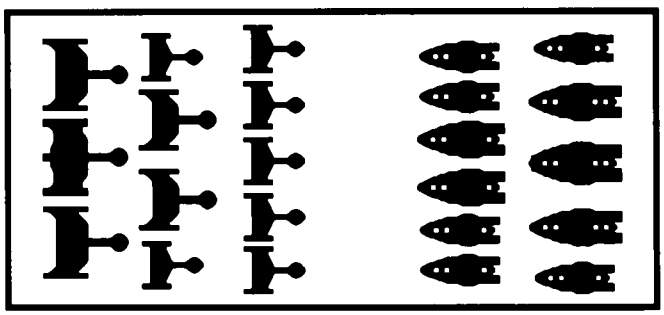
The SAMs must decide if it will use its one special sensor for self-defense jamming, or to apply OEW to the Deltan, or to

† The year selected by the players may change this situation.

provide ECCM to the NCL. Part of this decision will depend on how much ECM and ECCM the Deltan ship is using.

(SG66.X) DESIGNER'S NOTES: This scenario is, as noted, the one for which Deltan ships were designed.

(SG67.0) FORM LINE OF BATTLE!



by Ardak Kumerian, Klinshai

The Frax were used in the Red Fleet as an artificial enemy for training purposes in some exercises. The intent was to teach future starship captains to engage an enemy never previously encountered.

(SG67.1) NUMBER OF PLAYERS: 2; the Frax player and the other player. This is a very large battle with a dozen ships on each side.

(SG67.2) INITIAL SET UP

FRAX: DN in 1705; CAs in 1604 and 1504; CWs in 1403 and 1303; DWs in 1202 and 1102; DWD in 1602; DWS in 1701; FFs in 2006, 1306, 0701; heading C, speed max, WS–III.

ENEMY: Ships from one race equal to a total of 1415 BPV (including drone speed upgrades and refits). Fleet cannot include carriers. Set up within 4 hexes of 0626, heading B, speed max, WS–III.

YEAR: The players must select a year for this scenario. The year selected will determine the availability of warp booster packs, special drones, refits, and other items. If no year is selected, Y175 is assumed.

(SG67.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG67.4) SPECIAL RULES

(SG67.41) MAP: Use a floating map. The Frax units can only disengage in directions A or B. The Enemy units can only disengage in directions D or E. Units which disengage in unauthorized directions are considered destroyed.

(SG67.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.

(SG67.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SG67.431).

(SG67.422) If using EW fighters (only the Hydrans could have fighters in the standard scenario), use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters and adjust the BPV appropriately.

(SG67.423) There are no PFs in this scenario. If playing a variant with PFs, use the appropriate rules.

(SG67.43) COMMANDER'S OPTION ITEMS

(SG67.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. This is in addition to the 1415 points provided to the Enemy player. See (S3.2) for details and exceptions. Note that whatever is spent here counts in the Standard Victory Conditions (S2.2) as victory points for the enemy.

(SG67.432) All drones are "medium", i.e., speed–20.

Each drone-armed ship can purchase special drones up to the historical percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG67.44) REFITS are available depending on the year selected. The cost of any refit is included in the total BPV used to purchase the Enemy ships in (SG67.2) above.

(SG67.45) REFUND: When selecting ships, if the total Enemy ships are less than 1415, the extra points (up to a maximum of 25) are credited toward the purchase of additional Commander's Option Items.

(SG67.5) VICTORY CONDITIONS: Use the Standard Victory Conditions (S2.2).

(SG67.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG67.61) For that special thrill, use two Frax fleets against each other! Just "mirror" the positions of the two fleets, e.g., the DN in 1726, the CAs in 1625 and 1525, etc.

(SG67.62) Tactical Intelligence could be used, as the enemy ships will be unknown.

(SG67.63) For a smaller battle, delete the DN and first CA, one of the DWs, and one of the FFs, and give the enemy only 870 BPV for ships (applies to all above conditions).

(SG67.64) Add 335 BPV in forces to the Frax at start set up (might include refits for existing ships), and use the various battleforces from Captain's Log #11.

(SG67.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG67.71) Give the enemy player more or fewer points.

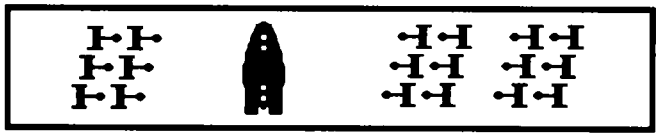
(SG67.72) Replace one Frax DW with a CW or vice versa.

(SG67.73) Place the superior player at WS–II or WS–I.

(SG67.8) TACTICS: The enemy player is attacking the strongest point of the Frax Fleet, its broadside. Either try to get around his rear, or charge straight in, but don't dilly dally!

(SG67.9) PLAYTESTERS COMMENTS: The Frax line of battle tactics makes ramming with ESGs difficult. The overlapping arcs of their weapons allow them to fight aggressively under conditions where other ships would have to seriously consider disengaging. The Frax possess some good drone defenses even without the AFD system. If it is installed on all their ships, they are virtually drone proof and their opponent will have a hard time fighting them.

(SG68.0) FLYING FORTRESS



by Steven P. Petrick, Texas

This scenario was a training exercise for PF flotilla and division commanders at the Klingon War College.

(SG68.1) NUMBER OF PLAYERS: 2; the Frax player and the Klingon player.

(SG68.2) INITIAL SET UP
TERRAIN: Whatever the players feel is appropriate.
FRAX: Battleship (or other large ship) in 2215, WS–III, heading A, speed max.
KLINGON: A number of PFs enter the map from the xx30 hex row on Turn #1, speed max, WS–III, heading A. See (SG68.45).
YEAR: The scenario assumes Y184, but players can set the scenario in other years. This may affect available PFs, refits, and weapons.

(SG68.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG68.4) SPECIAL RULES
(SG68.41) MAP: Use a floating map. The Frax BB cannot disengage by any means. The Klingon PFs cannot disengage by any means. Any unit which disengages is considered destroyed.
(SG68.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs.
(SG68.421) If using the optional MRS shuttles, the Frax ship has two MRS. None of the Klingon ships have an MRS.
(SG68.422) The battleship has eight Demon–3 fighters, one of which is an EW fighter. If another ship is used, use the standard EW fighter deployment for that ship, i.e., one EW fighter for each squadron of fighters.
(SG68.423) The Klingon PFs are formed into standard flotillas, each including one leader and one scout.
(SG68.43) COMMANDER'S OPTION ITEMS
(SG68.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its combat BPV. See (S3.2) for details and exceptions. Note that PFs are extremely limited in what they can use points for.
(SG68.432) All drones are "fast", i.e., speed–32.
Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.
(SG68.44) REFITS: The PFs might or might not have the shield refit, at the mutual option of the players. The Frax ship might or might not have AFDs at the mutual option of the players.
(SG68.45) KLINGON PFs: After deciding on a year, the status or absence of shield refits and AFDs, whether or not EW will be used, and which G1 variants will be allowed, each player bids a number of PFs he will use to destroy the Frax ship. The maximum bid is 18 unless players agree to a higher number. The player who bid the lower number becomes the Klingon player (using the number of PFs that he bid) and the other player the Frax player. The 1st, 7th, 13th, etc. PFs are leaders; the 4th, 10th, 16th, etc. PFs will be scouts. The scout PFs might be excluded from the scenario, but only if both players agreed to this before they began bidding PFs.

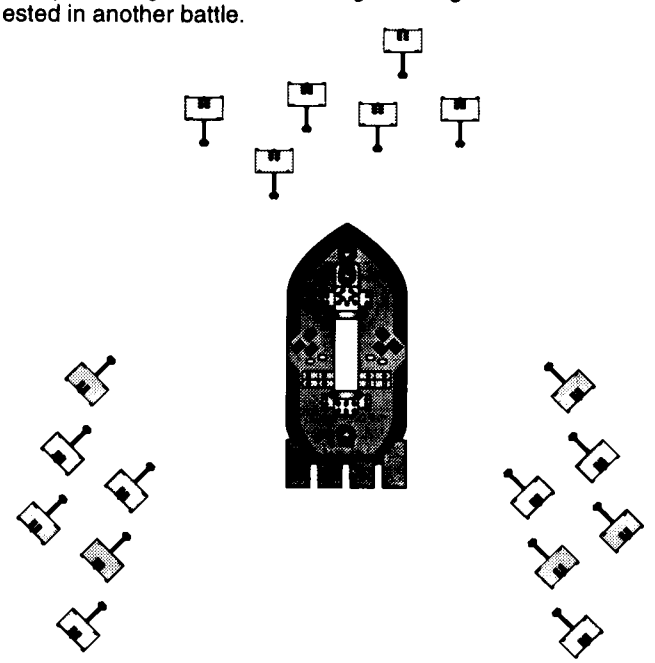
(SG68.5) VICTORY CONDITIONS: This is a battle to the death. The only acceptable result is the total destruction of the enemy force.

(SG68.6) VARIATIONS
(SG68.61) Use fighters instead of PFs (setting the scenario in an earlier year), but limit the speed of the battleship to two points less than the top speed of the fighters.
(SG68.62) Use another race's PFs or another race's battleship.
(SG68.63) For a smaller and faster scenario, use a DN or BCH.

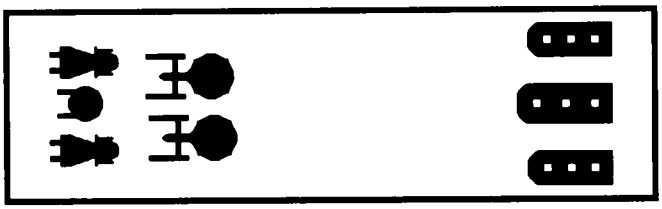
(SG68.7) BALANCE: The scenario is self-balancing.

(SG68.8) TACTICS
FRAX: Keep your speed up, and use your systems to deplete the drone supply of the PFs. Then engage them. Ultimately, your tactics will be dictated by what types of PFs and how many there are and what systems (such as AFDs) are available to defend your ship.
KLINGON: Your tactics will be driven much the same as your opponent. Mass your fires, and go straight in for the kill. An overrun with a point-blank massed drone launch before he can get a weasel out could work, but you have to time that carefully and not many of your PFs will come home.

(SG68.9) PLAYTESTERS COMMENTS: This should become one of the "standard" PF trainers. It is generally agreed that 13-18 PFs can junk any battleship, but both players will learn tactics to enhance their combat life.
Federation Thunderboomers (TB-Bs) should have instant respect due to their overloaded photons.
One playtester said he had been reluctant to play because it was obvious that the AFDs would slaughter the PFs, but to his own surprise, he won the battle.
Another found it a good scenario for beginners (who were assigned to command the battleship) because they will always manage to kill *something*, making them more interested in another battle.



(SG69.0) TRAFALGAR



by Stephen V Cole, Texas

With the Britanians based on 18th Century sailing ships, it was natural that the famous battle of Trafalgar would appear in the simulators. In this case, the Britanians are positioned as the French and Spanish fleets were, while the Federation forces assume the aggressive attacking role of the British fleet under Admiral Nelson.

(SG69.1) NUMBER OF PLAYERS: 2; the Federation player and the Britanian player.

(SG69.2) INITIAL SET UP

TERRAIN: Asteroid field (impassable) off the xx01 map edge. This battle was set up in "increments" equal to about 525 BPV points (in SFB terms). You can adjust the size of the battle by deploying one or more "increments" for each side.

FEDERATION: Each increment is equal to 525 points (not including Commander's Options). The ships set up anywhere in sector E (1st increment), F (2nd Increment), or D (3rd increment), heading A, speed max, WS–III.

BRITANIAN: Each increment consists of one Britanian DN and two Britanian CAs. Set up first. Set up one ship in 2203. Other ships must be within 5 hexes of the asteroids, i.e., within 4 hexes of the xx01 map edge, within 3 hexes of another Britanian ship, but not within 2 hexes of another Britanian ship. All Britanian ships are heading E or F, speed max, WS–III.

YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y168 is assumed if no other year is selected.

(SG69.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG69.4) SPECIAL RULES

(SG69.41) MAP: Use a floating map, but the map can float only in the E/F or B/C directions. It cannot float in the D or A directions. The Britanian units can only disengage by distance and only in the E/F or B/C directions. The Federation units can only disengage from the xx30 map edge. Units which disengage in unauthorized directions or areas are considered destroyed.

(SG69.42) SHUTTLES AND PFs: The presence or absence of warp booster packs on shuttles and PFs will be dictated by the year.

(SG69.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SG69.431).

(SG69.422) If the Federation player elects to include fighters in his force, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.

(SG69.423) If the Federation player elects to use PFs in his force, use the standard deployment patterns.

(SG69.43) COMMANDER'S OPTION ITEMS

(SG69.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions. Note that whatever is spent here counts in the Standard Victory Conditions (S2.2) as victory points for the enemy.

(SG69.432) The speed of any drones used will be defined by the year selected by the players.

Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG69.433) If the Federation player wishes to use the optional rules for Prime Teams (G32.0), he can purchase such teams (25 points each) as part of his starting forces (not part of Commander's Options). If the Britanian player wishes to use a Prime Team (G32.0), he can purchase one (25 points) as part of his Commander's Options.

(SG69.44) REFITS are available depending on the year selected. The cost of any refit is included in the total BPV used to purchase the Federation ships in (SG69.2) above.

(SG69.5) VICTORY CONDITIONS: Use the Standard Victory Conditions (S2.20).

(SG69.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG69.61) Use Britanian ships on both sides.

(SG69.62) Allow the non-Britanian player to select his ships privately, and force the Britanian player to use Tactical Intelligence (D17.0) to determine how dangerous any approaching ship is.

(SG69.63) Conduct the battle in an Ion Storm (P14.0), with gravity waves moving in direction B.

(SG69.64) To more closely simulate the battle of Trafalgar, use two increments of Britanians and two increments of Federation ships. The Britanian forces should be commanded by two players, one simulating the French and the other the Spanish commanders of the forces. The two Britanian increments must be at least six hexes apart. If the "line" is broken, the Spanish force must immediately attempt to disengage. The "line" is considered broken if, at the end of any movement segment, the lines of sight between all French and all Spanish ships intersect the line of sight between any two Federation ships.

(SG69.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG69.71) Change one Britanian DN to an CA or vice versa.

(SG69.72) Increase or decrease the BPV available to the non-Britanian player to purchase his forces.

(SG69.8) TACTICS

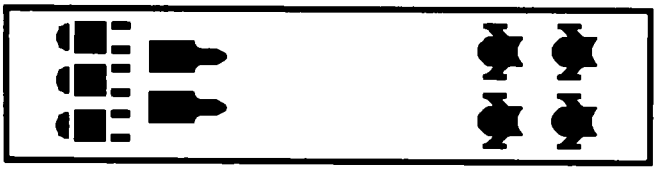
BRITANIAN: Decide whether to wait for your enemy or engage him at long range, but beware lest he make the decision for you and in the worst way.

FEDERATION: Do not charge in and depend on overloaded photons. Consider using some of your BPV to buy a small scout. Do not overlook the concept of long-range photon bombardment to reduce one enemy ship at a time before closing for the final battle.

(SG69.9) PLAYTESTERS COMMENTS

The dominating terrain defines the scenario, as the ships can go every way *except* that way. The Federation (with its FA weapons) must pin the Britanians against the rocks.

(SG70.0) THE SPACE WOLVES



by Steven P Petrick, Texas

One of the earliest Romulan training exercises pitted a squadron of Snipes against a convoy escorted by Sharkhunter ships. Could the Snipes wreck the convoy and escape despite the Sharkhunter escorts?

(SG70.1) NUMBER OF PLAYERS: 2; the Romulan player and the Sharkhunter player.

(SG70.2) INITIAL SET UP

ROMULAN: Four Snipe-As enter the map cloaked from any map edge (or edges), heading at player's option, speed max, WS–III.

SHARKHUNTER: Convoy of three small freighters within two hexes of 2215, no more than one ship per hex, heading D, speed 5, WS–0.

Two DW within four hexes of 2215, heading D, speed 5, WS–I.

YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y163 is assumed if no other year is selected.

(SG70.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG70.4) SPECIAL RULES

(SG70.41) MAP: Use a floating map. The Sharkhunter units can only disengage in direction D. The Romulan units can disengage in any direction except D. Units which disengage in unauthorized directions are considered destroyed.

(SG70.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.

(SG70.421) No ship in this scenario is qualified to carry an MRS shuttle, but in a variant of the scenario where that is possible, they may be purchased [up to the limits in (J8.5)] under (SG70.431).

(SG70.422) There are no fighters in this scenario. In a variant in which fighters are present, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.

(SG70.423) There are no PFs in the basic version of this scenario. In a variation set in a year where PFs are allowed, the Romulan player might choose to replace one of the Snipe–As with a Centurion PF.

(SG70.43) COMMANDER'S OPTION ITEMS

(SG70.431) Each ship can select additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions.

(SG70.432) The races that are involved in this scenario do not use drones. In a variation where a drone-armed race is used, drone speeds will depend on the year selected for the scenario.

Each drone-armed ship can select special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG70.433) Prime Teams (G32.0) are not available in this scenario.

(SG70.44) REFITS are available depending on the year selected.

(SG70.45) CONVOY: The freighters are a convoy and cannot move faster than a speed of 7. No single freighter can be more than two hexes from at least one other freighter unless it is crippled. Crippled freighters are no longer part of the convoy. Crippled freighters which repair themselves to uncrippled status must attempt to rejoin the convoy and may move faster than 7 to do so.

(SG70.5) VICTORY CONDITIONS: The Romulans win the scenario based on the destruction of the convoy and loss of Snipes.

If all three freighters are destroyed, and none of the Snipes is destroyed, it is a Decisive Victory.

For each Snipe destroyed, lower the Romulan victory by two levels (S2.3).

For each freighter that is not destroyed, lower the Romulan victory by another level.

If a Sharkhunter DW is destroyed, and all the freighters have been destroyed, raise the Romulan victory by three levels.

(SG70.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG70.61) Replace the Romulans with three Frax Frigate Subs or some other combination of Frax Submarines of equivalent BPV.

(SG70.62) Replace the Snipes with three K4Rs.

(SG70.63) For a smaller battle, delete one Sharkhunter DW and two Romulan Snipe-As. Double the value of each unit in the victory conditions, i.e., if a Snipe is destroyed, lower the Romulan victory by four levels.

(SG70.64) Replace the Snipes with one Orion DW and two LRs, all fitted with cloaks. Select a cartel to define what weapons are available.

(SG70.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG70.71) Change one of the Snipe-As to a Snipe-B.

(SG70.72) Replace one of the DWs with an FF.

(SG70.73) Delete or add a Snipe-A.

(SG70.8) TACTICS

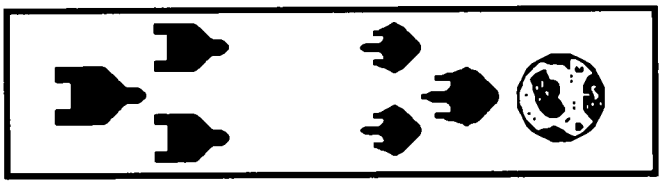
ROMULAN: Your Snipes are slow under the cloak, but there are four of you, and your plasma-Gs have good range in this situation. You will have to concentrate on the freighters; the DWs may be too tough to run out of chaff for a kill.

SHARKHUNTER: Leaving the convoy may be an option, but letting a few plasma-Gs hit can wreck the freighters quickly. Get wild weasels ready on the freighters; they will at least buy you some time. Remember, these Romulans have NSMs, and DWs do not like to run into those. So take care where you move and watch the Romulans closely.

(SG70.9) PLAYTESTERS COMMENTS: At first this appears to be just another convoy battle, and then just another cloaked ships raid the convoy battle. It is, however, far more than that. The Sharkhunters are the most dangerous enemy that cloaked Romulans will ever have to face.

(SG70.X) DESIGNER'S NOTES: This is, in some ways, the first convoy scenario that can truly claim to be "typical" of historical battles! It was fairly straightforward to design, but proved to have subtle tactical nuances not immediately obvious to the reader.

(SG71.0) BARBARIANS AT THE GATE



by Steven P Petrick, Texas

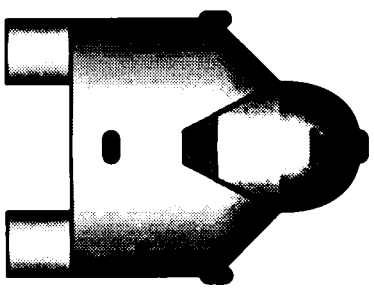
The ISC initially built its military forces to defend itself from incursions by barbaric neighbors. At first, the training exercises concentrated on keeping these neighbors as far from the civilized areas of the Concordium as possible. Reality soon intruded, and the ISC commanders were forced to conclude that, at least for the foreseeable future, they would not be able to prevent raids on their outer colonies should their neighbors decide to conduct them. Still the ISC commanders studied the problem extensively while their shipyards strove to build a fleet, and their scientists attempted to develop weapons that were not simple copies of those used by those same neighbors.

(SG71.1) NUMBER OF PLAYERS: 2; the ISC player and the Barbarian player.

(SG71.2) INITIAL SET UP
TERRAIN: Class M planet in hex 2215.
ISC: CL, and 2xDD set up anywhere within four hexes of the planet, heading E or F, speed 10, WS–III.
BARBARIAN: At least three ships with a combined total BPV after selecting option boxes of no more than 350, enter anywhere along the 01xx map edge, heading B or C, speed max, WS–III.
YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y167 is assumed if no other year is selected.

(SG71.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged. Barbarian units must disengage by the end of Turn #10, or they are considered to be destroyed by arriving reinforcements.

(SG71.4) SPECIAL RULES
(SG71.41) MAP: The map is fixed; it does not float. Any unit leaving the map has disengaged and cannot return. The ISC units can only disengage from the 42xx map edge. The Barbarian units can only disengage from the 01xx map edge. Units which disengage in unauthorized areas are considered destroyed.



BARBARIAN DESTROYER

(SG71.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.
(SG71.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SG71.431).
(SG71.422) There are no fighters in this scenario. In a variant in which fighters are present, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.
(SG71.423) There are no PFs in this scenario.
(SG71.43) COMMANDER'S OPTION ITEMS
(SG71.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions. Note that whatever is spent here counts in the Standard Victory Conditions (S2.2) as victory points for the enemy.
(SG71.432) The speed of any drones used will be defined by the year selected by the players.
Each drone-armed ship can select special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.
(SG71.433) Prime Teams (G32.0) are not available.
(SG71.44) REFITS are available depending on the year selected if using a race other than the Barbarians as the raiding force. The ISC ships do not have their rear phaser and plasma refits. The cost of any refit is included in the total BPV used to purchase the non-ISC ships in (SG71.2) above.
(SG71.45) WEAPONS: The weapons selected by the Barbarians are not revealed to the ISC until they are fired or detected by tactical intelligence.
(SG71.46) RAID: The Barbarian ships are here to conduct a raid. To do this, they must place at least 20 boarding parties (including Militia squads) on the planet's surface at a single GCL for a minimum of six turns (192 consecutive impulses). These do not have to be consecutive impulses. If the number of boarding parties is reduced below 20, that impulse will not count for the 192 impulses. The Barbarians gain a bonus of 100 victory points if they accomplish this.

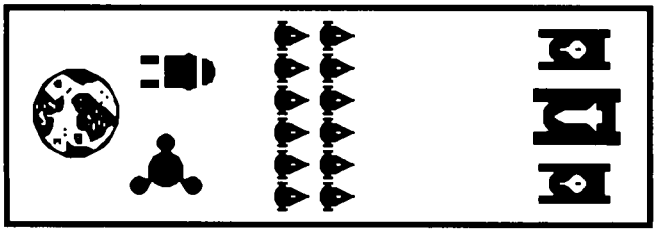
(SG71.5) VICTORY CONDITIONS: Use the Standard Victory Conditions (S2.20). The Barbarians can gain a bonus under (SG71.46).

(SG71.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:
(SG71.61) Replace the Barbarians with a Gorn, Romulan, or Orion force of equivalent BPV.
(SG71.62) Draw a counter to pick the race that the Barbarians will be programmed to imitate. Place counters for each race into a cup and draw one. This will establish what weapons arrangements the Barbarian ships must use.
(SG71.63) For a smaller and faster battle, halve the BPV available to the Barbarians and use only the two ISC DDs.

(SG71.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:
(SG71.71) Change one of the ISC DDs to a DDG.
(SG71.72) Replace the ISC CL with a CS.
(SG71.73) Add an FF to the ISC side.

(SG71.8) TACTICS
BARBARIAN: Figure out your weapons based on what you plan to do to the ISC ships, and get down to business.
ISC: Identify his weapons so that you do not get caught flat footed, and keep him away from the planet as long as you can. Send down your own marines to fight his, or if you feel really gutsy, make a grab for one of his ships.

(SG72.0) ASSAULT ON TIAWUK



by Stephen V Cole & Steven P Petrick, Texas

One of the more interesting scenarios in the Star Fleet simulator was this one, simulating a "bombardment" attack on a neutral planet (Tiawuk) protected by the Federation.

(SG72.1) NUMBER OF PLAYERS: 2; the Qari player and the Defending player.

(SG72.2) INITIAL SET UP

The scenario uses two maps, with the 42xx column of Map A adjacent to the 01xx column of Map B.

A	B

TERRAIN: Class M planet in hex 1215 of map A.

TIAWUK: Federation BATS in 1415 with two hangar modules (F–18s) and one cargo module, WS–I.

One small phaser-armed freighter within 5 hexes of the planet, heading at the Tiawuk player's option, speed 4, WS–I.

QARI: One T–73 Scud Launcher, one BMD Trans-Mortar carrier, one BR6 frigate.

Set up within 5 hexes of 4215 on map B, speed max, facing E or F, WS–III.

YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, Scud speeds, and other items. Y175 is assumed if no other year is selected.

(SG72.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG72.4) SPECIAL RULES

(SG72.41) MAP: The map is fixed; it does not float. Any unit leaving the map has disengaged and cannot return. The Qari units can only disengage from the 42xx map edge of Map B. The Tiawuk units cannot disengage. Units which disengage in unauthorized directions or areas are considered destroyed.

(SG72.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.

(SG72.421) No ship in this scenario has an MRS shuttle, but in a variant of the scenario where that is possible, they may be purchased [up to the limits in (J8.5)] under (SG72.431).

(SG72.422) If using EW fighters, one of the F–18s on the BATS is a F–18E. If not using EW fighters, it is a standard F–18.

(SG72.423) There are no PFs in the basic version of this scenario. They may be added in a variation.

(SG72.43) COMMANDER'S OPTION ITEMS

(SG72.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions.

(SG72.432) The speed of any drones used will be defined by the year selected by the players.

Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG72.433) Prime Teams (G32.0) are not available in this scenario.

(SG72.44) REFITS: These will be defined by the year selected.

(SG72.5) VICTORY CONDITIONS: If the BATS is destroyed, the Qaris win. If not, they lose.

(SG72.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG72.61) Use Frax missile subs and missile ships to replace the Qari forces.

(SG72.62) Replace the T73 with two more BMDs.

(SG72.63) For a smaller scenario, delete the armed freighter and the BR6.

(SG72.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG72.71) Change the BATS to a base station.

(SG72.72) Replace the armed freighter with a frigate or the BR6 with a BR8.

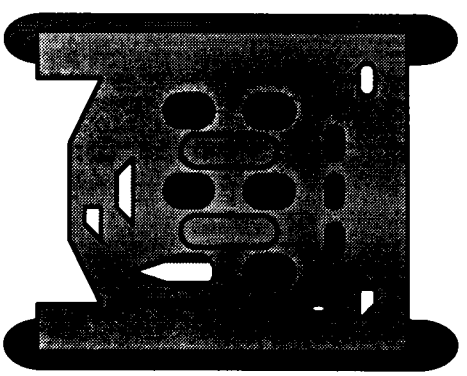
(SG72.73) Delete or add some fighters.

(SG72.74) Give the BATS an MRS shuttle.

(SG72.8) TACTICS

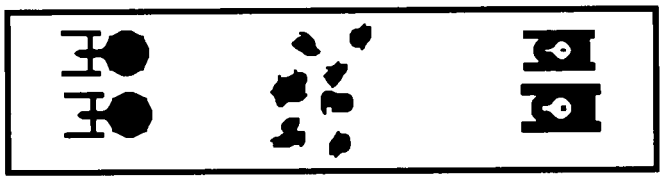
The Qari force gains little by moving closer or splitting up and should simply select the best range for its attack, go there, and get on with it.

The Tiawuk forces will have to go out and attack the T–73, leaving the armed freighter to stop any Scuds from reaching the base.



T73 SCUD MISSILE LAUNCHER

(SG73.0) THE BATTLE OF 73 COREWARD



by Stephen V Cole, Texas

This battle pitted the command candidates against a force of Qaris in a unique terrain situation not likely to be encountered in normal space.

(SG73.1) NUMBER OF PLAYERS: 2; the Federation player and the Qari player.

(SG73.2) INITIAL SET UP

TERRAIN: Asteroid field in the area from 2001 to 2030 to 2530 to 2501, inclusive. See special rule (SG73.45).

This battle was set up in "increments" equal to about 250 BPV points (in SFB terms). Players may use as many or as few increments as they wish.

FEDERATION: Each increment is equal to 250 points. Use the same number of increments as you use for the Qaris. Arrive anywhere along the 42xx map edge on Turn #1, heading E or F, speed max, WS–III.

QARI: Increment #1: T90, BR6
Increment #2: 2xT72, BR7
Increment #3: T80, T72
Increment #4: T70, T72
Increment #5: 2xBM3, BR6
Qari units set up anywhere in the hex rows between 0201 and 0801, inclusive, heading A or B, speed 4, WS–0.

YEAR: Players should select a year before setting up the scenario. This will define the availability of ships, refits, fighters, drone speeds, and other items. Y168 is assumed if no other year is selected.

(SG73.3) LENGTH OF SCENARIO: The scenario continues until all forces belonging to one side have been destroyed, captured, or have disengaged.

(SG73.4) SPECIAL RULES

(SG73.41) MAP: The map is fixed; it does not float. Any unit leaving the map has disengaged and cannot return. The Qari units can only disengage from the 01xx map edge. The Federation units can only disengage from the 42xx map edge. Units which disengage in unauthorized areas are considered destroyed.

(SG73.42) SHUTTLES AND PFs: All shuttles and PFs have warp booster packs if the year selected allows them.

(SG73.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SG73.431).

(SG73.422) If the Federation purchases a carrier and fighters, use the standard deployment patterns (one EWF for each squadron of eight or more fighters) for EW fighters.

(SG73.423) If the Federation purchases PFs, he should use a casual flotilla with no leader or scout.

(SG73.43) COMMANDER'S OPTION ITEMS

(SG73.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-bombs, extra marines, etc.) up to 20% of its Combat BPV. See (S3.2) for details and exceptions. Note that whatever is spent here counts in the Standard Victory Conditions (S2.2) as victory points for the enemy.

(SG73.432) The speed of any drones used will be defined by the year selected by the players.

Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SG73.433) If the Federation player wishes to use the optional rules for Prime Teams (G32.0), he can purchase such teams (25 points each) as part of his starting forces (not part of Commander's Options). If the Qari player wishes to use a Prime Team (G32.0), he can purchase one (25 points) as part of his Commander's Options.

(SG73.44) REFITS are available depending on the year selected. The cost of any refit is included in the total BPV used to purchase the Federation ships in (SG73.2) above.

(SG73.45) ASTEROID ZONE: The Asteroid Zone (which extends completely across the map, in the event you are using a map not of the standard 4230 size) is comprised of asteroids with a special EW effect. If firing completely through the asteroid field, there is a penalty of 10 ECM points applied to the firing ship. If, however, the firing unit and its target are both on the same side of the field, or if both are in the field, or if one is in the asteroid field, this penalty is entirely ignored. If you don't use EW, then just don't allow firing through the Asteroid Zone.

(SG73.5) VICTORY CONDITIONS: Use the Standard Victory Conditions (S2.20).

(SG73.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SG73.61) Allow both sides to begin the scenario with one increment initially. At the start of each turn after Turn #1, each player rolls one die and receives reinforcements on a roll of 1. The increment arriving should be chosen by placing chits with the appropriate numbers in a cup and drawing them one at a time each time a 1 is rolled. This reflects the fact that the commanders would not know what force would arrive to reinforce them first.

(SG73.62) Allow the Qari player to create his own increments, perhaps by combining odd points from several to allow one to have more ships. This would force the Federation player to use Tactical Intelligence to identify the Qari ships that he is actually facing.

(SG73.63) For a more difficult battle, do not allow either side to employ scouts.

(SG73.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SG73.71) Allow the Qari player up to 25 BPV to upgrade one ship in his selected increment.

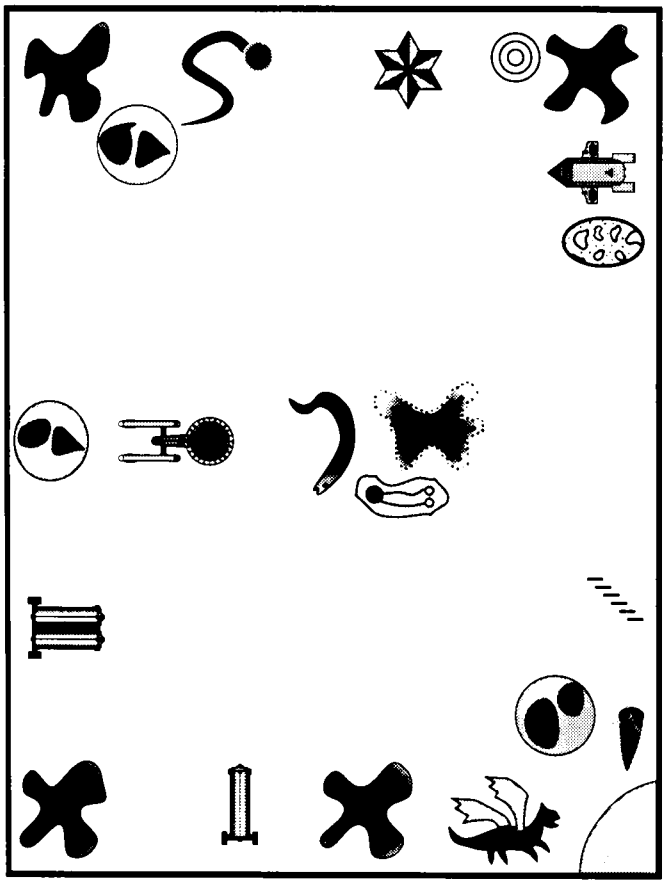
(SG73.72) Reduce or increase the BPV the Federation player has to purchase his increment.

(SG73.8) TACTICS: Both of you are going to have to determine how much effect the EW from the asteroids will have on your fire. Maneuver your ships to try to isolate an element of the enemy force and defeat him in detail. To finish the battle, one of you will have to cross the asteroid field.

(SG73.9) PLAYTESTERS COMMENTS: A real bar fight. Close range forced by the terrain.

(SG73.X) DESIGNER'S NOTES: Anyone who has studied recent military history will recognize the inspiration for this scenario, which I created to honor those who fought there.

(SM17.0) MONSTERS, MONSTERS, MONSTERS!!!



(Y150) *by Chuck Alego, Ohio*

After a showing of a WYN Monster holo, a young cadet at Star Fleet Academy created a scenario for the training computer's fleet tactics simulator. Somehow, and an investigation is still ongoing, this scenario intended only to amuse cadets was confused by the computer for a programmed unannounced drill for the defense force. The computer also ordered the ships' sensors to ignore the starbase and ground defenses of the planet, causing them to suddenly appear as "destroyed" to the officers of the fleet, while simultaneously ordering the ships' sensors to "see" several new planets and a sun suddenly bloated to huge size by its apparent nearness.

The mayhem that briefly held sway was, to say the least, memorable, as command officers faced with the impossible and no time to assess the situation struggled to react. While convinced that the situation had to be a computer glitch, they could not afford to assume it was not (as it might have been a drill set up by admirals to judge their fitness to command).

No real damage was done (other than to the nerves of many senior officers on the ships, at the Academy, and in the High Command), although several actual freighters (which the computer was now directing the ships to ignore) were nearly hit by weapons fire. At least two ships only narrowly avoided colliding with the moon, which they could no longer see, when the computers on the ships instead steered them around it.

As to the cadet, it perhaps says much of Star Fleet that his name was dropped from the investigation's records and never publicly released despite the demands of several Federation senators.

(SM17.1) NUMBER OF PLAYERS: 2; the Fleet player and the Monsters player.

Alternatively, the scenario could be played by two teams, one team operating the fleet units, while another operates the various "monsters".

(SM17.2) INITIAL SET UP

TERRAIN: Class M planet in hex 2229, class M planet in hex 3606, class M planet in hex 0328. The edge of the sun is in hexes 3901, 3902, 4002, 4003, 4104, 4105, 4205, and 4206.

FLEET: 1,780 BPV of ships within 5 hexes of the planet (Earth) in hex 2229; two ships, player's choice, are at WS–III, one is at WS–I, the rest are at WS–0; all speed 0, heading at the fleet player's option.

Large freighter in 2930, heading F, speed 10, WS–III, see (SM10.0) and (SM17.48).

Small freighter in 4216, heading F, speed 4, WS–I (SH4.0).

There are 20 crew units on the planet in hex 3606 which must be rescued before the Sun Snake makes the sun go nova.

MONSTERS: See (SM17.45) for special rules on monster interaction.

Orion CR with a Super Intelligent Computer (G11.0) and optional weapons of the fleet player's race in hex 0401 escorting a meteor on a collision course with the planet in hex 2229 (SH3.0); see (SM17.46).

Planet Crusher in hex 3701, objective to destroy planet in hex 2229 (SM1.0).

Space Amoeba in hex 2316 (SM2.0).

Moray Eel in hex 2216 (SM3.0) trying to destroy a random ship; see (SM17.47).

Cosmic Cloud in hex 2215 (SM4.0).

Sun Snake in hex 0124 attempting to dive into the sun (SM5.0).

Mind Monster in hex 0103 attempting to destroy the planet in hex 2229 (SM6.0).

Space Dragons; one ancient, one old mother, one adult, one baby in hex 4204, objective to "ravage" the planet in hex 0328 (SM7.0).

Arastoz is in 0101, 4211, 4230, and 0130, objective to destroy the large freighter that starts in hex 2930 (SM10.0); see (SM17.48).

Cruise drones targeted on the small freighter initially in hex 4216 to arrive under the provisions of (SH4.0).

Igneous in 0119 and targeted on the planet in hex 2229 (SM8.0).

(SM17.3) LENGTH OF SCENARIO: The scenario continues until all the monsters have been destroyed or have accomplished their individual goals as described in their basic scenarios as modified by the rules below.

(SM17.4) SPECIAL RULES

(SM17.41) MAP: The map is fixed; it does not float. Any unit leaving the map has disengaged and cannot return.

Any unit can disengage in any direction.

(SM17.42) SHUTTLES AND PFs: No shuttles or PFs have warp booster packs.

(SM17.421) MRS shuttles may be purchased [up to the limits in (J8.5)] under (SM17.431).

(SM17.422) There are no fighters in this scenario. Exception: Stinger-1 fighters carried on Hydran warships.

(SM17.423) There are no PFs in this scenario.

(SM17.43) COMMANDER'S OPTION ITEMS

(SM17.431) Each ship can purchase additional or special equipment as Commander's Option Items (e.g., T-

bombs, extra marines, etc.) up to 20% of its combat BPV. See (S3.2) for details and exceptions.

(SM17.432) All drones are "slow", i.e., speed–8. Type-II and type-V drones (speed 12) are available for purchase as special drones.

Each drone-armed ship can purchase special drones up to the historical racial percentages as part of the Commander's Option Items. Note that (S3.2) allows drone ships extra points for this purpose.

(SM17.44) REFITS: No refits of any type had been installed on any ships at the time of this "disaster".

(SM17.45) MONSTERS: All the monsters are assumed to be at full strength as provided in their individual scenarios. All the monsters are immune to each other and will totally ignore each other for all purposes except as provided in their individual scenarios, e.g., Arastoz will try to combine, the baby dragon will attempt to nurse on the "real ships" and will ignore the two freighters, the mind monster will ignore the other "class M planets" and move only on its target planet, and so on. Once a monster accomplishes its stated objective, it will "fade away" like the simulacrum it is.

(SM17.46) ORION CR: The CR can never move more than 5 hexes from the asteroid it is protecting and can only fire/launch weapons at a ship that is within 10 hexes of the asteroid, within 8 hexes of itself, or at a ship which has fired on it or the asteroid. It can guide any seeking weapons it launched under the above conditions until they are destroyed or strike their targets.

(SM17.47) MORAY EEL: The ship the Moray will attempt to destroy is determined before set up by placing duplicate counters of all of the ships into a cup and the monster player drawing one. The monster player retains this counter, setting the rest aside. The counter and the contents of the cup are examined by the fleet player after the scenario to verify that the monster attempted to destroy its target ship.

(SM17.48) ARASTOZ: The Arastoz monster must always move so as to get closer to the large freighter as a seeking weapon, except when its component parts are moving towards each other to join, in which case those parts not actively moving to join must continue to pursue as seeking weapons.

(SM17.49) OTHER MONSTERS: Players could incorporate other monsters (those published later or of their own making) into the scenario by simply replacing one of the monsters with the new one. Maintain balance by carefully selecting a monster of equivalent power to replace.

(SM17.5) VICTORY CONDITIONS: The fleet player wins if all of the monsters are prevented from fulfilling their victory conditions as provided in each of their respective scenarios. The monster player wins a marginal victory if one monster accomplishes its objective and gains one level of victory for each monster that does so up to an astounding victory. Note that all four dragons count as one monster in this instance.

(SM17.6) VARIATIONS: The scenario can be played again under different conditions by making one or more of the following changes:

(SM17.61) Select one of the ships randomly at start, and add the monster from "Intruder Alert" (SG31.0) to the scenario, starting on the randomly selected ship.

(SM17.62) Assume the computer is generating sunspot activity as part of the scenario (P11.0).

(SM17.63) For a shorter and faster scenario, reduce the strength of each monster as provided below and allow only 1,000 BPV for the fleet player. There is no change to the victory conditions for this scenario.

Change the Orion CR to an LR, and reduce the damage needed to destroy the asteroid to 200 points.

The Planet Crusher is destroyed by 100 points of damage.

Use only two adult and one baby Space Dragons.

Roll to determine how to destroy the Space Amoeba when 200 points of lab information has been gathered.

Roll for destruction of the Moray Eel when 100 points of damage has been scored on it.

Roll to determine how to destroy the Cosmic Cloud when 200 points of lab information has been gathered.

Roll to determine how to destroy the Sun Snake when 200 points of lab information has been gathered.

Roll to determine how to destroy the Mind Monster when 200 points of lab information has been gathered.

A single piece of Arastoz requires 50 points to destroy. If two pieces combine, they require 100 points to destroy. If three pieces combine, they require 200 points to destroy. If all four pieces combine, the monster requires 400 points to destroy.

Each turn only four to six cruise drones arrive.

Igneous is destroyed by 300 points of damage and loses one weapon for every 50 points of damage (the weapons are not otherwise reduced). The MCIDS stops working after 150 damage points have been scored on Igneous.

(SM17.64) Replace any of the monsters with a new monster from a more recent product.

(SM17.65) Select a different year.

(SM17.7) BALANCE: The scenario can be balanced between players of different skill levels by one or more of the following:

(SM17.71) Allow the fleet player an additional 300 BPV.

(SM17.72) Delete one of the monsters, selected randomly.

(SM17.73) While not historical, allow the fleet player to install some refits on some or all of his ships.

(SM17.8) TACTICS depend on the situation and the terrain. Carefully evaluate what monsters are present (if you were using a variant). Try to keep your ships intact while killing off the monsters one by one. Arastoz may be the most dangerous if left to himself for too long.

PLAYTESTERS

BATTLE GROUP AMERICA: Scott Fridenberg, Joel Fink, and Mike Sweet.

BATTLE GROUP CHICAGO: John D. Berg, Mike Incavo, Randy Demsetz, Cliff Yahnke, Karl Blatter, David Jannke, and Gina M. Kouimelis.

BATTLE GROUP CINCINATTI: Mike Filsinger and Kyle Marcroft.

BATTLE GROUP COLORADO; FIRST SQUADRON: Scott Moellmer, Pat Moellmer, Craig McRae, Dan Hoffacker, Kie Kreuger, Mark Bochinski, John Bowers, Josh Mathis, Erik Eklund, and Mike Raehal.

BATTLE GROUP ILLINOIS: Cliff Yahnke, Paul Pundy, Alex Pundy, Dr. Andy Pundy, Joe Lewis, Tim Longacre, and Jon King.

BATTLE GROUP MADISON: Ken Burnside, Ken Rotar, Mike Greenholdt, and Dane Jesperson.

BATTLE GROUP UTAH: Dave Cheever, Sam Michaels, Barry Clark, Kevin Woods, Jeff Samuels, and Mark Smith.

CONFEDERATE STAR FORCE: Stewart Frazier, Catherine Lizama, Warren Tuck, and Rich McQuire.

BATTLE GROUP SHAWNEE: David Brinson and Michael Teaney.

BATTLE GROUP NORTH CAROLINA: Oliver Upshaw and Diane Wood.

TIDEWATER ACADEMY: Larry Ramey, Chas Owens, and Chris Graves.

FORT IRWIN GARRSION: Jon Cleaves, Bryan Hamilton.

ANNEXES FOR C4

These annexes cover only items unique to the ships and races of Module C4 and do not include or duplicate materials from previous products.

INDEX OF ANNEXES

1. INDEX OF THE GAME
2. SEQUENCE OF PLAY
3. MASTER SHIP CHART
   3A. Tug Movement and Turn Mode
   3B. Master PF Chart
4. MASTER FIGHTER CHART
5. ABBREVIATIONS
   5A. Abbreviations for terms
   5B. Abbreviations for ship classes
   5C. Code names and class names
6. COMMANDER'S OPTION ITEMS
   6A: Other Optional Items Available
7. DATA ON SHIPS
   7A. Color of Counters
   7B. Ships Able to Land on Planets
   7C. Orders of Battle
   7D. Systems Defined as "Weapons"
   7E. Damage Conversion Chart
   7F. Nimble Units
   7G. Carrier Information
   7H. Cloaking Device Energy Cost
   7I. Not used (could be confused with 71)
   7J. Docking Point Chart
   7K. Cargo Space Points
   7L. Unit Towing Costs
   7M. Multiple Shuttle Bays
   7N. Drone Reloads
   7P. Systems Affected by Scanners
   7R. Ships Able to Pinwheel
   7S. Ships Subject to Shock
   7T. Changes Due to Dropped Engines
8. WEAPONS DATA
   8A. Disruptor Range Table
   8B. Orion-WYN Optional Weapons
9. COST OF REPAIR CHART
10. TACTICAL INTELLIGENCE
11. EXPERIENCE POINTS
12. MONSTER DATA TABLE

ANNEX #1: INDEX OF ITEMS IN C4

Axion Torpedo E51.0
Anti-Fighter Defense System E52.0
Arming Kinetic Cannon E53.21
Armor on Turrets G52.4
Barbarian Non-Weapon Options R55.1C
Barbarian Optional Weapons R55.1A
Barbarian Power Options R55.1B
Barbarians R55.0
Bomb Thrower and Orions E54.42
Bomb Thrower as Transporter E54.41
Bomb Throwers and Shields E54.23
Bomb Throwers E54.0
Bomb Throwers, arming E54.21
Bomb Throwers, firing E54.22
Britanians R58.0
Canadi'ens R59.0
Catfish Drones FD51.0
Chaff Thrower Effect G53.33
Chaff Throwers and Energy G53.21
Chaff Throwers and Holding G53.22
Chaff Throwers and Orions G53.48
Chaff Throwers and Terrain G53.47
Chaff Throwers G53.0
Creating Chaff G53.121
Damaging Scuds FD54.3
Deltans R57.0
Explosive Ammunition E53.34
Flashbombs E54.3
Flivvers R56.0
Frax R51.0
Guarding Kinetic Cannons E53.366
Heavy Kinetic Cannon E53.111
Heloshuttles J51.0
High Energy Direction Change C51.2
Hoverwarp C52.0
Hyperdrone E55.0
Indirect-Fire Mortar Bombs G51.5
Kinetic Cannon And Narrow Salvoes E53.361
Kinetic Cannon and NVC E53.363
Kinetic Cannon and Special Sensors E53.368
Kinetic Cannon Arming E53.21
Kinetic Cannon E53.0
Kinetic Cannons and Legendary Officers E53.369
Kinetic Cannons and Orions E53.367
Kinetic Cannons and Terrain E53.37
Kinetic Cannons versus Cloaks E53.365
Limit on Trans-Mortars G51.15
Long Range Plasma FP51.33
M-Bombs G51.4
Medium Kinetic Cannon E53.112
Missile Rack FD52.0
Orions and Bomb Throwers E54.42
Orions and Chaff Throwers G53.48
Orions and Trans-Mortars G51.61
Orions and Wire Guidance FP52.28
Penetrating Ammunition E53.33
Plasma-A FP52.0
Qaris R52.0
Scaleboard FD54.4
Scud Launchers FD54.15
Scud Missiles FD54.0
Scud Warheads FD54.12
Scuds versus MCIDS FD54.34
Scuds and Endurance FD54.23
Scuds and Terrain FD54.32
Scuds and Tractors FD54.24
Scuds and Webs FD54.33
Sharkhunters R54.0
Short Range Plasma FP52.34
Subspace Guided Drones FD53.0
Trans-Mortars and Crew Quality G51.62
Trans-Mortars and ESGs G51.38
Trans-Mortars and EW G51.35
Trans-Mortars and Orions G51.61
Trans-Mortars and Terrain G51.39
Trans-Mortars G51.0
Trans-Mortars versus Web G51.37
Triaxians R53.0
Turret Armor G52.4
Turret Rotation G52.3
Turrets G52.0
Wire Guidance and Orions FP52.28
Wire-Guided Plasma FP52.0
Wire-Guided Plasma Targets FP52.22
Wire-Guided Range Limit FP52.237
Wire-Guided Shotguns FP52.236

ANNEX #2: SEQUENCE OF PLAY

This Sequence of Play lists almost every action that can be taken during the turn, in the EXACT order that they occur. These actions must be taken in the SPECIFIC order listed here.

Note that Catastrophic Damage (D21.0) (with its associated evacuations and escapes) may be declared on a number of the following steps. See (D21.11).

1. ENERGY ALLOCATION PHASE

Roll for activation of surprised ships (D18.31).
Roll for computer failure (G11.4).
Roll for Ion Storms (P14.3).
Pinwheel Step: Dissolve (C14.31) or form (C14.20) pinwheels, announce this action, and conduct the subsequent Energy Allocation for the component ships as appropriate.
PFs (and interceptors) drop warp booster packs (K1.62).
Tractor/Negative-tractor auction (G7.42).
All players allocate energy in accordance with the rules (B3.0).
Allocate repair points (G17.0), EDR (D14.0), and damage control efforts (D9.2) and (D9.7).
Plot Self-Destruction (D5.1).
Orions announce if they are doubling their engine output (and which engines); see (G15.2).
Andromedans resolve energy released from PA panels (D10.423).
Announce if shields were unpowered; if so, shields cease to function at this point (D3.52).
Announce Self-Destruction (D5.1).

2. SPEED DETERMINATION PHASE

All players announce their speeds (B2.3 #2).
Announce intention to dock (C13.17) or undock (C13.21).
Announce intention to voluntarily separate sections (G12.02).
The controller prepares his charts (C1.44).

3. SELF-DESTRUCTION PHASE

Resolve self-destruction by units plotted to do so (D5.0). This may include evacuation under (D21.21) which may involve many functions such as dropping shields (on receiving as well as the self-destructing ships), shuttle launches, and ship separations (D21.4), etc. See also (D7.7) for the possibility that enemy marines on board could prevent self-destruction.

4. SENSOR LOCK-ON PHASE

All players secretly assign alternative ECM/ECCM strength (PF swing points, EWP swing points, etc.).
All players secretly assign all lending of EW that is to be in effect at the start of the turn under the various provisions of (G24.2), (J8.41), (J9.11), (J4.9), (G22.71), etc.
Announce ECM and ECCM strength (D6.32) including loaning.
All players determine if they have a lock-on to targets (D6.11).
Attempt to re-acquire lock-on to cloaked units (G13.333).
Release Death Riders to self-guidance (K7.22).

5. INITIAL ACTIVITY PHASE

Tractor Rotations Step (G7.7).
Assign boarding parties as guards (D7.83).
Ships committed to do so undock (C13.21).
Ships committed to do so voluntarily separate sections (G12.02).
Roll for variable pulsar outburst (P5.12).
Attempt to destroy cloaking device (G13.163).
Begin inter-bay shuttle (J1.59) and deck crew (J4.813) transfers.
Officer Location Step: Specify location of all legendary officers (G22.13). Begin transfers of legendary officers (G22.132).
Reload Assignment Step: Take drone racks (FD2.42) and plasma racks (FP10.3) out of service for reloading or unloading.
Computer-controlled ship completes all actions above this point in the Sequence of Play (G11.11), except tractor auctions, which are conducted along with other ships.

6. IMPULSE PROCEDURE

(Repeat once for each impulse.)

6A. MOVEMENT SEGMENT

6A1: INVOLUNTARY MOVEMENT STAGE
- Move playing pieces in accordance with black hole rules (P4.1).
- Gravity waves advance, and their effect is applied immediately (P9.2).
- Movement caused by nebula (P6.5) on Impulses #5, #15, #26.
- Andromedan ships take nebula damage (P6.31) on Impulses #8 and #24.

6A2: VOLUNTARY MOVEMENT STAGE
- Declare direction for accumulation of Directed Turn Mode (C3.81).
- Determine which playing pieces will move in this impulse (C1.4).
- Declare and resolve evacuation and escapes under Catastrophic Damage due to Impending Destruction (D21.22).
- Move those playing pieces scheduled to move in accordance with the rules, including changes in Temporal Elevation (G31.0). See (C1.31). This will include base rotations on certain impulses (C3.7). This may include, on Impulse #32 only, landing on or taking off from a planet (P2.41) or atmospheric flight (P2.8). Determine, but do not resolve, any damage caused by movement. Heloshuttles may drop flashbombs (J91.32).

6A3: DAMAGE DURING MOVEMENT STAGE: *In each of the following steps, allocate the damage (D4.0) as it is resolved, step by step.*
- Resolve actions of ESGs (G23.5) [including interaction of ESGs and mines (G23.61)].
- Resolve damage from enveloping plasma torpedoes (FP5.3).
- Resolve damage from seeking weapons not resolved above (F2.3).
- Resolve damage from asteroids (P3.2), dust, rings (P2.223).
- Determine any collisions with planets (P2.212) or moons (P2.23). Resolve any crash landings (P2.431) or catastrophic landings (P2.435). Web deceleration (G10.59).
- Controlled mines can be ordered to detonate (M5.201). Resolve damage from mines (M0.0).
- Resolve explosions from destroyed units (D5.0) (if any) and any resulting ship separations (G12.0) or escapes (D21.4).
- Resolve damage to Andromedan satellite ships in the hangar bay (G19.213).

Roll for possible critical hits (D8.0).
Resolve breakdowns (C6.54), (C3.61), (G7.3222).
Resolve Energy Balance Due to Damage (D22.0). This could reduce speed or halt certain functions.

6A4: FINAL MOVEMENT ACTIONS STAGE
Release ships from tractor beams (G7.0) if these systems were destroyed or lost power in this segment. (Involuntary release from stasis is in 6B6.)
Announce movement changes: intention to adopt/drop pursuit (C1.322), evasion (C1.3223), or station keeping plotting (C1.3224); drop/adopt erratic maneuvers (C10.0); make speed changes under (C12.0); Triaxian ships announce change of direction (C32.12); forgo or resume web passage status (G10.533). These decisions are made secretly and simultaneously in advance of all announcements in this step.
Reveal the presence of a minefield (M7.1).
Emergency deceleration takes effect (C8.0).

6B. IMPULSE ACTIVITY SEGMENT

6B1: INITIAL STAGE
Resolve damage from pulsar outburst (if outburst occurs) (P5.2).
Switch fire control from active (D6.6) to passive mode (D19.0) or vice versa. This is the time for voluntary changes; involuntary changes [e.g., wild weasel (J3.0), cloak (G13.0)] occur as required at other points (D6.63).

6B2: CLOAKING DEVICE STAGE
Activate (G13.14) or deactivate (G13.15) cloaking device.
Announce range and bearing if using hidden movement of cloaked ships (G13.61) on Impulses #8 and #24.
Attempt to destroy own cloaking device (G13.162). This can only be attempted once in any period of 32 impulses.

6B3: LOCK-ON STAGE
Roll to determine if lock-on has been lost, retained, or regained due to changing conditions (D6.1). Note that this may be repeated several times during the impulse if conditions (particularly cloaked ships and WW) change. This is also the point at which self-controlled ATG and warp-seeking drones which are beyond tracking range of their targets lose tracking, and the point at which the conditions of (F3.31) are judged.
Scouts and carriers use reserve power to increase EW available for lending (H7.2). Legendary Weapons Officer uses his reserve EW point (G22.71).
Scouts begin or voluntarily end lending (G24.212). Scouts deploy reserve EW (G24.2114).
Tactical Intelligence Interrogations (D17.23) are conducted. Reports from probe drones (FD6.32) and (FD6.33) are received.
Controlled Death rider Target Assignments (K7.301).
ECM drones begin to generate EW (FD9.12).
Fighters make voluntary changes as to which EW source they are accepting lending from (J4.922).
Determine disengagement by separation (C7.21).

6B4: SHIP SYSTEM FUNCTIONS STAGE
Detect individual mines (M7.2). Automatic mine detection (M7.34).
Reinforce web; recalculate strength (G10.3).
Web Step: Lay web (G10.23). Lay web anchors (G26.3). Assume or drop web anchor status (G10.116).
Operate Tractors: Activate or release tractor beams (G7.0). This is the only time for voluntary activation or release; involuntary release may occur at various points (destruction of tractor, launch of WW, etc.). This could result in an immediate tractor auction (G7.414).
Attach pods to a tug (G14.4). (Pods are dropped in 6B10.)
Rotate Turrets (G97.33).
Labs (G4.2), scouts (G24.25), aegis (D13.3), and SWACS (J9.12) attempt to identify seeking weapons and mines (M7.5).

6B5: SCOUT FUNCTIONS STAGE
SWACS (J9.12) and scouts attempt to attract drones (G24.23), break lock-ons (G24.22).
SWACS (J9.2) and scout PFs (K1.756) go wild.

6B6: SEEKING WEAPONS STAGE
SW Control Step: Voluntary transfers (F3.5) or release (F3.4) of control of seeking weapons; this includes catfish drone activations (FD51.24). Involuntary transfers and releases can occur at many other points in the sequence; see (F3.53). Program suicide freighters (R1.33C).
Drop electronic warfare pods (J4.9622).
Launch plasma torpedoes (FP1.3) and/or pseudo-plasma torpedoes (FP6.12). Announce launching of any wire-guided plasmas (FP93.25). Release wire-guided plasmas to their own guidance (FP93.218); this must be announced (FP93.25).
MW Release Step: Deploy drones from MW drones (FD8.22) and SP shuttles (FD7.33). Stingray release (FD16.0). Swordfish and Starfish drones commit to fire.
Launch drones (FD1.2). Launch Scuds (FQ1.26).
Launch probes (for information, not as weapon) (G5.2).
Drop chaff (D11.3).
ESG Step: Deactivate and (subsequently) activate expanding sphere generators (G23.3) based on previous announcements. Announce operation of ESGs (G23.3); cancel previous announcement (G23.33). Size and strength are announced (G23.46).
SFG Step: Activate and (subsequently) deactivate stasis field generators (G16.11). Involuntary deactivations become effective (G16.14).
Shock Step: Resolve shock effects from the launch of seeking weapons (D23.32). (Shock from DF weapons is in 6D5.) Accumulate SEPs and roll for breakdown as required.

6B7: MARINES ACTIVITY STAGE
Mutiny Step: First die roll for mutiny (G6.20).
Operate Shields Step: Drop shields; restore shields dropped previously (D3.5).
Shield Cracker Step Resolve fire from shield cracker. Shield damage is marked; ignore any "internal damage" that results (E16.0). Web Breakers are fired immediately after all shield cracker fire is resolved; web strength reduction takes place immediately (E15.0).
Operate transporters (G8.0), including the laying of T-bombs (M3.22) and the firing of Trans-Mortars. Block boarding by (G8.23). Resolve "hit and run" raids (D7.8) conducted by transporter.
Reactive guard assignments are made (D7.86).
Crew unit transfers under (C13.471), (C13.951), and (G19.28) are made. Transfer of cargo under (G25.23) is conducted.
Mines laid two impulses previously by transporter (M3.22) become active if the laying ship is out of detonation range (M3.32).
Resolve damage caused by the arrival of Trans-Mortar bombs fired in previous impulses and which arrived in their target hex on this impulse.

6B8: SHUTTLE & PF FUNCTIONS STAGE
Challenge enemy shuttles to a dogfight (J7.0).
Resolve pilot ejection (J6.6).
Fighters may drop warp booster packs (J5.41). Fighters may turn warp booster packs on or off (J5.14).
Recover (land) shuttlecraft (J1.6), fighters, fast patrol ships (K2.31), web anchors (G26.35), and cloaked decoys (G27.3). Shuttles land on enemy ships (J1.65) and (J1.63).
Release of (J1.34) restrictions (after appropriate delay) for previously-launched shuttles.
Launch shuttlecraft (J1.5), fighters, fast patrol ships (K2.32), wild weasels (J3.0), suicide shuttles, scatter-packs (FD7.0), and cloaked decoys (G27.3). Involuntary release of tractor beams to allow wild weasel launch (J3.452) may be a part of this action.
Move shuttles between shuttle bay and balcony (J1.53).
Deck Crew Actions Step (J4.817). Record deck crews which begin or finish actions and incremental progress on assigned actions.
6B9: SATELLITE SHIP FUNCTIONS STAGE
Recover satellite ships and energy modules (G19.412) via transporter. (No recovery by DisDev.)
Direct Transfers of Satellite Ships (G19.47).
Launch satellite ships and energy modules (G19.411) via transporter. (Launch by DisDev is in 6D5.)
Transfer energy to an energy module (G20.31).
6B10: SEPARATIONS STAGE
Drop pods from a tug (G14.3).
Rear hulls of ships that separated 64 impulses previously are stabilized (G12.54).
Lay mines (other than by transporters) (M2.1) (M9.21).
Mines laid in previous impulses become active if the conditions of (M2.34) are satisfied.
6B11: FINAL FUNCTIONS STAGE
Announce emergency deceleration (C8.0).
Roll to determine new facing of tumbling ships (C6.5511). If this is the last tumbling impulse, see (C6.554).
Roll to reprogram the computer; Impulses #8 and #24 only; see (G11.341).

6C. DOGFIGHT RESOLUTION INTERFACE (PA PANEL RADIATION DAMAGE)
(Only on Impulses #4, #12, #20, #28.)
Shuttles may drop booster packs (J7.72) or other items to improve DFR. Resolve resulting separations. See (J7.13).
Announce intent to separate by breakaway (J7.711) and resolve any resulting separations.
Determine advantage (J7.6) and resolve any resulting separations (J7.71) or surrenders (J7.73).
Launch dogfight drones (J7.53) and plasma–Ds (J7.532) within dogfight (by one shuttle in a dogfight against another shuttle in that same dogfight only).
Drop chaff (D11.3) and (J7.55).
Fire weapons at drones launched above if allowed by firing arcs (J7.56).
Resolve phaser (J7.52) and other (J7.54) fire between fighters/ shuttles in the dogfight. See (J7.66).
Determine if dogfight drones (J7.53) and plasma–Ds [or SWs coming from outside (J7.32) of the dogfight] hit their targets (or just what they did hit), and resolve damage.
Resolve any collisions or separations resulting from (J7.6621).
Andromedan PA panels absorb energy from radiation (P15.7) and heat (P10.6) zones. If this results in the destruction of the Andromedan ship, the explosion is resolved in 6D5; the destroyed ship can take no further actions beyond this point.
Resolve damage to Andromedan satellite ships in the hangar bay (G19.213).
Ships suffer crew casualties from radiation zones (P15.1) and damage from heat zones (P10.1).

6D. DIRECT-FIRE WEAPONS SEGMENT
6D1: FIRE ALLOCATION STAGE
DisDev Declaration Step: Announce intention to use displacement device on the current impulse, the unit to be displaced, and (if Andromedan) the direction in which displacement will be made (G18.31).
Fire Decision Step: All players secretly and simultaneously decide what direct-fire weapons to fire and the targets of those weapons. At this point, EW points being generated can be adjusted under (D6.315) by reserve power or various other means. (Note that lending of EW is adjusted in 6B3.)
Fire Declaration Step: All direct-fire weapons fire is announced, including specific weapons and targets. Changes to EW levels under (D6.315) are also announced. Whether a web caster will be fired in web fist (E14.11) mode is announced. ISC announces dropping of wavelocks. All of these announcements are simultaneous.
6D2: DIRECT-FIRE WEAPONS FIRE STAGE
General note: Weapons are fired in the specific order given. Resulting internal damage is not resolved until the Damage Resolution Stage. At the points marked "§", reserve power may be used under (H7.134) to mitigate damage.
PPD Step: PPDs roll for wavelock if available and required (E11.3). PPDs score damage (E11.332). Shield damage is marked §; internal damage is recorded to be resolved in 6D4.
First Hellbore Firing Option (E10.44). Shield damage is marked §; internal damage is recorded to be resolved in 6D4.
Direct-Fire Step: All direct-fire weapons not listed separately fire. Shield damage is marked §; internal damage is recorded to be resolved later (E1.11) in 6D4.
Aegis Fire Step: Weapons able to use Aegis Fire Control fire their remaining pulses (D13.0). Shield damage is marked §; internal damage is recorded to be resolved in 6D4.
Second Hellbore Firing Option (E10.44). Shield damage is marked §; internal damage is recorded to be resolved in 6D4.
Flashbombs fired in this stage , or dropped by Heloshuttles in (6A2) of the current impulse, detonate (E105.22).
6D3: WEB CASTER STAGE
Previously fired free standing webs become effective (E12.22).
Web casters fire (E12.13).
Previously effective free-standing webs dissipate (E12.26).
6D4: DIRECT-FIRE WEAPONS DAMAGE RESOLUTION STAGE
Resolve escapes, evacuations, and ship separations under catastrophic damage rules (D21.0).
Allocate the internal damage from all direct-fire weapons above (D4.0). Note that a weapon destroyed in the first of the many various firing steps would still be able to fire (if allocated to do so) in its appropriate later step in the same impulse because no damage is resolved until this point.

6D5: DIRECT-FIRE WEAPONS CONSEQUENCES STAGE
Resolve explosions (D5.0) from destroyed units (if any) (D4.4), then repeat stage 6D4. (No weapons are fired; this is used to resolve any damage resulting from the explosions.)
Resolve damage to Andromedan satellite ships in the hangar bay (G19.213).
Displacement devices operate (G18.3) and can be used to launch satellite ships (G19.42).
Roll for possible critical hits (D8.0).
Resolve Energy Balance Due to Damage (D22.0). This could reduce speed or halt certain functions.
Release ships from tractor beams (G7.0) if these systems were destroyed in this segment. (Involuntary release from stasis is in 6B6.)
Electronic warfare (D6.3) benefits of any systems destroyed in Segment D are lost (e.g., scout channels destroyed, etc.). Chaff throwers may be fired (G98.31). The effect of chaff fired four impulses previously is lost (G98.31).
Shock Step: Resolve shock effects (D23.32) from the firing of direct-fire weapons. (Shock from seeking weapons is resolved in 6B6.) Accumulate SEPs and roll for breakdown as required.

6E. POST-COMBAT SEGMENT
Roll for the possibility of UIM breakdown (D6.52).
Start/stop erratic maneuvers takes effect (C10.0).
Deploy Reserve Power for "delayed uses" under (H7.132).

END OF IMPULSE PROCEDURE
Return to start of Impulse Procedure and repeat until all 32 impulses have been completed.

7. FINAL ACTIVITY PHASE
Roll for mutiny (G6.20).
Resolve boarding party combat (D7.4), (D7.63), (D16.21), (D15.2).
Legendary Captain bluffs (G22.21).
Ships committed to dock (C13.0) do so.
Roll for critical hit repair (D8.3).
Announce and roll for Emergency Damage Repairs (D14.0).
Legendary engineer (G22.41) repairs; legendary doctor cures (G22.61).
Ships drop warp engines (G12.6).
Disengage by acceleration (C7.1) or evasion (C7.3).

8. RECORD KEEPING PHASE
8A: REPAIR STAGE
Mark and announce repairs completed (D9.73) and (G17.34).
Resolve repair of shields by damage control (D9.2).
Move reserve power to phaser capacitors (H7.36).
8B: POWER ABSORBER ACCOUNTING STAGE
Transfer power from PA panels to batteries (D10.411).
PA panels dissipate power to space (D10.412).
8C: FINAL RECORDS STAGE
Orions record loss of engines from double output (G15.2).
Determine information from labs based on closest approach to the monster (or other object of study) (G4.12).
Record drone racks (FD2.42) and plasma racks (FP10.3) which were reloaded or unloaded. Anti-drones that were not fired (E5.74) on the current turn are reloaded automatically unless the player orders otherwise.
Complete inter-bay shuttle (J1.593) and deck crew (J4.813) transfers.
Complete transfers of legendary officers (G22.132).

END OF TURN. Begin a new turn at the start of the sequence.

ANNEX #3: MASTER SHIP CHART

See separate file. Annex #3B is in Module K.

ANNEX #3A: MOVEMENT COST AND TURN MODES FOR TUGS AND LTTs

TUG CLASS	0 PODS	1 POD	2 PODS	3 PODS
Frax	1 C	1 C	1.5 D	2.0 E
Any LTT*	0.67	1	1.33	–

*LTT includes: Fed LTT, Klingon D5G or D5H, Kzinti MTT, Gorn HDT, Tholian LTT (with actual pods, rather than packs), Hydran Mule LTT, Lyran LTT, ISC LTT, LDR LTT, Frax LTT. Turn mode increases by one letter for each pod carried. Note that no LTT can carry two pods, but most can carry a double-weight pod.

Klingon, Kzinti, and Frax tugs with two CVA pods have "3 pod weights"; they cannot carry two pods of different weights.

NOTE: The number of pods is the total equivalent weight. Some pods are "double weight". No tug can carry three pods (some can only carry one), but some can carry three "pod weights".

ANNEX #4: MASTER FIGHTER AND SHUTTLE CHART

Race	Type	Spd	Phaser	Drones	Damage	Special	BPV	Year	DFR	Ref
Frax	Dmn–1	8	1xP3–FA	2xI	8	–	6	168	2	F1
	Dmn–2	12	1xP3–FA	2xI	10	–	8	173	3	F2
	Dmn–III	15	2xP3–FA	2xI + 2xVI	12	–	9	177	4☆	F3
	Dmn–IIIC	15	2xP3–FA	4xI	12	–	10	177	4☆	F3
	Dmn–IV	15	2xP3–FA	2xI + 2xVI	12	2xSpecial Rail	11	180	4☆	F4
	Dmn–IVC	15	2xP3–FA	4xI	12	2xSpecial Rail	12	180	4☆	F4
	Dmn–H	12	1xP2–FX 1xP3–RX	4xI + 2xVI 2xSpecial Rail	16	2xDisr–FA 1xEW Pod	16	176	0☆	F5
Qari	MiG–21	8	1xP3–FA	1xI + 1xVI	8	–	5	168	2	F1
	MiG–23	15	2xP3–FA	2xI + 2xVI	12	–	9	177	4☆	F2
	MiG–29	15	2xP3–FA	4xI + 4xVI	13	–	13	177	4☆	F3
Triax	Cal–2	15	2xP3–FA	2xPL–D	12	Option, 1xPl-F	11	180	4☆	F2
	Cal–1T	8	1xP3–FA	–	8	1xPl–F	5	165	2	F1
	Cal–1D	8	1xP3–FA	2xPL–D	8	–	5	170	2	F1
Shark	Harpoon	15	2xP3–FA	2xPL–D	12	Flashbomb (J91.14)	10	180	4☆	F1
	Helo–A	6	1xP3–360	–	6	J91.0	3	165	0§	J91
	Helo–MR	8	Same as Romulan		10	J8.0	10	150	0	J91
	Helo–GA	6	1xP3–360	–	8	Ground Attack	4	70	0§	J91
	Helo–HTΔ	6	none	–	12	Troop Transport	6	90	0§	J91
	Helo–MS	6	1xP3–360	–	6	M8.3	3	150	0§	J91
	Helo–ML	6	1xP3–360	–	6	M9.18	3	150	0§	J91
	Helo–HAΔ	6	none	–	14	Ground Attack, Troops	9	120	0§	J91

NOTES ON ANNEX #4

RACE: The empire/nation that operates this fighter.
TYPE: The specific type of fighter.
SPEED: Maximum speed of this fighter.
PHASER: The number, type, and firing arc of this fighter's phasers. Some fighters also have phasers listed in the Special column.
DRONES: The number and type of drones carried by this fighter. See C-refits in (R1.F8).
DAMAGE: The number of damage points to destroy this fighter. Two-thirds of this number is the required damage to cripple it (J1.33).
SPECIAL: Any unusual characteristics of this unit. Any direct-fire weapons with unspecified firing arcs have FA firing arcs.
BPV: The basic point value of this fighter. Under (J1.85) the economic BPV of the fighter is 50% of this amount.
YEAR: The year when this fighter type was first available in squadron service. Prototypes might have been in service up to three years earlier; limited numbers up to two years earlier.
DFR: The dogfighting rating.
REF: The specific reference number for that fighter within the owning race's general rules reference number.
* The BPV of these fighters is increased by 1 for each special drone launch rail (J4.233) added.
☆ This fighter carries two chaff packs; all others carry one, except §.
§ This fighter has no chaff packs.
Δ This is a large (double-size) fighter; see (J10.0) for special cases.
EW pods listed here are built-in versions; additional pods can be carried externally.

FIGHTER CLASSES (J4.48)

As a shorthand method of designating fighters in general scenarios, all fighters can be divided into "classes" based on their BPV (including the cost of adding heavy or special rails and the cost of any drone speed upgrades), as follows:

Class 1 fighters ..... 0–7 BPV points.
Class 2 fighters ..... 8–10 BPV points.
Class 3 fighters ..... 11–15 BPV points.
Class 4 fighters ..... 16 or more BPV points.

ANNEX #5: ABBREVIATIONS (C4)

ACA ..... Frax Heavy Stasis Cruiser.
ACW ..... Frax Stasis War Cruiser.
AFD ..... Anti-Fighter Defense System used by the Frax.
BBS ..... Frax Battle ship Space Control Ship.
BBV ..... Frax Battleship Carrier.
BM1 ..... Qari Destroyer.
BM2 ..... Qari Destroyer Leader.
BM3 ..... Qari War Destroyer.
BMD ..... Qari Trans-Mortar Carrier.
BME ..... Qari Escort War Destroyer.
BMS ..... Qari War Destroyer Scout.
BR6 ..... Qari Frigate.
BR7 ..... Qari Drone Frigate.
BR8 ..... Qari Frigate Leader.
BT ..... Bomb Thrower, system used by the Sharkhunters to throw Flashbombs at cloaked ships.
CAA ..... Frax Heavy Aegis Escort Cruiser.
CAD ..... Frax Drone Bombardment Cruiser.
CAE ..... Frax Heavy Escort Cruiser.
CAG ..... Frax Heavy Commando Cruiser.
Caltrop ..... Triaxian Fighter.
CAP ..... Frax Heavy PF Tender.
CAS ..... Frax Heavy Scout.
CF ..... Frax Fast Cruiser.
CMW ..... Frax Missile War Cruiser.
CT ..... Chaff Thrower, system on Sharkhunter ships that throws chaff to protect against seeking weapons.
CWD ..... Frax Drone War Cruiser.
CWG ..... Frax Commando War Cruiser.
CWL ..... Frax War Cruiser Leader.
CWM ..... Frax War Cruiser Minesweeper.
CWS ..... Frax War Cruiser Scout.
CWV ..... Frax War Destroyer Carrier.
DWL ..... Frax War Destroyer Leader.
DWP ..... Frax War Destroyer PF Tender.
FCR ..... Frax Fast Carrier Resupply Ship.
FFA ..... Frax Aegis Escort Frigate.
FFD ..... Frax Drone Frigate.
FFE ..... Frax Escort Frigate.

FFG ..... Frax Commando Frigate.
FFL ..... Frax Frigate Leader.
FFM ..... Frax Minesweeping Frigate.
Harpoon ..... Fighter used by the Sharkhunters.
HEDC ..... High Energy Direction Change
Helo-Shuttle ..... Shuttle used by Sharkhunters.
Helo–A ..... Sharkhunter admin shuttle capable of Helo movement.
Helo–GA ..... Sharkhunter ground assault shuttle capable of Helo movement.
Helo–HA ..... Sharkhunter heavy assault shuttle capable of using Helo movement.
Helo–HT ..... Sharkhunter heavy transport shuttle capable of Helo movement.
Helo–ML ..... Sharkhunter mine-laying shuttle capable of Helo movement.
Helo–MR ..... Sharkhunter multi-role shuttle capable of Helo movement.
Helo–MS ..... Sharkhunter mine-sweeping shuttle capable of Helo movement.
KKH ..... Qari Heavy Kinetic Cannon.
KKL ..... Qari Light Kinetic Cannon.
KKM ..... Qari Medium Kinetic Cannon.
LTT ..... Frax Light Tactical Transport.
M-Bomb ..... Type of T-bomb fired only by Qari Trans-mortars.
MCW ..... Frax War Cruiser Mauler.
MFF ..... Frax Missile Frigate.
NWO ..... Barbarian non weapon option boxes, cannot hold weapons or power but otherwise can hold any system listed in annex #8B.
Opt–R ..... Barbarian weapon option box that can hold phasers with RS arcs, direct-fire heavy weapons with RF+R arcs, or plasma–Fs with RS, RP, or RAP arcs, or drones.
Opt–F ..... Barbarian weapon option box that can hold weapons with direct-fire weapons with FA arcs, plasmas with FP arcs, or drones.
Opt–L ..... Barbarian weapon option box that can hold phasers with LS arcs, direct-fire heavy weapons with LF+L arcs, or plasma–Fs with LS, LP, or LAP arcs, or drones.
PL-A ..... Type of Plasma Torpedo used only by the Triaxians.
Plasma-SL ..... Long-Range plasma used by Triaxians
Plasma-SS ..... Short-Range plasma used by Triaxians
Plasma–F–W ..... Wire-Guided plasma-F torpedo.
Plasma–G–W ..... Wire-Guided plasma-G torpedo.
Plasma–L–W ..... Wire-Guided plasma-L torpedo.
Plasma–M–W ..... Wire-Guided plasma-M torpedo.
Plasma–S–W ..... Wire-Guided plasma-S torpedo.
PO ..... Barbarian power option box.
POL ..... Police Corvette.
Scud ..... Qari Heavy Missile.
SL, Plasma-SL .... Long-Range plasma used by Triaxians
SS, Plasma-SS ... Short-Range plasma used by Triaxians
T10 ..... Qari Dreadnought.
T55 ..... Qari Light Cruiser.
T64 ..... Qari Heavy Cruiser.
T70 ..... Qari War Cruiser Scout.
T72 ..... Qari War Cruiser.
T73 ..... Qari Light Scud Carrier.
T78 ..... Qari Escort War Cruiser.
T79 ..... Qari War Cruiser PFT.
T80 ..... Qari Command Cruiser.
T83 ..... Qari Heavy Scud Carrier.
T87 ..... Qari Fighter Carrier.
T90 ..... Qari Heavy battlecruiser.
TM ..... Trans-Mortar, weapon used by Qaris.
Tricorn ..... Triaxian PF.

ANNEX #6: COMMANDER'S OPTIONS

ITEM OR FUNCTION ..... VALUE

WEAPONS, FIRE CONTROL, MISC. ITEMS

Trans-Mortar round (per round, Qari only) 1

DRONES

Convert one drone to
Subspace Guidance (Qari only) 2.0
Upgrade drone to Catfish (cloak) status 5.0
Replace Hyperdrone with fast drone 0.0
(No discount for using slower drones on Flivvers.)
Additional Scud missiles cannot be purchased.

NOTE: See also (FD10.0) for cost to assemble special drones, as well as the allowed percentages and dates. Only ships armed with drone racks or drone-armed fighters can buy extra drones.

ANNEX #7: DATA ON SHIPS

ANNEX #7A COLOR OF COUNTERS

RACE	SHIP	BACKGROUND
General	Blue	White
Federation	Black	Blue
Klingon	White	Black
Romulan	Black	Red
Romulan Civil War	Black	Pink
Kzinti	Black	White
Kzinti Civil War	White	Orange
Gorn	Red	White
Tholian	White	Red
Orion	White	Blue
Orion, Lion' Heart	Red	Blue
Hydran	White	Green
Andromedan	Black	Green
Lyran	Green	Yellow
WYN	Red	Yellow
ISC	Black	Yellow
LDR	Green	White
Seltorians	Orange	White
Jindarians (1)	Black	Gray
Jindarians (2)	Red	Gray
Frax	Purple	Gray
Triaxian	White	Purple
Qari	Black	Tan
Sharkhunter	Black	Purple
Barbarian	Purple	White
Flivver	Turquoise	White
Deltan	White	Turquoise
Britanian	Black	Turquoise
Canadi'en	Red Stripes	White

Some of the above are in other products.

ANNEX #7B: SHIPS ABLE TO LAND ON PLANETS

Various ships in the game can land on planets by various systems. See (P2.43) for details and instructions.

GRAVITY: The following ships can use the Gravity Landing System: All Orion warships (not otherwise noted†), Tholian PC/CoM hull types; detached troop transport pods.

AERODYNAMIC: The following ships can use the Aerodynamic Landing System: Romulan WB, WE (all variants), H+, BH (all variants including WH), Falcon, Snipe (all variants); Orion AR, BC, BR, BRH, BRP, CA, CR, CV, CVL, CVS, DBP, DBR, DW, HR, LR, MR, PFT, SAL, SLV, VIK, PFs and INTs, variants of the above, and WYN versions of those ships; all fighters (except Jindarians).

ENGINE: The following ships can land under engine power: All ships capable of aerodynamic landings; Free Trader, Free Traitor, Federation Express; Federation Commando Cruiser; Andromedan Bull Snake, King Snake, Diamondback, Rattler; all PFs; all shuttles.

BONUS: All ships that can land under engine power and Federation saucers receive the 1-5 bonus for crash landing (P2.431).

†ORION ships which cannot land by the Gravity System include: OFT, Freighters (any type), Q–ships, OK6, BCH, DN.

ANNEX #7D: SYSTEMS DEFINED AS "WEAPONS"

ALWAYS: The following systems are always defined as weapons: phasers, photon torpedoes, plasma torpedoes, plasma racks, disruptors, fusion beams, drone racks, anti-drone systems, tractor-repulsor beams, hellbores, maulers, plasmatic pulsar devices, web casters, expanding sphere generators, stasis field generators, particle cannons, web breaker, shield cracker, warp augmented rail guns, light rail guns, prospecting cannon, missile racks, kinetic cannons, Scud launchers, Trans-Mortars, Bomb Throwers.

CONDITIONAL: The systems listed below are considered weapons for purposes of the rule noted in addition to those above:

(C6.547) Recovery from breakdown: DisDev, probe, web generator, snare.

(D4.21) Damage Allocation: "Any Weapon": Any listed anywhere in Annex #7D, special sensor replacing a weapon (G24.17), power absorber panels, any power system connected to a mauler (E8.13), any shuttle (D4.324).

(D7.55) Any item listed anywhere in Annex #7D *except* shuttles; see (D7.541).

(D9.43) Repair: DisDev. See (D6.522) for UIMs.

(D14.251) Legendary weapons officer: probe.

(D18.19) Inactive Ships: DisDev, probe, web generator, snare, chaff throwers.

(G6.511) Mutiny: DisDev, probe, shuttlecraft, fighter, PFs.

(G11.412) Computer failure: DisDev.

(S2.41–E) Crippled ships: DisDev, web, snare.

SAFETY: Restrictions under (C13.8) include the following (and only the following): phasers, photon torpedoes, plasma torpedoes, disruptors, fusion beams, tractor-repulsor beams, hellbores, plasmatic pulsar devices, web casters, expanding sphere generators, stasis field generators, probes, snares, particle cannons, web breaker, shield cracker, warp augmented rail guns, light rail guns, prospecting cannon. See (C13.82) for data on drones, anti-drones, mines, fighters, plasma racks, etc.

TACTICAL INTELLIGENCE: No additions since (D17.17).

ANNEX #7E: DAMAGE CONVERSION CHART

HIT FROM CHART..... SCORED ON

Aft Hull ..... C Hull, Repair, Barracks. Shuttles on Balconies (J1.531) must be hit first.
Any Weapon ..... See Annex #7D, item (D4.21).
APR ..... AWR on ships and starbases.
C Warp..... AWR on bases other than starbases (H4.32).
Cargo ..... Repair, Mine Rack, ship in Starbase docking module (R1.1D).
Drone † ..... Power absorbers, plasmatic pulsars, web casters, hellbores, ADD, ESGs, missile racks, Scud launchers, Trans–Mortars, Chaff Thrower.
Excess Damage ..... Cargo, Repair, Mine Rack.
Flag Bridge ..... Security Station, DisDev, web generator, snare generator, anti-transporter fields, cargo on Flivver ship.
Forward Hull ..... C Hull, Repair, Barracks.
Phaser † ..... SFG (G16.5).
Shuttle ..... Fighter, Mine Rack, ships in Andromedan hangar (G19.2).
Torpedo † ..... Tractor-repulsor beam, fusion beams, disruptors, plasma torpedo, photon, plasma rack, particle cannon, warp augmented rail gun, light rail gun, prospecting cannon, kinetic cannon.
Transporter ..... Bomb throwers.
† ..... Subject to Damage Priority Rule.

Special sensor hits may be scored on weapon hits which are scored on the type of weapon (torpedo, drone, phaser) which the special sensor replaced (G24.17). This varies from ship to ship; see the individual ship SSDs or their descriptions. Orion special sensors in option mounts are destroyed on "torpedo" hits.

Some units may have special exceptions noted in their ship descriptions.

(D4.322) DAMAGE PRIORITY RULE UPDATE

(D4.3221) PHASERS: For the purposes of this rule, the priority (for establishing the best type of phaser) is: special sensors that replaced phasers, stasis field generators (whether or not they replaced phasers), phaser-4, phaser-1, anti-fighter defense system, phaser-G, phaser-2, phaser-3.

(D4.3222) TORPEDOES: For the purposes of this rule, the priority (for establishing the best type of torpedo) is:
special sensor replacing torpedo,
plasma-R, plasma-M, plasma-A, plasma-S,
kinetic cannon-heavy, kinetic cannon-medium, kinetic cannon-light,
tractor-repulsor, photon,
plasma–L, plasma-G,
particle cannon, disruptor (in order from greatest range to shortest), axion torpedo,
fusion beam, plasma-F, plasma-D rack (including a magazine of a starbase or BATS rack), prospecting cannon.

(D4.3223) DRONES: For the purposes of this rule, the priority (for establishing the best type of weapon destroyed on drone hit) is:
special sensor replacing drone-weapon,
Hyperdrone magazine,
PPD, web caster,
hellbore, Trans-Mortar,
ESG, PA panel,
web breaker, shield cracker,
magazine of D-rack, magazine of Scud launcher,
H-rack, Gx-rack, G-rack, missile rack,
B-rack, C-rack, E-rack, F-rack, A-rack,
chaff thrower, starbase ADD,
anti-fighter defense system, ADD-12, ADD-6.

ANNEX #7F: NIMBLE UNITS

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7G: CARRIER INFORMATION

Race	CV	Ftrs	Admin	Bays	Store	DC
Frax	CVA	24	4	1	500	24
	SCS	12	6	1	500	12
	BB	8	4	2	200	8
	BCS	12	6	1	300	12
	BCV	6	6	1	300	6
	CV	24	4	1	500	24
	CWV	12	4	1	150	12
	DWV	8	2	1	100	8
Triax	CVS	12	6	3	150¥	12
Qari	T87	12	4	1	150	12
Shark	CVS	12	2	1	150¥	12

† This assumes that drone-using fighters are present.
If fighters that use plasma–D are present, these are plasma–Ds.
¥ These are type–D plasma torpedoes, not drones.
‡ This is a Tug+Pod combination.
For casual carriers, see (J4.62).

ANNEX #7H: CLOAKING DEVICE ENERGY COST

The energy cost to operate the cloaking device of any given ship is shown on the SSD of that ship. For other ships which might acquire a cloaking device (G13.2), see the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7J: DOCKING POINT CHART (C13.32)

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7K: CARGO SPACE POINTS

This data is used for purposes of (G25.1).

0.05 .....Small objects, computer memory cubes, dilithium crystals, mineral samples, tribbles, etc.
0.2 .....Chaff Pack, prospecting charge.
0.5 .....Anti-drone (per round), dogfight drone, kinetic cannon round, Trans-Mortar round.
1 .....Drone (one space), fighter pod, type–D plasma, flashbomb, Hyperdrone.
2 .....Drone (two space); small mine; probe.
4 .....Booster packs for standard-size shuttle; large mine; cloaking device, UIM.
8 .....Booster packs for double-size shuttle.
10 .....Defense satellite.
15 .....Booster packs for interceptor.
20 .....Booster packs for PF; ground combat vehicle, Scud missile.
25 .....Shuttle or fighter stored as cargo; MR-PF pallets (one set)
50 .....Shuttle or fighter available for flight; double-size shuttle stored as cargo.
100 .....Double-size shuttle available for flight; interceptor stored as cargo.
125 .....PF stored as cargo.
200 .....Interceptor available for flight.
250 .....PF available for flight.

NOTE: The term "available for flight" requires that a shuttle be in a shuttle bay and that a PF be on a mech link or internal docking facility.

CAPACITY: See (G25.135) for cargo on shuttles. Note that Heloshuttle versions of the below all have the same cargo capacity as the non-Helo version.

Admin shuttle, MLS, MSS, GAS (G25.131)	15
GBS	0
MRS	20
SWAC	5
Two-seat fighter (rear seat)	4
X-Shuttle	20
HTS, HAS	50
Normal cargo box	50
Orion cargo box on some units (G25.12)	25
PF cargo box	25
Ground Combat Vehicles (replace each BP)	5
Truck (D15.825)	10

ANNEX #7L: UNIT TOWING COSTS

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7M: MULTIPLE SHUTTLE BAYS

In the Captain's Edition, ships with multiple shuttle bays are marked as such on their SSD, making this annex redundant.

ANNEX #7N: DRONE RELOADS

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7P: SYSTEMS AFFECTED BY SCANNERS

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7R: SHIPS ABLE TO PINWHEEL

See the version of this Annex in Module R1 or Advanced Missions.

ANNEX #7S: SHIPS SUBJECT TO SHOCK

This data is used with rule (D23.0). Non-maulers often have special rules on firing certain weapons or combinations of weapons.

RULE	SHIP	WEAPON	RATING
R51.36	Frax MCW	Mauler	13
R59.2	Can MAP	Mauler	17
R59.3	Can OAK	Mauler	13

ANNEX #7T: EXAMPLES OF CHANGED FIRING ARCS AND LOST WEAPONS AFTER DROPPING WARP ENGINES FOR USE WITH (G12.6).

Qaris lose the "corner" phasers.

Any exceptions or additions to this list will be given in the ship descriptions of the individual units. Variants of the above ships have the same changes if they have the applicable systems.

This annex only gives examples from dropping warp engines. See (G12.14), (G12.23), (G12.94) for changes in firing arcs resulting from the separating of a section.

ANNEX #8: WEAPONS DATA

ANNEX #8B: ORION PIRATE, WYN DEFENSE FORCE, AND BARBARIAN OPTIONAL SYSTEMS COST CHART

WEAPONS OR SYSTEM	COST	NOTES
ADD	0	
ADD (12 round)	1	
APR (¶ on Barbarian or HDW)	0	
Aux Control	0	Δ
AWR (¶ on Barbarian or HDW)	0	
Battery (¶ on Barbarian or HDW)	0	
Cargo	0	
Cloak	See (G15.3)	
Disruptor–10 (PFs only)	0	
Disruptor–15	–1	†
Disruptor–22	0	
Disruptor–30	1	‡
Disruptor–40	2	‡
Drone Rack A	0	
Drone Rack B	1	
Drone Rack C	1	
Drone Rack E	1	
Drone Rack G	2	
ESG	1	*
ESG without capacitor	0	*
Fusion Beam	0	
Hellbore	2	‡Δ
Hull	0	Δ
Lab	0	
Mauler	NA	∞
Mine Rack (Plus cost of mines)	1	
Phaser-1	0	
Phaser-2	–0.25	†
Phaser-3	–0.50	†
Phaser-G	2	
Phaser-4	NA	∞
Photon Torpedo	0	
Plasma–D Rack	3	
Plasma–F Torp (No Swivel)	0	
Plasma–F Torp (Swivel)	1	
Plasma–G Torp (No Swivel)	1	*
Plasma–G Torp (Swivel)	2	*
Plasma–S Torp (No Swivel)	4	*‡
Plasma–S Torp (Swivel)	7	*‡
Plasma–R	NA	∞
Plasma–A	NA	∞
PPD	12	*‡
Probe Launcher	0	
Prospecting Cannon	–1	
Repair	0	Δ
Stasis Field Generator	7	*‡§Δ
Special Sensor	10	
Tractor Beam	0	
Transporter	0	Δ
SIMULATOR USE ONLY		
Anti-fighter Defense system	5	
Bomb Thrower	4	
Chaff Thrower	2	
Displacement Device	12	
Hyper Drone	8	
Impulse Engine (per box)	2	¶
KKL (per box)	-1	†
KKM (per box)	0	‡ (no PFs)
KKH (per box)	1	‡ (no PFs)
Missile Racks	4	
Particle Cannon	2	
Plasma–F–W (no swivel)	1.5	
Plasma–G–W (no swivel)	3	*
Plasma–S–W (no swivel)	10.5	*‡
Plasma–A	12	*
Plasma–R	12	Δ*‡
Plasma–R–W (no swivel)	20	Δ*‡
Plasma–L–W (no swivel)	4.5	*x
Plasma–M–W (no swivel)	13.5	*‡x
Shield Cracker	0	
Snare Generator	3	
Tractor-Repulsor Heavy	7	Δ*‡
Tractor-Repulsor-Light	3	
Trans–Mortar	NA	∞
Void space	–2	
Warp-Augmented Railgun Heavy	12	Δ*‡
Warp-Augmented Railgun Light	1	
Warp Engine (per box)	10	¶
Web Breaker/Shield Cracker	5	
Web Caster	10	Δ
Web Generator	0	

* Requires two adjacent centerline optional mounts or two adjacent WYN hull side mounts. A plasma-R requires four adjacent option mounts.

∞ Orions (and WYN) option mounts can never, *under any circumstances*, have this weapon. Orions and WYNs also cannot have Tholian (web, web caster, snare, web fist), Seltorian, or Andromedan (DisDev, PA, TR) technology. (Allowed in Simulator.)

† These weapons reduce BPV of ship.

‡ Cannot be used on size–4 or smaller ship.

Δ Cannot be used in Orion wing mounts.

§ Orions (and WYNs) can only have an SFG if captured in a campaign.

x X-Ships only.

¶ Can only be placed in power option boxes.

Orion PFs which select disruptors for their option mounts use range-10 disruptors with no cost reduction.

Only tractors on wings can have mech links.

Weapons with ammunition (e.g., drone racks) are fully loaded at no extra cost (drone speed upgrades must be paid for).

Wire-guided plasma torpedoes can never have swivels.

Some other items or systems are available for purchase under various rules but do not use option mounts. These include DERFACS, UIM, cloaks, aegis, OAKDISC, mech links.

ANNEX #9: COST OF REPAIR CHART

Data is used with (D9.7) and (G17.0).

SYSTEM	REPAIR COST
Bomb Thrower	5
Chaff Thrower	8
Hyperdrone Magazine	3
Kinetic Cannon, Heavy (per box)	8
Kinetic Cannon, Medium (per box)	6
Kinetic Cannon, Light (per box)	4
Missile Rack	NA
Plasma–A	18
Plasma–F–W	7
Plasma–G–W	12
Plasma–L–W	12
Plasma–M–W	20
Plasma–R–W	22
Plasma–S–W	17
Scud Launcher	3
Trans-Mortar	5

‡ Can only be repaired if internally docked (starbase or FRD).

† Ship cannot repair this system on itself.

ANNEX #10: TACTICAL INTELLIGENCE HULL TYPE CLASSIFICATIONS

FRAX SHIPS

BB	BB, BBH‡
BBH	BBV, BBS
DN	DN, DNH‡
DNH	CVA, SCS
BC	BC, BCV§, BCS§
CA	CC, CA, CV§, CAG, CAE, CAA, CAM§, CAS§, CAD§, CAP§, CAE§, ACA, CF§, Tug§
CW	CW, CWV§, PFT§, CWE, CWA, ACW, CWG, CMW, LTT§, CWM, MCW, CWD, CWS§, CWL
DW	DW, CWD, DWS§, DWM, DWE, DWA, DWC, MDW, DWP§, DWV§, DWL
FF	FF, FFD, FFE, FFA, MFF, FFM, FFG, FCR, FFL, FCR, POL§
Tug	Tug (presence of pods detected at level D§).
SUB	SFF§, SDD§, SCW§, SCL§, SCG§

TRIAXIAN SHIPS

DN	DN
CA	CA, CVS§
CW	CW, CWE, CWA
CL	T55
DD	DD, DDS§, PFT§, DE, DEA

QARI SHIPS

DN	T10
BC	T90
CA	T80, T83§, T87, T64§
CW	T72, T70, TT73§, T78, T78A, T79
DW	BM3, BMS, BME, BMEA
DD	BM2, BM1, BMD§
FF	BR8, BR6, BR7

SHARKHUNTER SHIPS

DN	DN
BCH	BCH
CA	CA, CVS§
CW	CW, CWS, CWE, CWA
DW	DW, DWE, DWA
FF	FF

BARBARIAN SHIPS

DN	DN
BCH	BCH
CA	CA
CL	CL
DD	DD
FF	FF

FLIVVER SHIPS

CA	CA
DW	DW

DELTAN SHIPS

CA	CA
CW	CW

BRITANIAN SHIPS

DN	DN
CA	CA

CANADI'EN SHIPS

CA	MAP
CW	OAK

TACTICAL INTELLIGENCE NOTES

1. Each classification includes all refits and any unlisted variants.
2. PFs within each race/type are the same hull type. (Note that some races have two types, e.g., Romulan StarHawk and Centurion. Also, WYN-foreign PFs are reported as a PF of the original race-type.) Interceptors of that race are distinguishable from PFs as §. (Romulan Decurion looks like Centurion§.)
3. Pods (each race) are a single hull type; "heavy" pods are distinguishable as §. This includes base augmentation modules.
4. Each type of base is a separate hull type, with the exception that SAMS and ComPlats are of a ‡group.

† Ships of this ‡ group can only be distinguished from each other by their actions (e.g., how many fighters they launch), or by boarding them.

‡ Not a class, but a grouping of similar hull types distinguishable from the larger category at Level D.

§ Major outward differences distinguishable at Level D.

ANNEX #11: EXPERIENCE POINTS

There are no additional entries for this annex as of the publication of *MODULE C4 FLEET TRAINING CENTERS.*

ANNEX #12: MONSTER DATA TABLE

SCEN	MONSTER	SIZE	TYPE	CONTROL
SM14	Ice Monster	1	Live	Automatic
SM15	Metamorph	1	Live	Player
SM16	Dragons	3	Live	Player

SYMBOLS ON FIGHTER SSDs

SYMBOL	MEANING
	Type–I drone
	Type–III drone
	Type–VI drone
	Chaff Pack
	Type–D Plasma Torpedo
	Disruptor, Fusion Beam, or Hellbore
	Photon or type–F Plasma Torpedo
	Electronic Warfare Pod

END OF ANNEXES, MODULE C4

(Z25.7) DESIGNER'S NOTES

The concept of a book of simulator races took several years to develop. The idea was to both enhance the history of the universe (by explaining how combat training is done) and to provide players with more challenges and excitement by giving them more races, technology, and weapons to experiment with.

WHY DO SIMULATOR RACES?

There is a simple answer to that: Players want new races, but don't want the established universe wrecked by attempts to integrate new powers. Adding a new race in the off-map areas (based on the map from *Federation & Empire*) raises the question of what fleet of an on-map race is watching that border and under what conditions that force might come onto the map and unbalance the strategic situation.

Simulator races have no "historical baggage" to deal with. They have no territory and, as such, do not disrupt the published geography. They have no history, and their prior role in that history does not have to be explained.

And there is another reason. Simulator races can be FUN because they are not hamstrung by "reality" (within a game context). Submarines, wire-guided torpedoes, starships that fly sideways, and "transporter mortars" cannot possibly work within the "real" (i.e., game) universe and, yet, are fun to play and provide new challenges. Such races as the "sailboats" and "tanks" provide an amusing diversion and allow the SFB universe to tap into a worldwide database of ideas. No "real" race could be based on British sailing ships of the 1790s, but a simulator race could be (and is).

Simulator races have another advantage. They can be "one shot wonders" good only for a single scenario, in effect wandering monsters. The Deltans, for example, were designed only to attack bases. No real race so limited in scope could function in space, but they don't have to function outside of that scenario. (Although, if someone later figures out how to make them work, we'll bring them to you.) The Britanians, as designed, will collapse quickly if matched against an opponent with enveloping weapons. As they are inside the simulator, this is not a problem.

WHY DID STAR FLEET DO SIMULATOR RACES?

The basic idea is one known as "dissimilar combat training". By training their captains against races they had never seen before, Star Fleet (and the other fleets) taught them not just how to deal with a specific threat, but to analyze and counter any possible threat. It could be presumed that the first captain to face an Andromedan Intruder had no idea what the new enemy could do, but knew the mental thought processes of finding out what it could do and what he could do about it.

Another reason for the creation of simulator races was to provide a means of training the entire fleet for combat without the political problems attendant with using a real enemy. The US Army, anxious to avoid causing tension with the Soviet Army, conducted years of wargames against such fictitious enemies as Aggressorland's Circle Trigon Forces (finally defeated about 1970), the Threat Forces (which passed from the stage about a decade later), and most recently the Opposing Forces or Opfor.

THE CANADI'ENS

The first true "simulator race" to enter SFB was in fact not the well-known Frax but the Canadi'ens, whose Maple Leaf Mauler dates back to the time of the Commander's Edition and its "Golden Anniversary" rulebook. (It was inspired by a group of Canadian players at Origins who remarked that they would like to see their own distinct culture reflected in a game that was primarily American in tone and feel.)

So far, they have only two ships, but new non-mauler ships are being readied for playtest even now.

THE FRAX

The Frax bring SFB full circle, since Steve Cole was inspired to create SFB while playing the old WWI naval game *Jutland*. The first Frax ships were created by Steve C during one of those times when "an idea" is born and refuses to allow anything else to be done until it is turned into a playtestable draft. The first ships, without the name Frax (which came much later) were passed around conventions and computer bulletin boards before Doomsday. When the idea for the P-modules came up, the Frax were found on the hard disk and provided much needed volume for the first such product. Their instant popularity was astounding and did much to bring this entire product to fruition.

The submarines are an interesting addition to the Frax. They were originally designed to fire ATG drones while under cloak, but playtesters expressed dissatisfaction with ships that had no direct firepower. The first solution was the SCL, which had to uncloak to fire its disruptors. Even this did not make the subs fun to play. An SFB player in England sent us the rules for a new torpedo (the Axion) which proved (in playtesting) to be just the thing they needed.

THE QARIS

Both Steves spent (or perhaps mis-spent) their youth in the ground forces and had always wanted to bring tanks and APCs and mortars and artillery and wire-guided anti-tank missiles into SFB, but there was obviously no place for such "unrealistic" systems in the "real" universe. The simulators, however, provided the perfect place to bring the T72 and T80 and BMP into space, and open the door for source material that can keep interesting new products coming for years.

The Qaris are, in some ways, the ultimate retrograde ships since they can rotate their turrets to the rear and fire their weapons at advancing enemy forces.

The subspace guided drones are not major weapons (as they are too few in number), but they can provide some new tactical twists. The Scuds are horribly inaccurate and unlikely to hit a moving target, but their ability to pound bases into scrap rhodinium is legendary.

THE TRIAXIANS

This is virtually the only "out of house" race in Module C4. It was created by Bruce Graw (designer of Star Fleet Warlord and editor of *Star Fleet Times*), who originally wanted to experiment with new types of movement and new types of plasma torpedoes. When the C4 project started, Bruce offered it to ADB without much hope of success, but it was in such excellent condition (98% ready for playtest) that ADB could not turn it down!

The Triaxians (like the Flivvers, below) are noteworthy for their unique movement rules, AND for a new weapon. The Plasma-A can be set for short or long range, effectively approximating the overload and proximity functions of other weapons.

THE SHARKHUNTERS

Perhaps no race in SFB is quite as imperious as the Romulans, and the Sharkhunter race was created by Steve Cole to be the worst nightmare of the aspiring Romulan captain. The title (and the background) came from one of dozens of unfinished science fiction novels that Steve Cole wrote (well, a few pages anyway) before TFG was created. In that novel, huge carnivorous fish were keeping human colonists from exploiting a newly discovered world.

The Sharkhunters of SFB draw from modern naval combat in many regards. Chaff provides protection from seeking

weapons. Wire-guided torpedoes can ignore wild weasels. The small "bomb throwers" expose cloaked ships and allow a lock-on. The term "sub-hunt", long used in SFB to describe combat with a cloaked ship, takes on a new meaning.

THE BARBARIANS

Players had long wanted us to provide them with a non-pirate race (no stealth or engine doubling) that could use optional weapon mounts. Even the WYN "fish ships" did not satisfy this demand. The simulator was the perfect place to provide such a race, as what real race could have access to all of those weapons? When the question was posed "Who shall build these?" there was only one answer: The ISC, who would eventually have to fight everyone and had to get ready for them.

These ships were designed simultaneously with the modular Heavy War Destroyers of Module R6 and use many of the same rules. There are differences, however, so don't assume that anything that applies to one applies in exactly the same way to the other.

THE FLIVVERS

This race began from a half-forgotten memory of a US Army drawing of a "future hovertank", a flat square machine (with a fighter cockpit and rotary missile racks) that floated across the battlefield on four huge vertical fans. Steve Cole saw it when very young (probably in the early 60s) and never quite got over how "cool" the idea was. He is, of course, still waiting for the US Army to unveil the real machine.

The Hyperdrone is perhaps one of the most innovative weapons to come into SFB in years, as it combines aspects of both seeking and direct-fire weapons.

THE DELTANS

This race originated from another of Steve Cole's flashes of inspiration. While working on something else (and complaining that he didn't have time to finish it), the idea of a VERY fast ship that was designed ONLY for base attacks but which couldn't turn very well sprang to mind. A few hours later the SSD was done (and uploaded, and photocopied for the staff, and sent to a few selected playtesters) and the original project was even more behind schedule. Steve's favorite airplane model, the B–58 Hustler, provided the name for the first ship.

With their heavy firepower and high speed, these ships can swoop in, hit their target and escape retaliation to reload if a second strike is needed.

THE BRITANIANS

If the Frax, based on naval technology of 1905-1945, were a good idea, then the Britanians (with a much longer history at sea) should be an even better idea! The ships use the "broadside" technology of their era and provide a new challenge for SFB. When these ships enter a battle, both sets of disruptors are armed and held (note that there is no cost for holding). The key to their success is to bring both batteries into arc on the same target. Of course, doing so means exposing the fragile forward or aft shield to the enemy.

THE FUTURE CAMPAIGNS

When creating a new race, one of the problems is the need for *so many* different ship classes in order for that race to be "campaign capable". It takes about a dozen ships to show what a race can do, and more than that in order to provide at least one alternative for any given mission. Most races, for example, have three or four different scouts, minesweepers, and commando ships. A new race may have to get by for some time with only one of each. That will allow it to at least play in every campaign in the game, but won't necessarily allow it to be totally efficient.

We made every effort to provide enough ships for the five larger races in C4 to fly and fight in just about any campaign, adding several ships (and using the new Carrier Group format to save some pages) at the last stage of the design process. Even so, there is a clear need for more ships and variants for those races, and a new product, Module C4R, is in preparation to provide more ships for the Frax, Qaris, Triaxians, Sharkhunters, and Barbarians.

The four small races (Flivvers, Deltans, Britanians, and Canadi'ens) will reach full campaign capability with the publication of Module C4F, which will provide the races will full operating capabilities, rather than just one-shot battles.

All nine races will appear in Module C4X, which will provide the X-ship classes for those players who want them. Eventually, Module C4Y will provide the Early Years versions (albeit after Module Y itself is published).

It is our intention that future "general expansions" of the game system (e.g., Module R7 Dreadnoughts At War) should include only the "real" races, with the corresponding expansions of the simulator races contained within special products.

The simulators may also provide a home for other races that are, historically, extinct. Current plans provide for two races (never seen before by players) to be exterminated during the Early Years. Would it not be logical for the surviving races to develop General War variants of their ships in the simulators for training, just to be ready should it turn out they are not really extinct?

Many of these products will include campaigns, and some may include new weapons or other systems. Many of these will come from players who will have seen these races for the first time only this summer.

We also plan to have Academy sessions and Term Paper sections for these races in future issues of Captain's Log. It is not impossible that fiction can be created for these races; the first such story, *FraxPrime,* appeared in Prime Adventures #1.

SUBMISSIONS ARE WELCOME

Those with ideas for new variants, special classes, basic hull types, and scenarios for all nine of these races (as well as any more simulator races) are welcome to submit them to ADB for publication under the Standard Terms provided in the Advanced Missions rulebook.

In the case of "obvious variants" (e.g, the commando version of the Britanian CA) and other common items, we cannot offer more than byline credit (for whichever design we accept of the many we will receive).

Compensation increases with the scope, completeness, and uniqueness of submissions.

There is a lot that can be done with the new races, and we are interested in any ideas for new directions.

WHEN DO THEY BECOME REAL?

They don't. Not ever. The nine simulator races in this product will remain in the simulators. None were based on actual starfaring races of the galaxy, so there are no Frax hiding just north of the Kzintis and no Barbarians on the far side of the ISC.

YOU ASKED, YOU RECEIVED

Players asked for new races, and now you have NINE of them in one package. Few will find all of them to their liking, but that's another advantage of the Simulators. If you don't like the Gorns, they're pretty hard to leave out of SFB, but if you just don't care for the Sharkhunters, they can be ignored without any disruption of the game. Write in and tell me what you think of these and what you want next.—*Stephen V Cole*

FRAX BATTLE LINE FLEET (R51.0)

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes
BATTLESHIP														
BB	65	26	350	3-6	2.00	2+2	2	E	8	184	36	43	10	D%, V
DREADNOUGHT AND VARIANTS														
DN	55	20	210	4-6	1.50	2	2	D	2	167	14	31	10	
CVA	61	16	229/219	4-6	1.50	2+6	2	D	26	174	14	31	10	D%, V
SCS	63	16	247/227	4-6	1.50	2+4	2	D	27	179	14	31	10	D%, P, V
HEAVY BATTLECRUISER AND VARIANTS														
BCH	49	18	180	5-6	1.00	2	3	C	28	178	10	23	10	
BCV	49	18	200	5-6	1.00	2+4	3	C	29	179	10	23	10	D%, V
BCS	49	18	200	5-6	1.00	2+2	3	C	30	180	10	23	10	D%, V, P
HEAVY CRUISER AND VARIANTS														
CC	45	14	153	5-6	1.00	2	3	C	9	143	10	21	9	
CA	45	14	140	5-6	1.00	2	3	C	3	122	10	19	8	
CV	45	14	140/100	5-6	1.00	2+4	3	C	18	167	10	17	8	D%, V
SR	40	16	160/140	5-6	1.00	2	3	C	31	160	10	18	8	◆
TUG	45	10	140/80	3-6	†	2	3	†	19	124	10	17	6	TG
WAR CRUISER AND VARIANTS														
CW	40	10	120	5-6	0.67	2	3	B	4	168	6	16	6	
CWV	44	10	140/100	5-6	0.67	2+4	3	B	5	170	6	13	6	D%, V
PFT	40	10	120/80	5-6	0.67	2	3	B	6	179	6	13	6	P, ◆
CWE	40	10	140	5-6	0.67	2	3	B	7	170	6	16	6	E, LA
CWA	40	10	152	5-6	0.67	2	3	B	7A	175	6	16	6	E, A
ACW	40	10	128	5-6	0.67	2	3	B	32	169	6	15	6	
CWG	44	32	120/105	5-6	0.67	2	3	B	33	170	6	13	6	T
LTT	36	8	120/79	5-6	†	2	3	B†	34	170	6	14	6	TG
CWM	38	10	135/120	5-6	0.67	2	3	B	35	170	6	16	6	MS
MCW	40	10	128	5-6	0.67	2	3	B	36	170	6	20	6	S, ✚
CWD	40	10	121	5-6	0.67	2	3	B	37	170	6	16	6	DB
CWS	40	10	110/130	5-6	0.67	2	3	B	38	169	6	15	6	◆
CWL	43	12	136	5-6	0.67	2	3	B	39	169	6	17	7	
WAR DESTROYER AND VARIANTS														
DW	28	8	90	5-6	0.50	1	4	B	10	135	4	12	4	
DWD	28	8	93	5-6	0.50	1	4	B	11	137	4	12	4	
DWS	28	8	100/80	5-6	0.50	1	4	B	12	138	4	11	4	◆
DWM	28	8	100/80	5-6	0.50	1	4	B	13	168	4	11	4	MS
DWE	28	8	97	5-6	0.50	1	4	B	14	167	4	12	4	E, LA
DWA	28	8	102	5-6	0.50	1	4	B	14A	175	4	12	4	E, A
DWG	32	28	109/79	5-6	0.50	1	4	B	17	155	4	10	4	T
MDW	28	8	93	5-6	0.50	1	4	B	15	170	4	12	4	Missile
DWV	25	8	90/75	5-6	0.50	1+2	4	B	40	167	4	10	4	V
DWL	32	10	100	5-6	0.50	1	4	B	16	143	4	12	5	
FRIGATE AND VARIANTS														
FF	20	6	75	5-6	0.33	1	4	A	20	121	4	9	3	
FFD	21	6	83	5-6	0.33	1	4	A	42	137	4	8	3	
FCR	12	6	73/63	5-6	0.33	1	4	A	44	168	4	8	3	
FFE	20	6	70	5-6	0.33	1	4	A	43	170	4	9	3	E, LA
FFA	20	6	80	5-6	0.33	1	4	A	43A	175	4	9	3	E, A
FFL	24	8	85	5-6	0.33	1	4	A	45	143	4	10	4	
POL	15	4	55	6	0.33	1	4	A	41	135	4	8	3	
SUBMARINES														
SFF	10	4	60	6	0.33	–	4	A	21	121	3	8	3	SUB
SDD	14	6	80	5-6	0.50	–	4	B	22	135	4	11	4	SUB
SCW	19	10	110	5-6	0.67	1	3	B	23	168	5	16	6	SUB
SCL	19	10	110	5-6	0.67	1	3	B	25	168	5	16	6	SUB
SCG	28	12	150	5-6	1.00	1	3	C	24	170	9	20	8	SUB, Missile

QARI MOBILE COMBAT FORCES (R52.0)

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes
DREADNOUGHT														
T10	59	24	234	3-6	1.50	2	2	D	2	169	14	27	10	
BATTLECRUISER														
T90	45	16	180	5-6	1.00	2	3	C	3	165	10	20	10	
HEAVY CRUISERS AND VARIANTS														
T80	42	14	145	5-6	1.00	2	3	B	4	165	10	17	9	
T64	40	12	135	5-6	1.00	1	3	B	5	165	10	14	8	
T83	40	12	135/115	5-6	1.00	1	3	B	6	165	10	18	9	
T87	40	12	115/90	5-6	1.00	2+4	3	B	19	170	10	16	9	D%, V
WAR CRUISER AND VARIANTS														
T72	36	10	100	5-6	0.67	1	3	B	7	165	6	14	6	
T70	36	10	140/80	5-6	0.67	1	3	B	8	165	6	13	6	◆
T73	36	10	120/100	5-6	0.67	1	3	B	9	165	6	15	6	
T79	36	10	120/95	5-6	0.67	1	3	B	22	179	6	13	6	◆, P
T78	36	10	110	5-6	0.67	1	3	B	20	170	6	15	6	E, LA
T78A	36	10	118	5-6	0.67	1	3	B	20A	175	6	15	6	E, A
LIGHT CRUISER														
T55	33	10	90	5-6	0.67	1	3	B	10	165	6	14	6	
WAR DESTROYER AND VARIANT														
BM3	26	8	82	5-6	0.50	1	4	A	11	165	4	11	4	
BMS	26	8	100/70	5-6	0.50	1	4	A	12	165	4	10	4	◆
BME	26	8	95	5-6	0.50	1	4	A	21	170	4	11	4	E, LA
BMA	26	8	100	5-6	0.50	1	4	A	21A	175	4	11	4	E, A
DESTROYER AND VARIANTS														
BM2	23	8	75	5-6	0.50	1	4	A	13	165	4	11	5	
BM1	23	8	68	5-6	0.50	1	4	A	14	165	4	10	4	
BMD	23	8	100/85	5-6	0.50	1	4	A	15	165	4	11	4	
FRIGATE AND VARIANTS														
BR8	20	8	63	6	0.33	–	4	A	16	165	4	9	4	
BR6	20	8	58	6	0.33	–	4	A	17	165	4	9	3	
BR7	20	8	58	6	0.33	–	4	A	18	165	4	9	3	

TRIAXIAN ALLIANCE THREAT FORCES (R53.0)

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes
DREADNOUGHT														
DN	59	30	280	4-6	1.50	3	2	E	2	169	14	33	10	
HEAVY CRUISER AND VARIANT														
CA	48	16	180	5-6	1.00	3	3	D	3	165	10	30	8	
CVS	48	16	170	5-6	1.00	3+4	3	D	8	170	10	19	8	V
WAR CRUISER AND VARIANT														
CW	40	12	140	5-6	0.67	3	3	D	7	165	6	17	6	
CWE	40	12	148	5-6	0.67	3	3	D	9	170	6	18	6	E, LA
CWA	40	12	160	5-6	0.67	3	3	D	9A	175	6	18	6	E, A
DESTROYER AND VARIANTS														
DD	20	6	110	5-6	0.50	1	4	C	4	165	4	13	4	
DDS	20	6	150/90	5-6	0.50	1	4	C	5	165	4	12	4	◆
PFT	20	6	130/80	5-6	0.50	1	4	C	6	181	4	10	4	P, ◆
DE	20	6	110	5-6	0.50	1	4	C	10	170	4	14	4	E, LA
DEA	20	6	122	5-6	0.50	1	4	C	10A	175	4	14	4	E, A

SHARKHUNTER PURSUIT SQUADRON (R54.0)

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes
DREADNOUGHT														
DN	49	18	240	4-6	1.50	2	2	D	10	165	14	31	10	
HEAVY BATTLECRUISER														
BCH	44	14	200	5-6	1.00	2	3	C	11	165	10	22	10	
HEAVY CRUISER AND VARIANT														
CA	40	12	179	5-6	1.00	2	3	C	2	160	10	19	8	
CVS	40	12	189	5-6	1.00	2+4	3	C	7	170	10	18	8	V
WAR CRUISER AND VARIANTS														
CW	32	12	135	5-6	0.67	1	3	B	3	160	6	15	6	
CWS	32	12	155/100	5-6	0.67	1	3	B	6	160	6	13	6	◆
CWE	32	12	140	5-6	0.67	1	3	B	8	170	6	17	6	E, LA
CWA	32	12	150	5-6	0.67	1	3	B	8A	175	6	17	6	E, A
WAR DESTROYER AND VARIANTS														
DW	22	10	102	5-6	0.50	1	4	B	4	160	4	11	4	
DWE	22	10	110	5-6	0.50	1	4	B	9	170	4	11	4	E, LA
DWA	22	10	118	5-6	0.50	1	4	B	9A	175	4	11	4	E, A
FRIGATE														
FF	16	6	80	6	0.33	–	4	A	5	160	4	8	3	

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes
BARBARIAN HORDE (R55.0)														
DREADNOUGHT														
DN	54	24	220	3-6	1.50	2	2	D	2	165	14	31	10	
HEAVY BATTLECRUISER														
BCH	49	14	180	5-6	1.00	2	3	C	3	165	10	22	10	
HEAVY CRUISER														
CA	45	10	150	5-6	1.00	2	3	C	4	165	10	19	9	
LIGHT CRUISER														
CL	36	10	115	5-6	0.67	1	3	B	5	165	6	17	6	
DESTROYER														
DD	28	8	90	5-6	0.50	1	4	B	6	165	4	13	4	
FRIGATE														
FF	20	6	75	5-6	0.33	–	4	A	7	165	4	9	3	
FLIVVER FAST FIGHTING FORCES (R56.0)														
HEAVY CRUISER														
CA	40	10	175	5-6	1.00	1	3	B	2	165	10	19	8	
WAR DESTROYER														
DW	26	8	115	5-6	0.50	1	4	B	3	165	4	10	4	
DELTAN STRIKE FORCE (R57.0)														
HEAVY CRUISER														
CA	30	10	160	6	1.00	2	3	4	2	165	10	21	8	
WAR CRUISER														
CW	26	8	130	6	0.67	1	3	4	3	165	6	18	6	
BRITANIAN SHIPS OF THE BATTLE LINE (R58.0)														
DREADNOUGHT														
DN	59	20	215	5-6	1.50	2	2	A	3	165	14	33	10	
HEAVY CRUISER														
CA	47	16	155	5-6	1.00	2	3	A	2	165	10	23	8	
CANADI'EN SELF-DEFENSE FORCES (R59.0)														
HEAVY CRUISER														
MAP	40	12	140	5-6	1.00	1	3	C	2	168	10	27	9	S, ✚
WAR CRUISER														
OAK	36	10	120	5-6	0.67	1	3	C	3	168	6	21	6	S, ✚

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes

ANNEX #3B (C4) MASTER FAST PATROL SHIP CHART

FRAX														
PF	3	1	20/30	6	0.20	–	5	AA	PF1	179	1	8	3	
PFD	3	1	20/30	6	0.20	–	5	AA	PF2	179	1	8	3	
QARI														
P76	3	1	20/35	6	0.20	–	5	AA	PF1	179	1	8	3	
TRIAXIAN														
PF	3	1	20/40	6	0.20	–	5	AA	PF1	181	1	8	3	

EXPLANATION OF TERMS

SYMBOLS used at various places in the chart:
Δ this is a sub–light ship (max speed of 1 in SFB).
° when detached.
† see tug chart, Annex #3A.
‡ Arbitrary date of Y175 is assigned to introduction of conjectural battleships. Exceptions: B10= Y173, B10V= Y175, B11= Y178, B10S= Y180.
■ does not move under own power.
◆ = Scout.
✚ = Mauler.
✱ = Has one large nuclear space mine included in BPV.

CREW: In the case of crew listed as X+Y, the Y figure indicates non-crew passengers.

BRDG PRTS: The number of boarding parties on board the ship.

BPV: Unless otherwise noted in the rulebook, no ship's BPV includes its fighters, PFs, satellite ships, or mines; all include their admin shuttles. Split BPVs are read economic/combat ratings. The BPV does not include MRS and SWAC shuttles mentioned in the ship descriptions. It DOES include GAS, MLS, MSS, and HTS shuttles specified as normal equipment. Temporary replacements (mostly on tugs carrying troop pods) require the appropriate cost.

MOVEMENT COST: This is expressed in decimals.
The movement cost designation of 0.13 is considered to be 1/8.
The movement cost designation of 0.20 is considered to be 1/5.
The movement cost designation of 0.17 is considered to be 1/6.
The movement cost designation of 0.33 is considered to be 1/3.
The movement cost designation of 0.67 is considered to be 2/3.

SHUTTLES: The Spare Shuttle column is read as: admin shuttles + fighters.

TUGS: If a specific "tug+pod" combination is listed (e.g. Fed BT), the combination factors must be used, NOT the sum of the individual factors. If no combined listing is shown, add the relevant factors.

RULE NUMBER: The rule reference number refers to the rule number in Section R that provides explanatory information about the ship.

YEAR IN SERVICE: Service dates are the beginning of series production. One or more prototypes may have existed 1–2 years previously. F&E has detailed and accurate production histories for some classes. This is the date of the first ship entering service for size-2 ships (i.e. no prototypes). PFs appeared in limited numbers the year before the date shown. Each race had one or two PF tenders operating one year earlier than PFs for use with interceptors.

F&E COMMAND RATING: This rating determines how many ships can be in a given battle; see (S8.2). The rating of pods is added to that of their tug, but no more than one pod can count for this purpose.

Ship Type	G9.0 Crew Units	D7.0 Brdg Prts	S2.1 BPV	C6.5 Break Down	C2.12 Move Cost	J1.42 Spare Shttl	R0.6 Size Class	C3.3 Turn Mode	Rule Nbr	Year in Srvc	C13.3 Dock Pts	D5.2 Explo Str	F&E Cmnd Ratng	Notes

NOTES:

A = Ship has the Full Aegis fire control system. Such ships are, in some regards, a "refit" of the Limited Aegis version, but do not have the R Note.

CJ = Conjectural ship, never built, possibly even never intended for production.

CP = Ship built on captured (or purchased) hull. Date is historical service date; could have been built earlier had it been provided earlier. Cannot be built without captured (or purchased) hull. All of these are unique ships. All Romulan KR-series ships are in this category but are not marked as such.

D% = Ship is authorized a higher than normal percentage of special drones by (FD10.6) and by (S3.223).

DB = Drone bombardment platform, has (drone factors) in F&E. These have a higher percentage of special drones provided by (S3.222).

E = Carrier escort. Never appears except as part of carrier group.

L = Ship was designed as a standard class but produced only in limited numbers.

LA = Limited Aegis.

ML = Maneuver limitations on acceleration and/or disengagement. See ship description.

MS = Ship is a minesweeper.

MW = Ship is a minelayer.

N = Nimble.

N# = Note applicable only to that race. See note at end of race section.

P = True PF Tender.

R = This ship is a refit of another class listed on the chart, not a new ship type.

S = Subject to shock.

T = Designated troopship able to have extra commandoes and heavy weapon squads.

TG = Tug or Light Tactical Transport (or otherwise capable of carrying a standard pod or pallet).

UNV: Unbuilt Variant. Ships existed to convert but no conversions were actually performed.

V = True carrier able to lend EW to fighters and with the supplies listed in (J4.7).

Y1 = Service date is the date that the earliest example of the class entered operations. No earlier prototypes. All size-2 ships are in this category, although not marked as such. Also, no ship can have full aegis before Y175.

Y2 = Could have been built earlier, but for various reasons the start of series production was delayed (i.e. prototypes are available several years early; consult ship description). Full Aegis is not available before Y175.

FRAX SHIPS (R51.0)

FRAX BATTLESHIP (R51.B1)

CLASS	A (FORWARD)	B (LEFT CENTER)	C (CENTER)	D (RIGHT CENTER)	E (REAR)
BB	6xDisr (FX), 9xPh-1 (FX), 1xProbe, 1xEmer, 3xBridge, 2xAFD (FA/L), 2xAFD (FA/R)	12xAPR, 10xTran, 2xFlag, 3xDrone, 2xTrac	33xC Hull	12xBtty, 10xLab, 2xAux, 3xDrone, 2xTrac	12xShttl, 6xPh-1 (RX), 3xDisr (RX), 2xAFD (RA/L), 2xAFD (RA/R), 6xImp

FRAX DREADNOUGHT (R51.B1)

CLASS	A (FORWARD)	B (LEFT CENTER)	C (CENTER)	D (RIGHT CENTER)	E (REAR)
DN	3xDisr (FX), 6xPh-1 (FX), 1xProbe, 1xEmer, 3xBridge, 2xPh-3 (FA/L), 2xPh-3 (FA/R)	8xLab, 6xTran, 2xFlag, 2xDrone, 2xTrac	30xC Hull	8xBtty, 6xAPR, 2xAux, 2xDrone, 2xTrac	4xShttl, 3xPh-1 (RX), 3xDisr (RX), 2xPh-3 (RA/L), 2xPh-3 (RA/R), 6xImp
CVA	3xDisr (FX), 6xPh-1 (FX), 1xProbe, 1xEmer, 3xBridge, 2xAFD (FA/L), 2xAFD (FA/R)	8xLab, 6xTran, 2xFlag, 2xDrone, 3xTrac	Same as DN	8xBtty, 6xAPR, 2xAux, 2xDrone, 3xTrac	28xShttl, 3xPh-1 (RX), 3xDisr (RX), 2xAFD (RA/L), 2xAFD (RA/R), 6xImp
SCS	Same as CVA	Same as CVA	Same as CVA	Same as CVA	18xShttl, 6xRepair, 3xPh-1 (RX), 3xDisr (RX), 2xAFD (RA/L), 2xAFD (RA/R), 6xImp

FRAX BATTLECRUISER (R51.B1)

CLASS	A (FORWARD)	B (LEFT CENTER)	C (CENTER)	D (RIGHT CENTER)	E (REAR)
BC	2xDisr (FX), 4xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge, 2xFlag	4xLab, 7xAPR, 2xDrone, 1xTrac	16xC Hull	7xBtty, 4xTran, 2xDrone, 1xTrac	2xAux, 6xShttl, 4xPh-1 (RX), 2xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 6xImp
BCV	2xDisr (FX), 4xPh-1 (FX), 1xAFD (FA/L), 1xAFD (FA/R), 1xProbe, 1xEmer, 2xBridge, 2xFlag	Same as BC	Same as BC	Same as BC	1xAux, 18xShttl, 4xPh-1 (RX), 2xDisr (RX), 1xAFD (RA/L), 1xAFD (RA/R), 6xImp
BCS	Same as BCV	4xLab, 7xAPR, 2xDrone, 3xTrac	Same as BCV	7xBtty, 4xTran, 2xDrone, 3xTrac	1xAux, 12xShttl, 4xRepair, 4xPh-1 (RX), 2xDisr (RX), 1xAFD (RA/L), 1xAFD (RA/R), 6xImp

FRAX HEAVY CRUISER (R51.B1)

CLASS	A (FORWARD)	B (LEFT CENTER)	C (CENTER)	D (RIGHT CENTER)	E (REAR)
CA	2xDisr (FX), 4xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	4xLab, 4xTran, 1xDrone, 1xTrac	14xC Hull	5xBtty, 3xAPR, 1xDrone, 1xTrac	2xAux, 4xShttl, 2xPh-1 (RX), 2xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CC	2xDisr (FX), 4xPh-1 (FX), 1xAFD (FA/L), 1xAFD (FA/R), 1xProbe, 1xEmer, 2xBridge	4xLab, 3xAPR, 1xDrone, 1xTrac, 1xFlag	Same as CA	5xBtty, 4xTran, 1xDrone, 1xTrac	2xAux, 4xShttl, 4xPh-1 (RX), 2xDisr (RX), 1xAFD (RA/L), 1xAFD (RA/R), 6xImp
SR	2xDisr (FX), 2xSensor, 1xPh-3 (FA/L), 1xPh-3 (FA/R), 2xPh-1 (FX), 1xProbe, 1xEmer, 2xBridge	4xLab, 5xTran, 1xDrone, 3xCargo	Same as CA	5xBtty, 4xLab, 1xDrone, 3xCargo	2xAux, 4xShttl, 2xPh-1 (RX), 2xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xTrac, 4xImp

FRAX WAR CRUISER (R51.B1)

CLASS	A (FORWARD)	B (LEFT CENTER)	C (CENTER)	D (RIGHT CENTER)	E (REAR)
CW	2xDisr (FX), 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	3xLab, 2xTran, 1xDrone, 1xTrac	10xC Hull	3xBtty, 2xAPR, 1xDrone, 1xTrac	2xAux, 4xShttl, 2xPh-1 (RX), 2xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CWV	2xPh-1 (FX), 2xBridge, 1xAFD (FA/L), 1xAFD (FA/R), 1xProbe, 1xEmer	Same as CW	16xShttl	Same as CW	8xC Hull, 1xPh-1 (RX), 2xTrac, 1xAFD (RA/L), 1xAFD (RA/R), 2xImp
PFT	2xSensor, 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	4xTrac, 4xShttl, 4xRepair, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CWL	2xDisr (FX), 4xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	3xLab, 2xAux, 1xFlag, 1xDrone, 1xTrac	Same as CW	3xBtty, 4xAPR, 1xDrone, 1xTrac	4xTran, 4xShttl, 2xPh-1 (RX), 2xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CWS	2xSensor, 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	2xAux, 4xShttl, 2xPh-1 (RX), 2xSensor, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CWD	2xDrone, 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	2xAux, 4xShttl, 2xPh-1 (RX), 2xDrone, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
MCW	2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 2xBridge, 1xProbe, 1xEmer	1xAux, 4xC Hull, 4xBtty	16xBtty	1xTran, 4xC Hull, 4xBtty	2xShttl, 2xLab, 2xTrac, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xPh-1 (RX), 4xImp
CWM	2xMine Rack, 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	2xAux, 4xShttl, 2xPh-1 (RX), 2xMine Rack, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
LTT	2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 2xBridge, 1xProbe, 1xEmer	3xLab, 2xTran, 1xDrone, 1xTrac	Same as CW	3xBtty, 2xAux, 1xTrac, 1xDrone	10xCargo, 4xShttl, 2xPh-1 (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 4xImp
CWG	2xPh-1 (FX), 2xBridge, 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer	3xLab, 2xAux, 2xBarracks, 2xCargo	Same as CW	3xBtty, 2xTrac, 2xBarracks, 2xCargo	6xTran, 6xShttl, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xPh-1 (RX), 4xImp
ACW	2xDisr (FX), 2xSFG, 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	Same as CWD
CWE CWA	4xPh-1 (FX), 1xAFD (FA/L), 1xAFD (FA/R), 1xProbe, 1xEmer, 2xBridge	Same as CW	Same as CW	Same as CW	2xAux, 4xShttl, 4xPh-1 (RX), 1xAFD (RA/L), 1xAFD (RA/R), 4xImp

FRAX SPECIAL (R51.B3)

CLASS	A (FORWARD)	B (CENTER REAR)	C (RIGHT SIDE)	D (REAR)
CV	2xPh-1 (FX), 1xAFD (FA/L), 1xAFD (FA/R), 1xProbe, 1xEmer, 2xBridge, 10xC Hull	2xLab, 1xAux, 4xBtty, 2xDrone, 4xTrac, 3xTran, 3xAPR	28xShttl	1xAFD (RA/L), 1xAFD (RA/R), 2xPh-1 (RX), 4xImp
TUG	2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 2xBridge, 1xProbe, 1xEmer	14xC Hull, 2xLab, 4xBtty, 1xAux	2xDrone, 2xTrac, 2xAPR, 4xTran, 12xCargo	6xShttl, 2xPh-1 (RX), 4xImp, 1xPh-3 (RA/L), 1xPh-3 (RA/R)

FRAX WAR DESTROYER (R51.B2)

CLASS	A (FORWARD)	B (CENTER)	C (REAR)
DW	2xDisr (FX), 1xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	8xC Hull, 2xDrone, 2xTrac, 2xTran, 1xAux	2xPh-1 (RX), 2xAPR, 2xShttl, 1xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
DWD	2xDrone, 1xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	Same as DW	2xPh-1 (RX), 2xAPR, 2xShttl, 1xDrone, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
DWS	2xSensor, 1xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	Same as DW	2xPh-1 (RX), 2xAPR, 2xShttl, 1xSensor, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
DWM	2xMine Rack, 1xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	Same as DW	2xPh-1 (RX), 2xAPR, 2xShttl, 1xMine Rack, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
MDW	2xMissile, 1xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	Same as DW	2xPh-1 (RX), 2xAPR, 2xShttl, 1xMissile, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
DWL	2xDisr (FX), 2xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 3xLab, 3xAPR	Same as DW	2xPh-1 (RX), 2xBtty, 2xShttl, 1xDisr (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp
DWV	1xPh-1 (FX), 1xAFD (FA/L), 1xAFD (FA/R), 1xBridge, 1xProbe, 1xEmer, 7x C Hull	2xLab, 2xBtty, 2xDrone, 2xTrac, 10x Shttl	2xTran, 1xAux, 2xTrac, 2xPh-1 (RX), 1xAFD (RA/L), 1xAFD (RA/R), 2xImp
DWG	2xCargo, 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xPh-1 (FX), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	2xBarracks, 6xC Hull, 2xDrone, 2xTrac, 2xTran, 1xAux	4xShttl, 2xPh-1 (RX), 1xPh-3 (RA/L), 1xPh-3 (RA/R), 1xTran, 2xImp
DWE DWA	3xPh-1 (FX), 1xPh-3 (FA/L), 1xPh-3 (FA/R), 1xProbe, 1xEmer, 1xBridge, 2xLab, 2xBtty	Same as DW	3xPh-1 (RX), 2xAPR, 2xShttl, 1xPh-3 (RA/L), 1xPh-3 (RA/R), 2xImp

FRAX FRIGATE (R51.B2)

CLASS	A (FORWARD)	B (CENTER)	C (REAR)
FF	1xDisr (FX), 2xPh-1 (FX), 1xPh-3 (FX), 1xProbe, 1xTran, 1xBridge, 1xEmer	2xLab, 1xTrac, 2xBtty, 2xDrone, 7xC Hull	1xPh-3 (RX), 1xTran, 1xAux, 1xPh-1 (RX), 2xAPR, 2xShttl, 1xDisr (RX), 2xImp
FFD	1xDrone, 2xPh-1 (FX), 1xPh-3 (FX), 1xProbe, 1xTran, 1xBridge, 1xEmer	Same as FF	1xPh-3 (RX), 1xTran, 1xAux, 1xPh-1 (RX), 2xAPR, 2xShttl, 1xDrone, 2xImp
FFL	1xDisr (FX), 2xPh-1 (FX), 1xPh-3 (FX), 1xProbe, 1xBridge, 1xEmer, 1xTran	2xLab, 1xTrac, 2xBtty, 2xDrone, 7xC Hull	1xPh-3 (RX), 2xTran, 1xAux, 2xPh-1 (RX), 3xAPR, 2xShttl, 1xDisr (RX), 2xImp
FCR	2xPh–1(FX), 1xPh–3 (FX), 1x Probe, 1xTrac, 1xBridge, 1xEmer	2xDrone, 2xLab, 2xBtty, 1xAux, 7xCHull	7xCargo, 1xPh–3 (RX), 1xPh–1 (RX), 2xTran, 2xShuttle, 2xImpulse
FFE FFA	Same as FFV	Same as FF	1xTran, 1xAux, 1xPh-1 (RX), 2xAPR, 2xShttl, 1xAFD (RA/L), 1xAFD (RA/R), 2xImp
POL	1xDisr (FX), 1xPh–1 (FX), 1xPh–3 (FX), 1xProbe, 1xTran, 1xBridge	2xBtty, 2xDrone, 2xLab, 2xCargo, 5xC Hull	1xTrac, 1xAux, 1xPh-3 (RX), 1xPh–1 (RX), 1xDisr (RX), 2xAPR, 2xShuttle, 1xImpulse

FRAX SUB (R51.B2)

CLASS	A (FORWARD)	B (CENTER)	C (REAR)
SCW	4xAxion (FA), 4xBtty, 2xPh-1 (FX), 1xProbe, 4xC Hull	4xShttl, 2xAFD (360°), 2xTrac, 2xBridge, 2xTran 2xMissile	2xDrone (RA), 4xImp, 4xBtty, 2xPh-1 (RX), 1xAux
SFF	2x Axion (FA), 2xBattery, 1xPh–1–FX, 1xProbe, 2xC Hull	2xBridge, 1xAFD, 1xTrans, 2xShuttle	1xPh–1–RX, 1xTrac, 2xBtty, 3xImp, 1xDrone
SDD	3x Axion torpedo, 3xBattery, 1xPh–1–FX, 1xProbe, 3xC Hull.	3xBridge, 1xAFD, 1xTrans, 3xShuttle	1xPh–1–RX, 1xTrac, 3xBtty, 3xImp, 1xDrone
SCG	4xAxion torpedo, 5xBattery, 2xPh-1-FX, 2xTran, 10xCHull	3xBridge, 1xProbe, 2xAFD, 2xTrac, 5xShuttle	2xPh–1–RX, 2xAux, 5xBattery, 4xMissile, 5xImpulse, 2xDrone
SCL	4xDisr (FX), 4xBtty, 2xPh-1 (FX), 1xProbe, 4xC Hull	4xShttl, 2xAFD (360°), 2xTrac, 2xBridge, 2xTran 2xMissile	2xDrone (RA), 4xImp, 4xBtty, 2xPh-1 (RX), 1xAux

QARI SHIPS (R52.0)

ALL QARI SHIPS (R52.B1)

CLASS	A FORWARD	B TURRET	C REAR
All	All systems forward of the turret; warp access	All systems in the turret	All systems aft of the turret; warp access
Scud T73 T83	All systems forward of the Scud bays; warp access	The Scud Launchers	All systems aft of the Scud bays; warp access
Carrier T87	All systems forward of the Fighter bays; warp access	The Fighter Bay (16 boxes)	All systems aft of the Fighter bays; warp access

The above chart is correct and complete and covers ALL of the Qari ships, but in the event that there is any confusion on the part of players, detailed breakdowns on a ship-by-ship basis are provided below.

QARI DREADNOUGHT (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
T10	2xPh-1 (FA/L), 2xPh-1 (FA/R), 6xBtty, 4xLab, 2xTran, 1xAux, 10xF Hull	2xKKM, 4xKKH, 4xPh-1, 1xProbe, 1xTran, 3xBridge, 4xC Hull	8xAft Hull, 4xAPR, 2xFlag, 2xPh-3 (360°), 2xEmer, 2xDrone, 2xTrac, 6xShttl, 4xImp, 1xPh-1 (RA/R), 1xPh-1 (RA/L)

QARI BATTLECRUISER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
T90	1xPh-1 (FA/L), 1xPh-1 (FA/R), 4xBtty, 4xLab, 2xTran, 1xAux, 6xF Hull	2xKKL, 4xKKH, 4xPh-1, 1xProbe, 1xTran, 3xBridge, 4xC Hull	6xAft Hull, 4xAPR, 2xFlag, 2xPh-3 (360°), 1xEmer, 1xDrone, 2xTrac, 4xShttl, 4xImp, 1xPh-1 (RA/R), 1xPh-1 (RA/L)

QARI HEAVY CRUISER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
T80	1xPh-1 (FA/L), 1xPh-1 (FA/R), 4xBtty, 3xLab, 1xTran, 1xAux, 6xF Hull	4xKKH, 2xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	6xAft Hull, 3xAPR, 1xFlag, 2xPh-3 (360°), 1xEmer, 1xDrone, 2xTrac, 4xShttl, 3xImp, 1xPh-1 (RA/R), 1xPh-1 (RA/L)
T64	1xPh-1 (FA/L), 1xPh-1 (FA/R), 4xBtty, 3xLab, 1xTran, 1xAux, 6xF Hull	3xKKH, 2xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	4xAft Hull, 3xAPR, 1xEmer, 1xDrone, 2xTrac, 2xShttl, 2xImp, 1xPh-3 (RA/R), 1xPh-3 (RA/L)
T83	Same as T80	2xBridge, 8xScud, 1xProbe, 1xTran, 10xC Hull	6xAft Hull, 3xAPR, 1xFlag, 2xPh-3 (360°), 1xEmer, 1xPh-1 (360°), 2xTrac, 4xShttl, 3xImp, 1xPh-1 (RA/R), 1xPh-1 (RA/L)
T87	Same as T80	2xFlag, 4xTrac, 1xProbe, 1xTran, 10xC Hull, 16xShuttle	6xAft Hull, 3xAPR, 1xPh-1 (360°), 2xPh-3 (360°), 1xEmer, 1xDrone, 2xTrac, 4xTran, 3xImp, 1xPh-1 (RA/R), 1xPh-1 (RA/L)

QARI WAR CRUISER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
T72	1xPh-1 (FA/L), 1xPh-1 (FA/R), 4xBtty, 3xLab, 1xTran, 1xAux, 6xF Hull	3xKKH, 2xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	4xAft Hull, 3xAPR, 1xEmer, 1xDrone, 2xTrac, 2xShttl, 2xImp, 1xPh-3 (RA/R), 1xPh-3 (RA/L)
T70	Same as T72	4xSensor, 2xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	Same as T72
T73	Same as T72	2xBridge, 6xScud, 1xProbe, 1xTran, 8xC Hull	Same as T72
T79	Same as T72	2xBridge, 2xSensor, 12xRepair, 6xTrac, 2xTran, 1xProbe, 8xC Hull	Same as T72
T78 T78A	Same as T72	6xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	Same as T72

QARI LIGHT CRUISER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
T55	1xPh-1 (FA/L), 1xPh-1 (FA/R), 4xBtty, 3xLab, 1xTran, 1xAux, 6xF Hull	3xKKM, 2xPh-1, 1xProbe, 1xTran, 2xBridge, 3xC Hull	4xAft Hull, 2xAPR, 1xEmer, 2xTrac, 2xShttl, 2xImp, 1xPh-3 (RA/R), 1xPh-3 (RA/L)

QARI WAR DESTROYER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
BM3	1xPh-1 (FA/L), 1xPh-1 (FA/R), 2xBtty, 2xLab, 1xTran, 1xAux, 4xF Hull	3xKKM, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	4xAft Hull, 2xAPR, 2xTrac, 2xShttl, 2xImp, 1xDrone, 1xProbe, 1xPh-3 (RA/R), 1xPh-3 (RA/L)
BMS	Same as BM3	3xSensor, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	Same as BM3
BME BMA	Same as BM3	5xPh-1, 1xBridge, 1xEmer, 2xC Hull	Same as BM3

QARI DESTROYER (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
BM2	1xPh-1 (FA/L), 1xPh-1 (FA/R), 2xBtty, 2xLab, 1xTran, 1xAux, 4xF Hull	4xKKL, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	4xAft Hull, 2xAPR, 2xTrac, 2xShttl, 2xImp, 1xDrone, 1xProbe, 1xPh-3 (RA/R), 1xPh-3 (RA/L)
BM1	Same as BM2	3xKKL, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	Same as BM2
BMD	Same as BM2	4xTrans-Mortar, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	Same as BM2

QARI FRIGATE (R52.B1)

CLASS	A (FORWARD)	B (TURRET)	C (REAR)
BR8	1xPh-1 (FA/L), 1xPh-1 (FA/R), 2xBtty, 1xTran, 1xAux, 2xF Hull	4xKKL, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	2xAft Hull, 2xAPR, 1xTrac, 2xShttl, 2xImp, 1xProbe, 1xPh-3 (RA/R), 1xPh-3 (RA/L)
BR6	Same as BR8	3xKKL, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	Same as BR8
BR7	Same as BR8	3xDrone, 1xPh-1, 1xEmer, 1xBridge, 2xC Hull	Same as BR8

TRIAXIAN SHIPS (R53.0)

TRIAXIAN DREADNOUGHT (R53.B1)

CLASS	A (FORWARD)	B (LEFT ARM)	C (RIGHT ARM)	D (REAR)
DN	2xPl-A (FP), 3xPh-1 (FH), 3xPh-3 (FH), 3xShttl, 3xBridge, 1xProbe, 8xLab	1xPl-D (LP), 1xPh-1 (LP), 3xImp, 6xTran, 9xF hull, 3xShttl, 3xAux, 3xPh-1 (LPR), 3xPh-3 (LPR), 2xPl-A (LPR)	1xPl-D (RP), 1xPh-1 (RP), 3xImp, 6xAPR, 9xF hull, 3xShttl, 3xEmer, 3xPh-1 (RPR), 3xPh-3 (RPR), 2xPl-A (RPR)	1xPh-1 (RH), 1xPl-D (RH), 3xImp, 6xTrac, 8xAft Hull, 8xBtty

TRIAXIAN HEAVY CRUISER (R53.B1)

CLASS	A (FORWARD)	B (LEFT ARM)	C (RIGHT ARM)	D (REAR)
CA	1xPl-A (FP), 2xPh-1 (FH), 2xPh-3 (FH), 2xShttl, 2xBridge, 1xProbe, 4xLab	1xPl-D (LP), 2xImp, 3xTran, 5xF hull, 2xShttl, 2xAux, 2xPh-1 (LPR), 2xPh-3 (LPR), 1xPl-A (LPR)	1xPl-D (RP), 2xImp, 3xAPR, 5xF hull, 2xShttl, 2xEmer, 2xPh-1 (RPR), 2xPh-3 (RPR), 1xPl-A (RPR)	1xPl-D (RH), 2xImp, 3xTrac, 8xAft Hull, 4xBtty
CVS	1xPl-A (FP), 2xPh-1 (FH), 2xPh-3 (FH), 6xShttl, 2xBridge, 1xProbe	1xPl-D (LP), 2xImp, 3xTran, 4xF hull, 6xShttl, 2xAux, 2xPh-1 (LPR), 2xPh-3 (LPR), 1xPl-A (LPR)	1xPl-D (RP), 2xImp, 3xBtty, 4xF hull, 6xShttl, 2xEmer, 2xPh-1 (RPR), 2xPh-3 (RPR), 1xPl-A (RPR)	1xPl-D (RH), 2xImp, 3xLab, 8xAft Hull, 4xTrac

TRIAXIAN WAR CRUISER (R53.B1)

CLASS	A (FORWARD)	B (LEFT ARM)	C (RIGHT ARM)	D (REAR)
CW	1xPl-A (FP), 2xPh-1 (FH), 1xPh-3 (FH), 2xShttl, 2xBridge, 1xProbe, 3xLab	1xPl-D (LP), 2xImp, 3xTran, 3xF Hull, 2xShttl, 2xAux, 2xPh-1 (LPR), 1xPh-3 (LPR), 1xPl-A (LPR)	1xPl-D (RP), 2xImp, 3xAPR, 3xF Hull, 2xShttl, 2xEmer, 2xPh-1 (RPR), 1xPh-3 (RPR), 1xPl-A (RPR)	1xPl-D (RH), 2xImp, 2xTractor, 6xAft Hull, 3xBtty.
CWE CWA	1xPl-D (FH), 2xPh-1 (FH), 2xPh-3 (FH), 2xShttl, 2xBridge, 1xProbe, 3xLab	1xPl-D (LP), 2xImp, 3xTran, 3xF Hull, 2xShttl, 2xAux, 2xPh-1 (LPR), 2xPh-3 (LPR), 1xPl-D (LPR)	1xPl-D (RP), 2xImp, 3xAPR, 3xF Hull, 2xShttl, 2xEmer, 2xPh-1 (RPR), 2xPh-3 (RPR), 1xPl-D (RPR)	Same as CW

TRIAXIAN DESTROYER (R53.B1)

CLASS	A (FORWARD)	B (LEFT ARM)	C (RIGHT ARM)	D (REAR)
DD	1xPl-F (FP), 1xPh-1 (FH), 1xPh-3 (FH), 1xShttl, 1xBridge, 1xProbe, 1xPl-D (360°), 2xLab	1xPh-1 (LP), 1xImp, 2xTran, 4xF Hull, 1xShttl, 1xAux, 1xPh-1 (LPR), 1xPh-3 (LPR), 1xPl-F (LPR)	1xPh-1 (RP), 1xImp, 2xAPR, 4xF Hull, 1xShttl, 1xEmer, 1xPh-1 (RPR), 1xPh-3 (RPR), 1xPl-F (RPR)	1xPh-1 (RH), 1xImp, 2xTrac, 4xAft Hull, 2xBtty
DDS	1xSensor, 1xPh-1 (FH), 1xPh-3 (FH), 1xShttl, 1xBridge, 1xProbe, 1xPl-D (360°), 2xLab	1xSensor, 1xImp, 2xTran, 4xF Hull, 1xShttl, 1xAux, 1xPh-1 (LPR), 1xPh-3 (LPR), 1xPl-F (LPR)	1xSensor, 1xImp, 2xAPR, 4xF Hull, 1xShttl, 1xEmer, 1xPh-1 (RPR), 1xPh-3 (RPR), 1xPl-F (RPR)	Same as DD
PFT	1xPl-F (FP), 1xPh-1 (FH), 1xPh-3 (FH), 1xShttl, 1xBridge, 1xProbe, 2xLab	2xTrac, 1xImp, 2xTran, 4xF Hull, 1xShttl, 1xAux, 1xPh-1 (LPR), 1xPh-3 (LPR), 1xSensor	2xTrac, 1xImp, 2xAPR, 4xF Hull, 1xShttl, 1xEmer, 1xPh-1 (RPR), 1xPh-3 (RPR), 1xSensor	2xTrac, 1xImp, 4xAft Hull, 2xBtty, 6xRepair
DE DEA	1xPl-D (FH), 1xPh-1 (FH), 1xPh-3 (FH), 1xShttl, 1xBridge, 1xProbe, 1xPl-D (360°), 2xLab	2xPh-3 (LP), 1xImp, 2xTran, 4xF Hull, 1xShttl, 1xAux, 1xPh-1 (LPR), 1xPh-3 (LPR), 1xPl-D (LPR)	2xPh-3 (RP), 1xImp, 2xAPR, 4xF Hull, 1xShttl, 1xEmer, 1xPh-1 (RPR), 1xPh-3 (RPR), 1xPl-D (RPR)	2xPh-3 (RH), 1xImp, 2xTrac, 4xAft Hull, 2xBtty

SHARKHUNTER SHIPS (R54.0)

SHARKHUNTER DREADNOUGHTS (R54.B1)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (CENTER)	D (RIGHT SIDE)	E (REAR)
DN	1xProbe, 6xBT (FX), 6xPh-1 (FX), 2xBridge, 10xLab	1xPl-R (LF/L), 1xPl-S (LF/L), 2xTrac, 3xPh-1 (LS), 3xCT, 2xTran, 2xEmer, 4xAPR	10xF Hull, 12xBtty, 2xFlag	1xPl-R (RF/R), 1xPl-S (RF/R), 2xTrac, 3xPh-1 (RS), 3xCT, 2xTran, 2xAux, 4xAPR	6xImp, 4xPh-3 (RX), 16xAft Hull, 8xShttl

SHARKHUNTER HEAVY BATTLECRUISER (R54.B1)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (CENTER)	D (RIGHT SIDE)	E (REAR)
BCH	1xProbe, 4xBT (FX), 4xPh-1 (FX), 2xBridge, 6xLab	2xPl-S (LF/L), 2xTrac, 1xTran, 1xEmer, 3xPh-1 (LS), 3xAPR, 3xCT	6xF Hull, 8xBtty, 2xFlag	2xPl-S (RF/R), 2xTrac, 1xTran, 1xAux, 3xPh-1 (RS), 3xAPR, 3xCT	6xImp, 2xPh-3 (RX), 12xAft Hull, 6xShttl

SHARKHUNTER HEAVY CRUISER (R54.B1)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (CENTER)	D (RIGHT SIDE)	E (REAR)
CA	1xProbe, 4xBT (FX), 4xPh-1 (FX), 2xBridge, 6xLab	1xPl-S (LF/L), 1xPl-G (LF/L), 1xEmer, 1xAPR, 1xTrac, 2xPh-1 (LS), 2xCT	6xF Hull, 4xBtty, 2xTran	1xPl-S (RF/R), 1xPl-G (RF/R), 1xAux, 1xAPR, 1xTrac, 2xPh-1 (RS), 2xCT	6xImp, 2xPh-3 (RX), 12xAft Hull, 4xShttl
CVS	Same as CA	1xPl-S (LF/L), 1xPl-G (LF/L), 1xEmer, 2xTrac, 2xPh-1 (LS), 2xCT	Same as CA	1xPl-S (RF/R), 1xPl-G (RF/R), 1xAux, 2xTrac, 2xPh-1 (RS), 2xCT	6xImp, 2xPh-3 (RX), 12xAft Hull, 14xShttl

SHARKHUNTER WAR CRUISER (R54.B1)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (CENTER)	D (RIGHT SIDE)	E (REAR)
CW	1xProbe, 4xBT (FX), 4xPh-1 (FX), 2xBridge, 6xLab	2xPl-G (LF/L), 1xTrac, 1xEmer, 1xAPR, 1xPh-1 (LS), 2xCT	6xF Hull, 4xBtty, 2xTran	2xPl-G (RF/R), 1xTrac, 1xAux, 1xAPR, 1xPh-1 (RS), 2xCT	4xImp, 2xPh-3 (RX), 6xAft Hull, 2xShttl
CWS	Same as CW	2xSensor 1xTrac, 1xEmer, 1xAPR, 1xPh-1 (LS), 2xCT	Same as CW	2xSensor, 1xTrac, 1xAux, 1xAPR, 1xPh-1 (RS), 2xCT	Same as CW
CWE CWA	1xProbe, 4xPh-3 (FX), 4xPh-1 (FX), 2xBridge, 6xLab	2xPl-D (LS), 1xTrac, 1xEmer, 1xAPR, 1xPh-1 (LS), 2xCT	Same as CW	2xPl-D (RS), 1xTrac, 1xAux, 1xAPR, 1xPh-1 (RS), 2xCT	Same as CW

SHARKHUNTER WAR DESTROYER (R54.B2)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (RIGHT SIDE)	D (REAR)
DW	1xProbe, 2xBT (FX), 4xLab, 2xPh-1 (FX), 1xBridge, 3xBtty	1xCT, 1xPh-1 (LS), 1xTrac, 2xTran, 2xF Hull, 1xEmer, 1xPl-G (LF/L)	1xCT, 1xPh-1 (RS), 1xTrac, 2xAPR, 2xF Hull, 1xAux, 1xPl-G (RF/R)	3xImp, 3xPh-3 (RX), 2xShttl, 4xAft Hull
DWE DWA	1xProbe, 2xPh-3 (FX), 4xLab, 2xPh-1 (FX), 1xBridge, 3xBtty	1xCT, 1xPh-1 (LS), 1xTrac, 2xTran, 2xF Hull, 1xEmer, 1xPl-D (LS)	1xCT, 1xPh-1 (RS), 1xTrac, 2xAPR, 2xF Hull, 1xAux, 1xPl-D (RS)	Same as DW

SHARKHUNTER FRIGATE (R54.B2)

CLASS	A (FORWARD)	B (LEFT SIDE)	C (RIGHT SIDE)	D (REAR)
FF	1xProbe, 2xBT (FX), 1xPh-1 (FX), 4xLab, 1xBridge, 2xBtty	1xPl-F (LF/L), 2xF Hull, 1xTrac, 1xEmer, 1xPh-1 (LS), 1xCT	1xPl-F (RF/R), 2xF Hull, 1xTran, 1xAux, 1xPh-1 (RS), 1xCT	3xImp, 2xPh-3 (RX), 4xAft Hull, 1xShttl, 1xAPR

BARBARIAN SHIPS (R55.0)

BARBARIAN DREADNOUGHT (R55.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT REAR)	D (RIGHT REAR)	E (LEFT FRONT)	F (RIGHT FRONT)
DN	6xOpt (F), 4xPh-1 (FH), 1xProbe, 2xFlag, 2xBridge, 6xTran	8xImp, 4xPower Options, 4xShttl, 2xOpt (360°), 4xAPR	3xPh-3 (LS), 2xEmer, 10xAft Hull, 2xNon-Wpn Opt	3xPh-3 (RS), 2xAux, 10xAft Hull, 2xNon-Wpn Opt	3xOpt (L), 3xBtty, 2xTrac, 3xLab, 4xF Hull	3xOpt (R), 3xBtty, 2xTrac, 3xLab, 4xF Hull

BARBARIAN HEAVY BATTLECRUISER (R55.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT REAR)	D (RIGHT REAR)	E (LEFT FRONT)	F (RIGHT FRONT)
BCH	4xOpt (F), 4xPh-1 (FH), 2xFlag, 2xBridge, 4xTran	8xImp, 4xPower Options, 4xShttl, 2xOpt (360°), 2xAPR	2xPh-3 (LS), 1xEmer, 4xAft Hull, 2xNon-Wpn Opt	2xPh-3 (RS), 1xAux, 4xAft Hull, 2xNon-Wpn Opt	2xOpt (L), 3xBtty, 1xTrac, 2xLab, 3xF Hull, 1xTran	2xOpt (R), 3xBtty, 1xTrac, 2xLab, 3xF Hull, 1xProbe

BARBARIAN HEAVY CRUISER (R55.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT REAR)	D (RIGHT REAR)	E (LEFT FRONT)	F (RIGHT FRONT)
CA	4xOpt (F), 2xPh-1 (FH), 2xFlag, 2xBridge, 2xTran	4xImp, 2xPower Options, 4xShttl, 2xOpt (360°), 2xAPR	2xPh-3 (LS), 1xEmer, 4xAft Hull, 2xNon-Wpn Opt	2xPh-3 (RS), 1xAux, 4xAft Hull, 2xNon-Wpn Opt	2xOpt (L), 2xBtty, 1xTrac, 2xLab, 3xF Hull, 1xTran	2xOpt (R), 2xBtty, 1xTrac, 2xLab, 3xF Hull, 1xProbe

BARBARIAN LIGHT CRUISER (R55.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT REAR)	D (RIGHT REAR)	E (LEFT FRONT)	F (RIGHT FRONT)
CL	4xOpt (F), 2xPh-1 (FH), 2xBridge, 1xProbe, 2xTran	4xImp, 2xPower Options, 2xShttl, 2xOpt (360°), 2xAPR	2xPh-3 (LS), 1xEmer, 3xAft Hull, 2xNon-Wpn Opt	2xPh-3 (RS), 1xAux, 3xAft Hull, 2xNon-Wpn Opt	2xOpt (L), 2xBtty, 1xTrac, 2xLab, 2xF Hull	2xOpt (R), 2xBtty, 1xTrac, 2xLab, 2xF Hull

BARBARIAN DESTROYER (R55.B2)

CLASS	A (FORWARD)	B (AFT)	C (LEFT SIDE)	D (RIGHT SIDE)
DD	2xOpt (F), 2xPh-1 (FH), 2xBridge, 4xF Hull, 1xTran, 1xProbe	4xImp, 2xPower Options, 2xShttl, 2xOpt (360°), 2xAPR	1xPh-3 (LS), 2xNon-Wpn Opt, 2xAft Hull, 1xEmer, 2xBtty, 1xOpt (L), 2xTrac	1xPh-3 (RS), 2xNon-Wpn Opt, 2xAft Hull, 1xAux, 2xBtty, 1xOpt (R), 2xLab

BARBARIAN FRIGATE (R55.B2)

CLASS	A (FORWARD)	B (AFT)	C (LEFT SIDE)	D (RIGHT SIDE)
FF	2xOpt (F), 1xPh-1 (FH), 1xBridge, 1xShttl, 1xTran, 1xAux, 1xProbe	2xImp, 2xPower Options, 2xNon-Wpn Opt, 1xOpt (360°)	1xPh-3 (LS), 2xAft Hull, 2xBtty, 1xOpt (L), 2xF Hull	1xPh-3 (RS), 2xAft Hull, 2xLab, 1xOpt (R), 2xF Hull

FLIVVER SHIPS (R56.0)

FLIVVER HEAVY CRUISER (R56.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT SIDE)	D (RIGHT SIDE)
CA	1xProbe, 2xBridge, 7xF Hull, 2xTran, 3xCargo	3xPh-3 (RX), 3xShttl, 2xImp, 2xTrac, 7xAft Hull	3xPh-1 (FA/L), 6xDrone (LF), 1xAux, 4xLab	3xPh-1 (FA/R), 6xDrone (RF), 1xEmer, 4xBtty

FLIVVER WAR DESTROYER (R56.B1)

CLASS	A (FORWARD)	B (AFT)	C (LEFT SIDE)	D (RIGHT SIDE)
DW	1xProbe, 2xBridge, 5xF Hull, 2xCargo, Center Warp Access	2xPh-3 (RX), 2xShttl, 2xImp, 2xTrac, 5xAft Hull	2xPh-1 (FA/L), 3xDrone, 1xAux, 2xTran, 2xBtty	2xPh-1 (FA/R), 3xDrone, 1xEmer, 2xLab, 2xBtty

DELTAN SHIPS (R57.0)

DELTAN HEAVY CRUISER (R57.B1)

CLASS	A (CENTER)	B (LEFT WING)	C (RIGHT WING)
CA	2xPh-1 (FX), 2xPh-1 (RX), 2xPh-1 (360°), 2xBridge, 2xTran, 4xLab, 4xBtty, 2xAux	2xPhoton, 2xPh-3 (LS) 1xADD, 4xAWR, 8xF Hull, 2xShttl, 1xTrac, 2xImp, 1xEmer	2xPhoton, 2xPh-3 (RS) 1xADD, 4xAWR, 8xAft Hull, 2xShttl, 1xTrac, 2xImp, 1xProbe

DELTAN WAR CRUISER (R57.B1)

CLASS	A (CENTER)	B (LEFT WING)	C (RIGHT WING)
CW	2xPh-1 (FX), 2xPh-1 (360°), 2xPh-3 (RX), 2xBridge, 2xTran, 4xLab, 4xBtty, 2xAux	2xPhoton, 1xPh-3 (LS) 1xADD, 4xAWR, 6xF Hull, 1xShttl, 1xTrac, 2xImp, 1xEmer	2xPhoton, 1xPh-3 (RS) 1xADD, 4xAWR, 6xAft Hull, 1xShttl, 1xTrac, 2xImp, 1xProbe

BRITANIAN SHIPS (R58.0)

BRITANIAN DREADNOUGHT (R58.B1)

CLASS	A (FORWARD)	B (CENTER)	C (AFT)
DN	3xPh-1 (FX), 3xPh-1 (L), 3xPh-1 (R), 1xPh-3 (L), 1xPh-3 (R), 1xProbe, 1xEmer, 3xAux, 8xAPR, 6xBtty, Left Warp Access	12xDisruptor, 10xF Hull, 10x A Hull, 3xTran, 3xLab, Center Warp Access	4xPh-1 (RA), 3xPh-1 (L), 3xPh-1 (R), 1xPh-3 (L), 1xPh-3 (R), 6xImp, 3xFlag, 3xBridge, 6xShttl, 4xTrac, Right Warp Access

BRITANIAN HEAVY CRUISER (R58.B1)

CLASS	A (FORWARD)	B (CENTER)	C (AFT)
CA	2xPh-1 (FX), 2xPh-1 (L), 2xPh-1 (R), 1xPh-3 (L), 1xPh-3 (R), 1xProbe, 1xEmer, 3xAux, 4xAPR, 4xBtty, Left Warp Access	8xDisruptor, 8xF Hull, 8xAft Hull, 3xTran, 3xLab, Center Warp Acess	2xPh-1 (RA), 3xPh-1 (L), 3xPh-1 (R), 1xPh-3 (L), 1xPh-3 (R), 6xImp, 3xBridge, 4xShttl, 4xTrac, Right Warp Access

CANADI'EN SHIPS (R59.0)

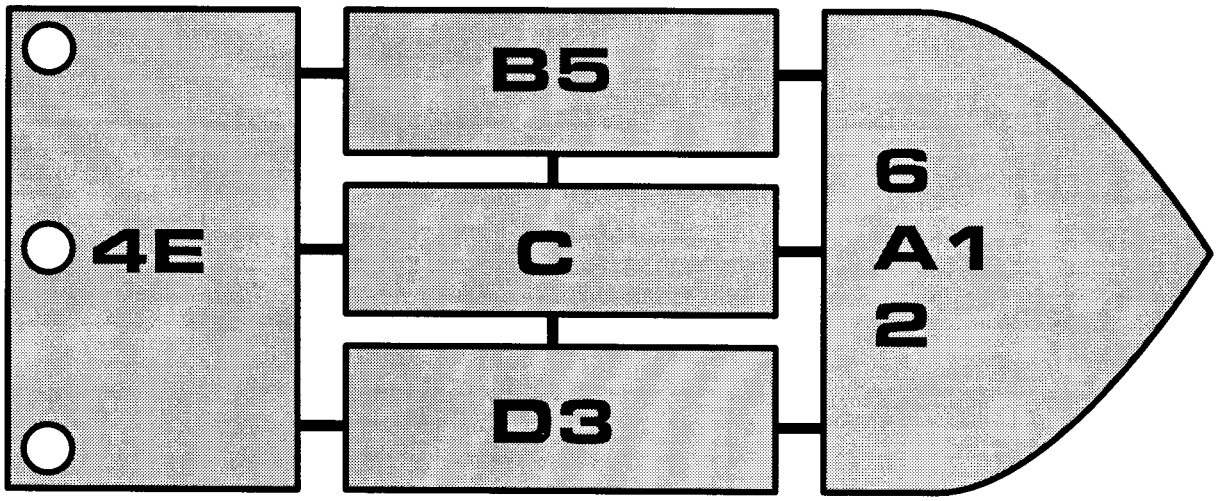
CANADI'EN HEAVY CRUISER (R59.B1)

CLASS	A (FORWARD)	B (LEFT WING)	C (RIGHT WING)	D (AFT)
MAP	4xPh-1 (FA), 2xFlag, 2xBridge, 10xBtty, 2xLab, 2xTran	2xPh-1 (LS), 1xEmer, 10xBtty, 1xTrac, 1xTran, 6xF Hull	2xPh-1 (RS), 1xAux, 10xBtty, 1xTrac, 1xProbe, 6xAft Hull	3xPh-3 (RX), 3xShttl, 3xImp, 4xBtty, 4xAPR

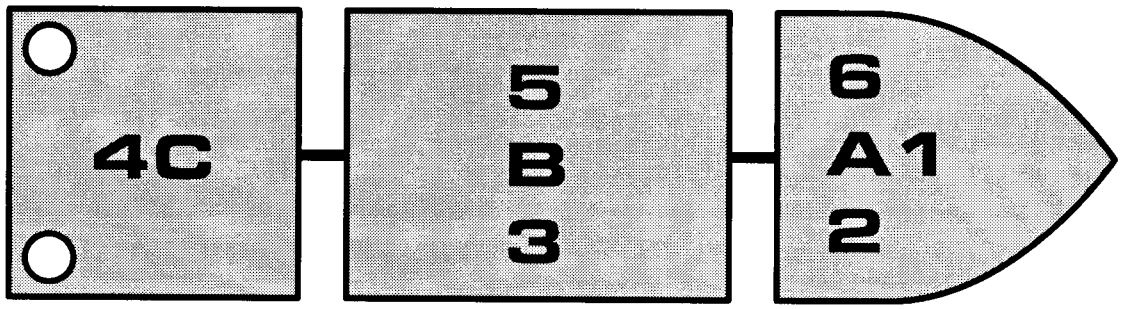
CANADI'EN WAR CRUISER (R59.B1)

CLASS	A (FORWARD)	B (LEFT WING)	C (RIGHT WING)	D (AFT)
OAK	4xPh-1 (FA), 1xBrdg, 1xProbe, 8xBtty, 2xLab, 2xTran	1xPh-1 (LS), 1xEmer, 6xBtty, 1xTrac, 4xF Hull	1xPh-1 (RS), 1xAux, 6xBtty, 1xTrac, 4xAft Hull	2xPh-3 (RX), 2xShttl, 2xImp, 4xBtty, 4xAPR

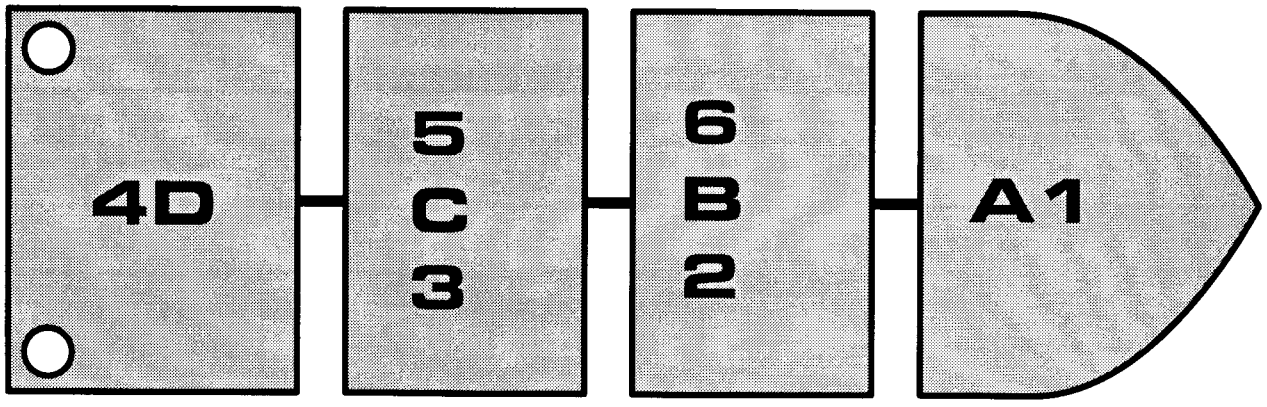
(R51.B1) LARGE FRAX WARSHIPS (Size Classes 2 and 3)



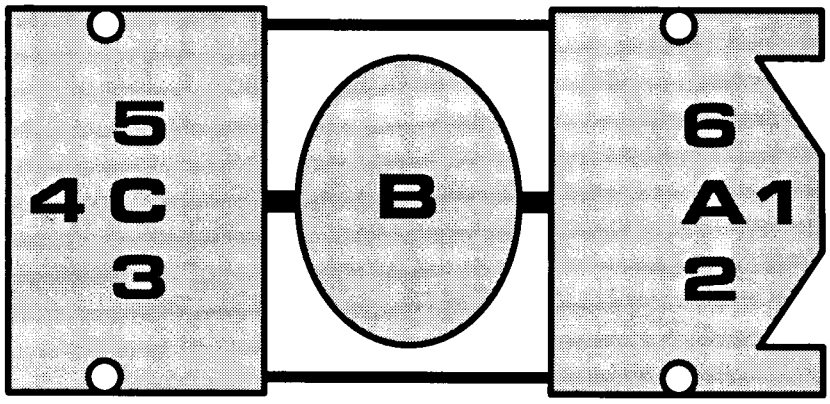
(R51.B2) SMALLER FRAX WARSHIPS (Size Class 4)



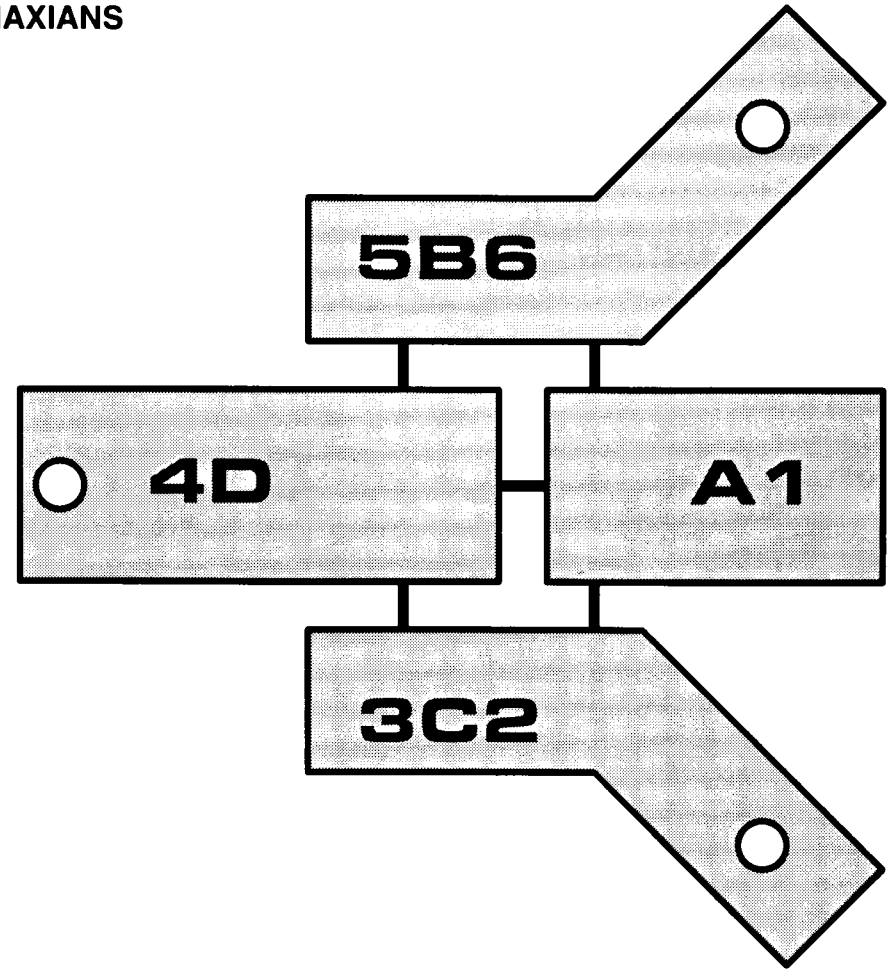
(R51.B3) SPECIAL FRAX WARSHIPS (CV, Tug, and others)



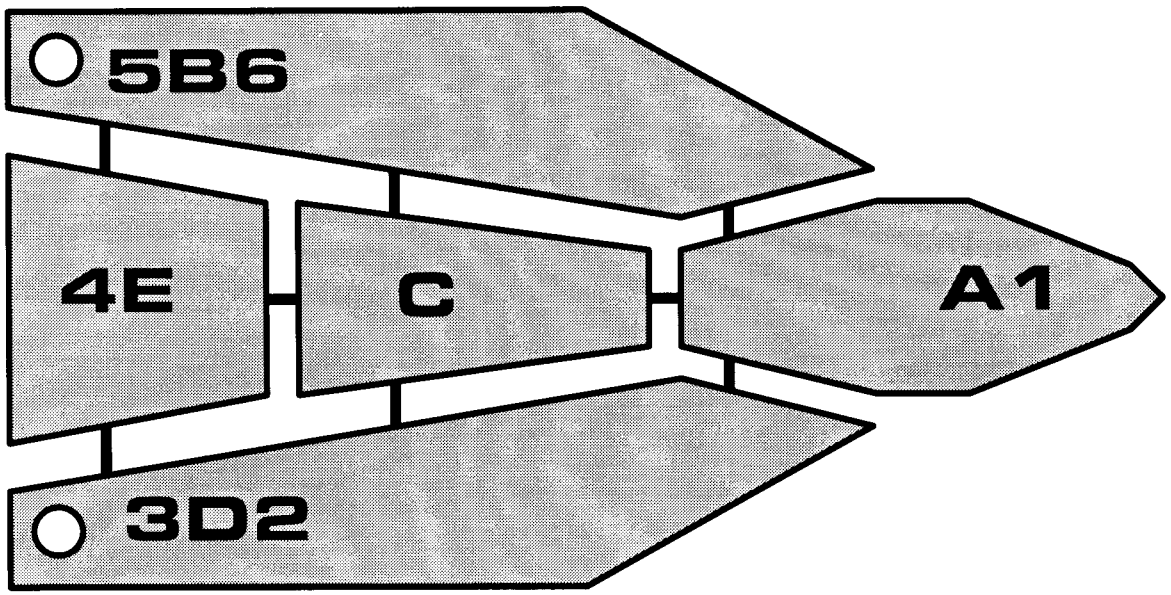
(R52.B1) QARIS



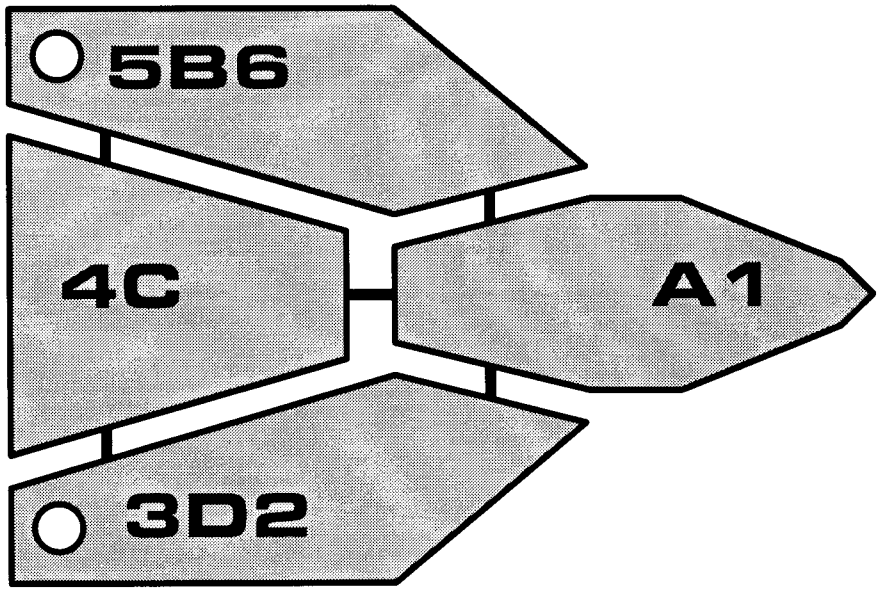
(R53.B1) TRIAXIANS



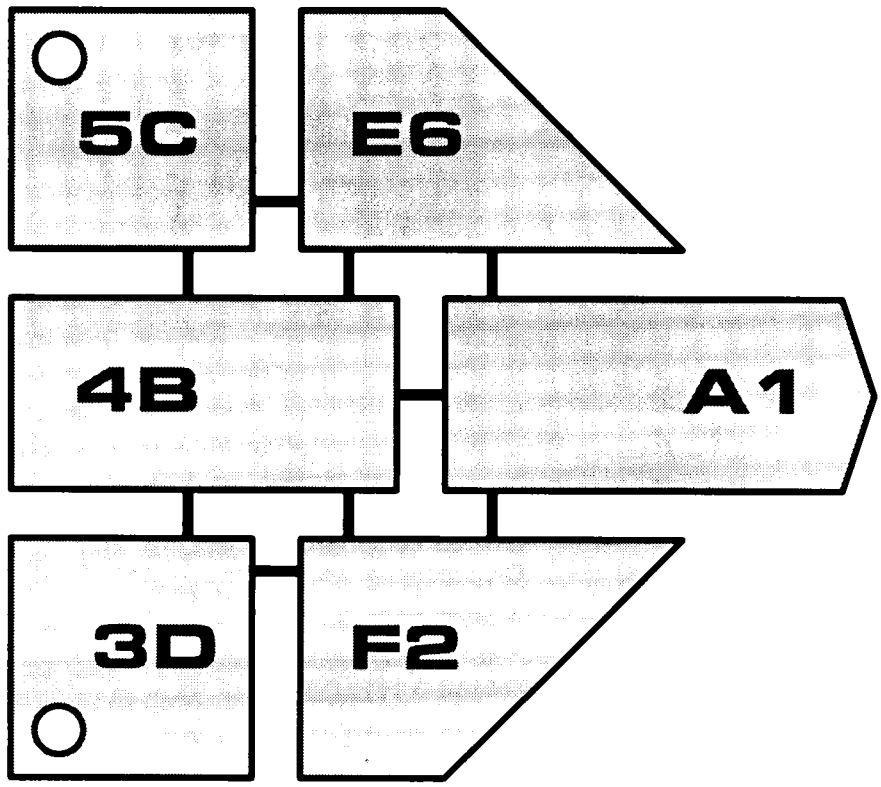
(R54.B1) LARGE SHARKHUNTERS



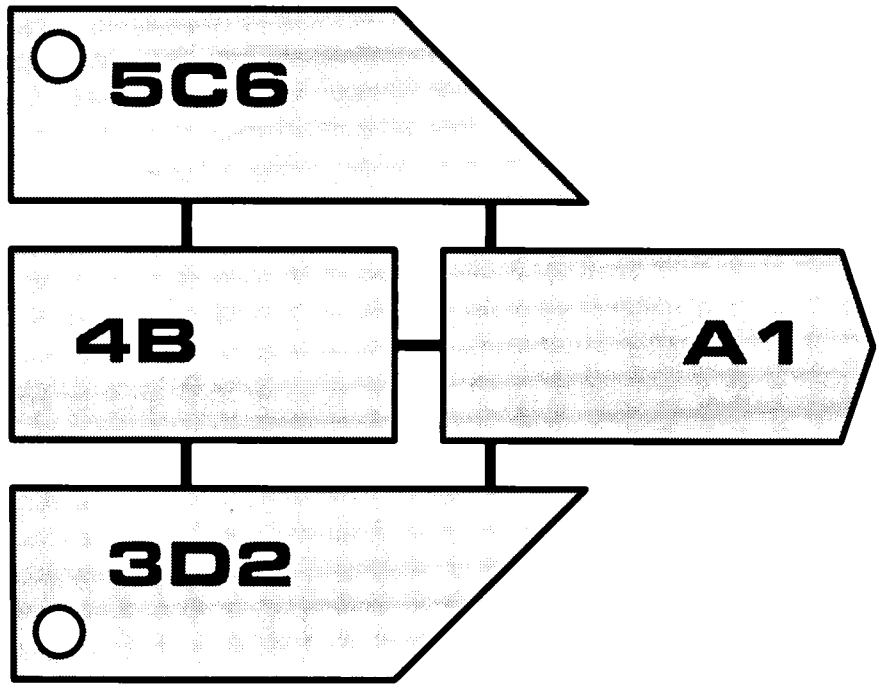
(R54.B2) SMALL SHARKHUNTERS



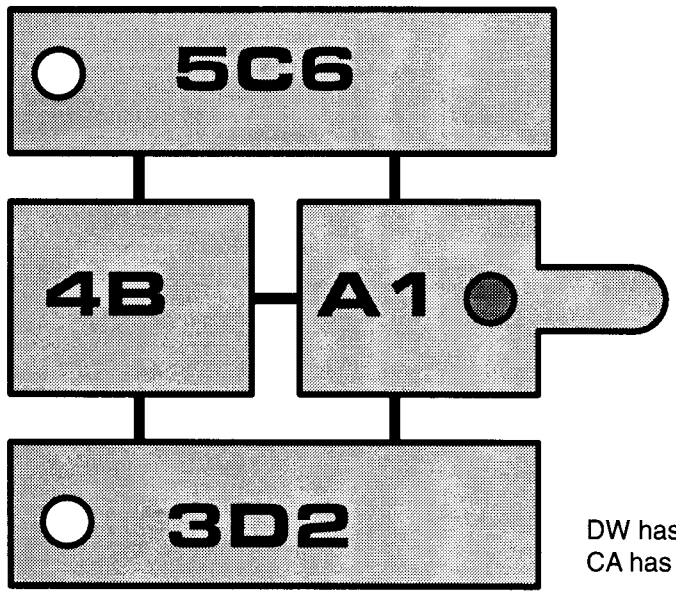
(R55.B1) LARGE BARBARIANS



(R55.B2) SMALL BARBARIANS

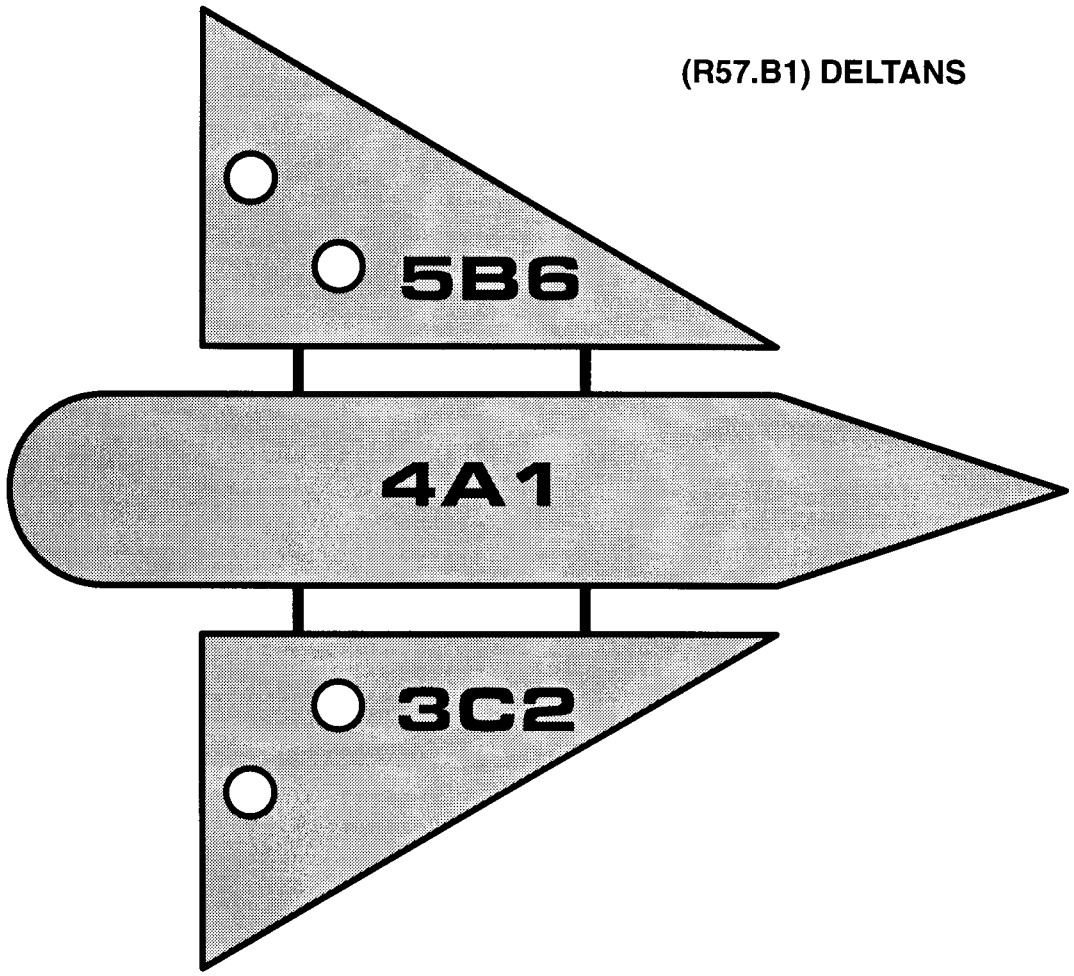


(R56.B1) FLIVVERS

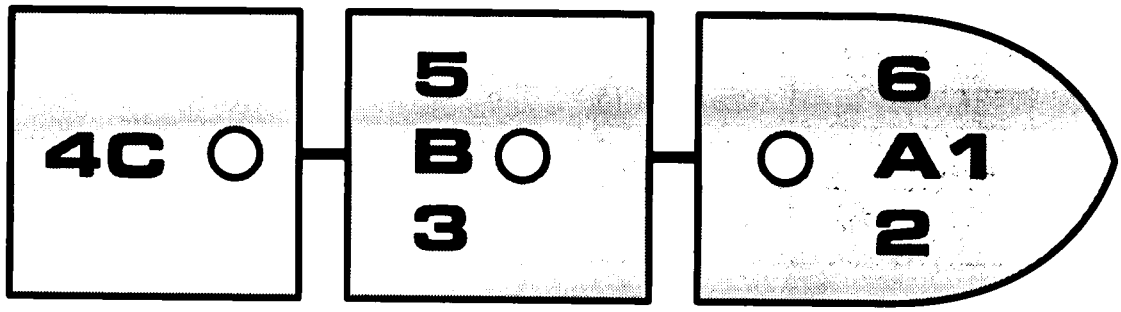


DW has center warp access in area A.
CA has center warp access in areas C and D.

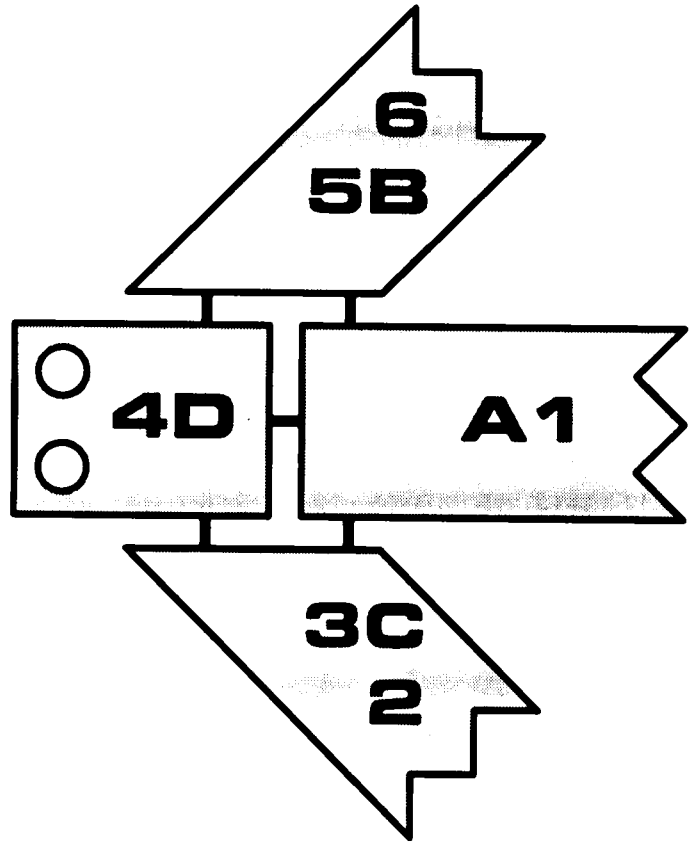
(R57.B1) DELTANS



(R58.B1) BRITANIANS



(R59.B1) CANADI'ENS



(E51.31) FRAX SUBMARINE AXION TORPEDO

AXION TORPEDO FIRING TABLE

RANGE	0	1	2–3	4–5	6–8	9–12	13+
HIT #	1–6	1–5	1–4	1–3	1–2	1	MISS
DAMAGE	10	9	8	7	6	5	NONE
OVERLOAD	15	13	12	10	9	NONE	NONE

AXION TORPEDO SMALL TARGET FIRING ADJUSTMENTS TABLE

SIZE CLASS	0–1	2–4	5	6	7
HIT MODIFIER	+1	0	–1	–2	–3

(E53.32) QARI KINETIC CANNON

(E53.321) KINETIC CANNON HEAVY FIRING TABLE

RANGE	0–4	5–8	9–15	16–23	24–30	31–40
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	6	6	5	4	3	2
Damage–E	8	8	8	0	0	0

(E53.322) KINETIC CANNON MEDIUM FIRING TABLE

RANGE	0–3	4–6	7–12	13–18	19–23	24–30
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	5	5	4	3	2	1
Damage–E	6	6	6	0	0	0

(E53.323) KINETIC CANNON LIGHT FIRING TABLE

RANGE	0–2	3–4	5–8	9–12	13–15	16–20
Hit	1–6	1–5	1–4	1–3	1–2	1
Damage–P	4	4	3	3	2	1
Damage–E	4	4	4	4	0	0

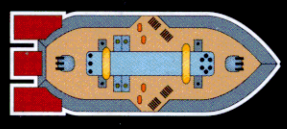
(FP51.5) TRIAXIAN PLASMA–A TORPEDO

TYPE	RANGE 0–5	6–10	11–12	13–14	15	16–18	19	20	21–23	24	25	26–30	31–34	35
S	30	30	22	22	22	15	15	15	10	5	1	0	0	0
SL	16	16	16	16	16	16	16	16	12	12	12	6	3	1
SS	48	24	12	12	12	6	3	1	0	0	0	0	0	0
G	20	20	15	15	15	10	5	1	0	0	0	0	0	0
GL	10	10	10	10	10	8	8	8	4	2	1	0	0	0
GS	32	16	8	4	1	0	0	0	0	0	0	0	0	0
F	20	15	10	5	1	0	0	0	0	0	0	0	0	0
D	10	8	5	2	1	0	0	0	0	0	0	0	0	0
BOLT	1–4	1–3	1–2						1			0		

NOTE: Do not use this plasma torpedo table for any race other than the Triaxians.

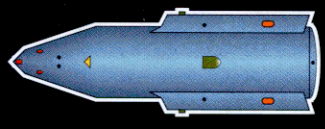
NINE NEW RACES!

FROM THE FLEET TRAINING SIMULATORS ACROSS THE GALAXY:

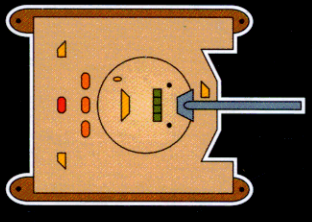


THE FRAX
Based on "wet navy" warships with FX and RX firing arcs. Their subs use the gravitic Axion Torpedo.

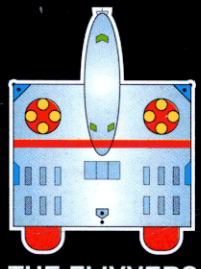
THE BRITANIANS
Their cruiser mounts no less than eight disruptors — four on each side! Cross the T to victory.



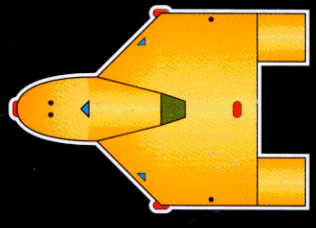
THE SHARKHUNTERS
A cloaked ship's nightmare, they use flashbombs for lock-on and wire-guided plasmas for the kill!



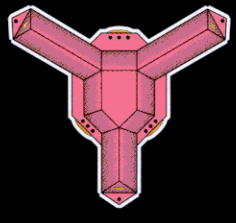
THE QARIS
Their ships mount rapid-fire kinetic cannons in rotating turrets. Their gigantic Scud missiles kill bases.



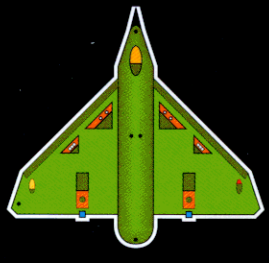
THE FLIVVERS
Float like a butterfly — and kick like a mule! Speed-640 Hyperdrones cannot be stopped easily.



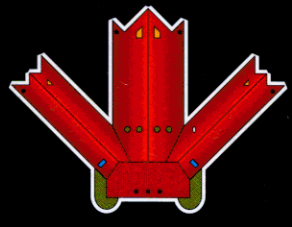
THE BARBARIANS
Their ships have option mounts able to hold weapons and other systems to simulate any enemy.



THE TRIAXIANS
Their ships move in three directions (rather than two) and mount the versatile Type–A Plasma Torpedo.



THE DELTANS
Designed for ONE mission — base busting! They are the fastest ships able to hold overloaded photons.



THE CANADI'ENS
Their Maple Leaf Maulers will hit you coming and going, right and left, up and down, in and out.

12 NEW WEAPONS, 5 NEW SYSTEMS, 95 NEW SHIPS, 11 NEW SCENARIOS!

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