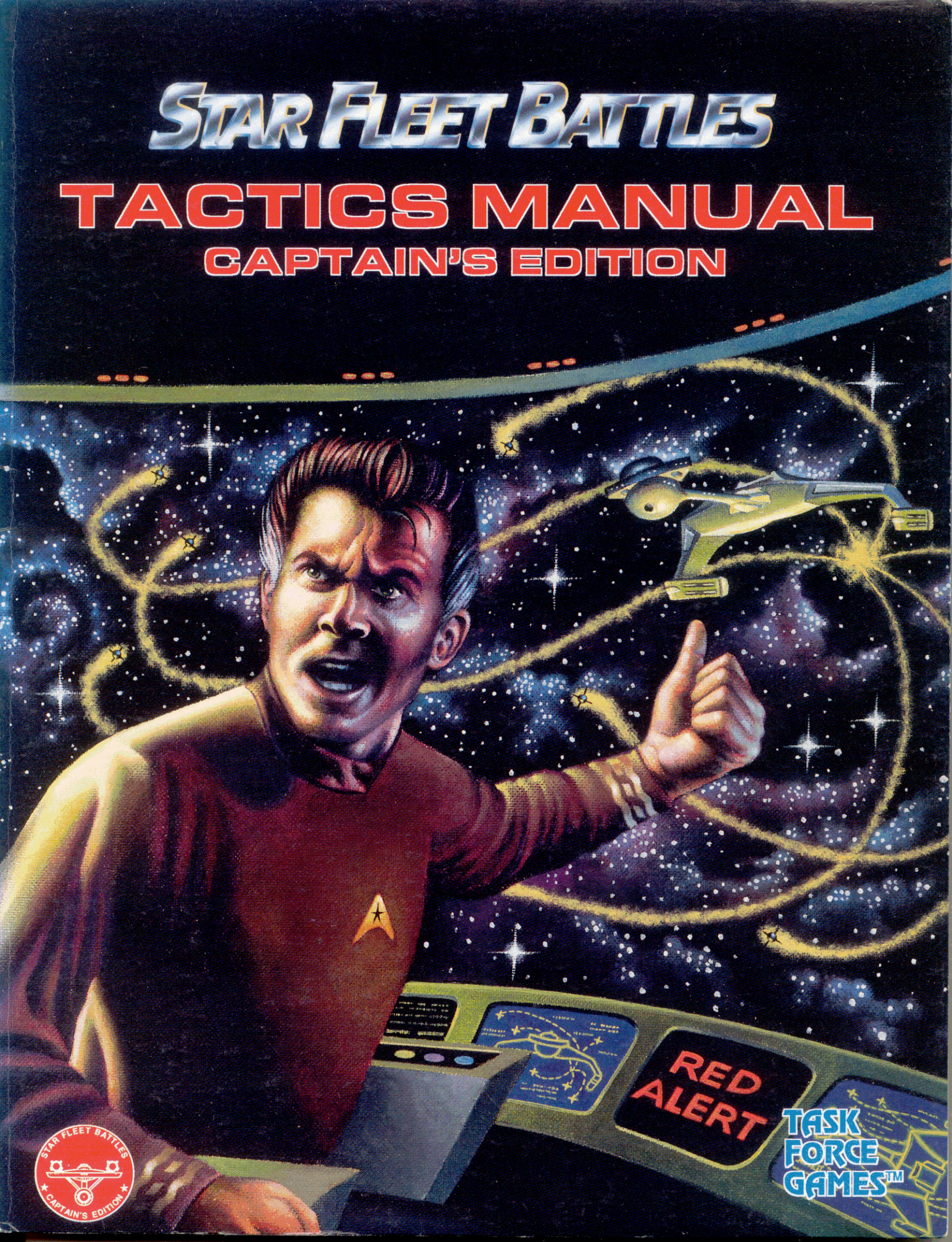
STAR FLEET BATTLES

TACTICS MANUAL

CAPTAIN'S EDITION



TASK FORCE GAMES™

A TACTICAL POINT

by Stephen V Cole

"Tactical." Kosnett snapped out the command and studied the display intensely. Yes, it was Kagan. The approach was his style. Kosnett and the command cruiser Kongo had met Commander Kagan and his D7 battlecruiser *Antagonist* more than once patrolling this sector of the border. What passed for peace in the Neutral Zone was a series of mock dogfights and occasional brief clashes. The current contention was over trade rights with a neutral planet.

"He's going to make a battle pass at us," Kosnett told the bridge crew. "We'll be ready if he wants to make it real this time. Sharon, raise the shields and tell the crew what's going on."

"Affirmative." Kosnett's first officer activated the shield controls and began speaking into the intercom, her voice calm and steady. Kosnett resumed giving orders.

"Helm, bring us to 233 mark 7. I'll take him down the port side. Make your speed warp factor 2 for now, but prepare to increase that to warp 2.4. Program 60% power for a high energy turn."

"Aye, Captain."

"Try to hail him," Kosnett ordered.

"I already have," the communications officer responded. "He refuses to acknowledge our transmission."

"Be ready for a deceleration followed by tactical maneuvers." Kosnett studied the screen, watching Kagan's ship maneuvering toward the port side. The old Klingon was usually willing to accept the flank he was offered. "Guns, are the phaser capacitors full?"

"Yes, Captain. I've switched power to the photons."

"I'll want a full salvo on hold and ready."

"Yes, Captain."

"Engineer..."

"Aye, Cap'n, the weasel will be hot when ye' want it. An I' go' reserve warp on stan'by. Will ye' be need'n the bombs?" the Irishman asked.

"Probably. Have transporters on standby, and get some reinforcement on the #1 shield, enough for a couple of long-range bolts," Kosnett commanded. "You can switch that to the #6 shield when he comes across the bow."

"Aye, cap'n." Kosnett nodded to him and thumbed the intercom.

"Shall we go erratic?" the helmsman asked.

"Negative," Kosnett responded. "I may have to shoot.

"Major Kruger."

"Yo!"

"Get your marines to their posts."

"First platoon is already deployed at critical stations," Kruger responded. "How many squads do you want for offensive duty?"

"Two. Get the rest to the rally points, and send one squad up here. Then get a flight crew to the #3 and #4 shuttles in case I need them for drone defense."

"Done. Do I have discretion on the transporters?"

"Negative. Kagan may not be planning to stick around after this pass, and I don't want any of your people on his ship when he leaves." Kosnett started to close the intercom but paused. "Kruger, leave that furry sergeant of yours with the offensive squads. You and the Lieutenant be ready to repel boarders."

"Yes, sir!"

"Ship secure. Labs processing tactical data," Sharon reported.

"He's moving across our bow. Now turning toward us at 300,000 kilometers."

"Shifting reinforcement to #6 shield, Cap'n."

"Klingon vessel is moving at warp 2.6 on course 046 mark 6."

"A standard oblique approach," Kosnett observed. The Klingon ship was not moving directly toward them, but was moving off to their left. The object of such an attack was to bring the D7's waist phasers to bear on the *Kongo* at the same time as the forward phasers and disruptors.

"At the computed point where his arc interface crosses our position the range will be 74,000 kilometers," Sharon reported.

Kagan had planned this well.

"He's going for overload range," Kosnett snapped. "Guns, bring the torps to overload status. Helm, bring us around to 208 mark 6. I want to be facing him when he passes the option point. And switch the reinforcement back to #1 shield."

"Do you think he'll fire?" Sharon asked.

"Doesn't matter. We'll be ready either way."

"Range 150,000 kilometers."

"He's launching a shuttle," Sharon observed.

"That will be the scatter-pack," Kosnett replied.

"Shall I fire at it with some of the phasers?" the weapons officer asked.

"Negative," Kosnett replied.

"We don't want to fire the first shot," Sharon added. "Kagan will claim we fired on an innocent scientific investigation."

"That's true," Kosnett confirmed, "but the point is that the old warhorse has launched it too far away for our phasers to take it out effectively. Keep an eye on it, Sharon."

"Affirmative."

"Range 100,000 kilometers."

"Shall we launch the shuttles for drone defense," Sharon asked.

"Negative. I don't want to be tied to low speed if we have to move."

"Understood."

"Bring electronic countermeasures to stage 2," Kosnett snapped.

"Photons to 75% overload. Will you want a standard spread or narrow salvo?" the weapons officer asked.

"Standard spread; I need at least one hit."

"Range 90,000 kilometers."

"He's counter-jamming."

"Engineer, 25% of reserve power to electronic warfare."

"Aye, Cap'n, but na' more if ye' be wanten' to tac' after ye' decel."

"Range 80,000 kilometers."

"Jamming at stage 2."

"Range 78,000 kilometers."

"Don't fire, Kagan. Leave it and just walk away," Kosnett whispered. "Just walk away."

"Range 76,000 kilometers."

"Photons at 100% overload status."

"Range 75,000 kilometers."

"Just walk away, Kagan."

"Range 74,000..."

Destruction lept from every weapon that the *Antagonist* could bring to bear on the *Kongo*. Shields flared but held as the Federation cruiser rocked and shook from the impact. The jamming had deflected much of the Klingon firepower.

"Scatter-pack has released!" Sharon reported.

"Damage report!" Kosnett snapped.

"Min'r bucklin'. Shiel' #1, it ha' held," the engineer reported. "Shall I dro' a shiel' t' set the T–bombs?"

"Negative! Guns, did he fire the waist phasers?"

"Klingon ship has turned and is bearing away! Left waist phasers unfired! We cut him off before he could get them into arc!"

"Increase speed! Warp 2.4! Keep him in range!"

"Range increasing to 77,000 kilometers."

"*Now*, Guns! Fire photons, fire phasers!" The *Kongo's* own destructive power roared from the weapons into the flank shield of the *Antagonist*. Two torpedoes struck home, as did four of the phasers.

"Drones approaching, starboard side, multiple vectors!" Sharon warned. "Range now 80,000 kilometers! Scanners report all type-Is."

Kosnett issued orders rapid fire, his voice steady but expressing the urgency of the situation. Firing all of the phasers at the Klingon ship left *Kongo* defenseless against the incoming drones. There wasn't time to launch the armed shuttles.

"Guns, go to passive! Helm, hard left turn; get that #1 shield away from the drones. Emergency deceleration! Engineer, launch the wild weasel!"

"Heavy damage to the Klingon," the weapons officer reported. "He's got fires in the shuttle bay and some engine damage."

"Engineer, divert reserve power to maneuvering for warp tacticals. Helm, keep the #2 shield toward the Klingon if he comes around." Kosnett watched the *Antagonist* on the tactical plot. While the D7 was hurt and the *Kongo* had only shield damage, using the wild weasel had cost them their speed. Kagan would have time to come around and hit them, possibly twice, before the photons were reloaded.

"Guns, get the phaser capacitors charged and the photons reloaded as fast as you can. Engineer, is the second weasel ready?"

"Aye, ih's hot, Cap'n."

"Drones have impacted on the weasel."

"Klingon ship is accelerating away, bearing toward Klingon border."

"Pursuit?" the helm officer asked.

"Negative. We've made our point."

"He took more damage than we did," Sharon observed.

"Old Kagan will probably tell his boss the same thing," Kosnett chuckled. Then he whispered to himself.

"Walk away, Kagan. Just walk away." ✪

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ABBREVIATIONS USED IN SFB

ADD: Anti-Drone
ATG: Active Terminal Guidance (used by some drones)
DAC: Damage Allocation Chart
EA: Energy Allocation
ECCM: Electronic counter-countermeasures, burning through his jamming
ECM: Electronic countermeasures, jamming the enemy
ED: Emergency Deceleration
EM: Erratic Maneuvering
EPT: Enveloping Plasma Torpedo
ESG: Expanding Sphere Generator
EW: Electronic Warfare
FA: Forward Arc
FX: Forward Expanded Arc
HET: High Energy Turn
LF/RF: Left front/right front
LS/RS: Left side/Right side
MRS: Multi-Role Shuttle
MW: Multi-Warhead
NVC: Non-Violent Combat
PPD: Plasmatic Pulsar Device
RA: Rear Arc
RX: Rear Expanded Arc
SFG: Stasis Field Generator
SP: Scatter-Pack, a shuttle loaded with drones
SS: Suicide Shuttle
SWAC: Space Warning and Control, a special type of Federation shuttle
TAC: Tactical Maneuver
Warp-TAC: Tactical Maneuver on warp power
WW: Wild Weasel

CAPTAIN KOSNETT MADE A MISTAKE!

In the battle portrayed in *A TACTICAL POINT,* Captain Kosnett made a tactical error. He did something that many captains do, and like most of them, he did it when he didn't need to. He got away with it, but if he keeps doing the same thing, he will eventually get caught and find himself in serious trouble. If you recognized the mistake, you are already on your way to being an above-average tactician. If you didn't recognize the mistake, we'll tell you (over the next 110 pages) what it was and how to avoid it.

All tactics are based on choices, options, and compromises. Some tactics produce advantages and opportunities at the cost of giving up other opportunities or accepting other risks. Successful tacticians are those who can recognize the best tactics to employ in a given situation and who can create situations where their tactics will be successful.

To begin our discussion, ask yourself what problem Kosnett faced, what options he had available to solve it, and why the option he chose was the wrong one. Then ask yourself what other options he could have created by taking steps earlier in the encounter.

Or perhaps you think the action was justified. Ask yourself what situation would have made this the logical choice.

Look at the situation from Kagan's point of view. What was he trying to accomplish? Did he?

This book will introduce you to some of the basic concepts and doctrine of starship combat. It will help you determine when you must make a decision and what options are available. It will also help you evaluate those options and employ your selected tactics with competence.

Brilliance is something you'll have to develop for yourself.

MAKING EFFECTIVE CHOICES

Let us discuss a few examples of the choices that a starship commander will face.

* Will you close to knife-fighting range, where a decision is certain but at the cost of a crippled ship, or will you engage from the middle ranges, where the destruction of either ship is unlikely but where you may find, or create, an opportunity to close to short range and destroy your enemy?
* Will you overload your weapons, increasing the damage you can do if you can get the enemy within range, while risking the possibility that you can't get the enemy in range?
* Will you use your reserve power now for electronic warfare, or save it in case you need to complete your HET allocation, or use tactical maneuvering after an emergency deceleration?
* Will you use erratic maneuvering, which lessens the chance of being hit but which blinds your own weapons?
* Will you arm your only available shuttle as a wild weasel for self-defense or as a suicide shuttle to use against the enemy?

As you can see, the choices are infinite. To learn tactics, you must learn to recognize the choices that are available to be made, as well as the risks, costs, and advantages of each option. More importantly, you must work to create the tactical options that are the most advantageous to you.

DON'T DO *ANYTHING* YOU DON'T HAVE TO DO

Virtually every action you can take in *STAR FLEET BATTLES* comes at the price of not being able to do the same thing again for a specified period, perhaps during the remainder of the scenario. Firing a weapon means that you won't be able to fire it again for at least 8 impulses, and certainly until the next turn.

Making your first HET (the only one with a bonus) means that you won't have it if you need it later.

Using ammunition (shuttles, drones, PPTs, probes) means that you won't have it to use later. It can be just as bad to lose a scenario with empty drone racks as it is to lose it with full drone racks, so you must seek to get the most out of your available supply.

Turning your ship means that you won't be able to change direction again until you have satisfied your turn mode, which can take several impulses.

Obviously, it would be just as wrong to use your systems, ammunition, and options indiscriminately as to never use them. To be a winner, you must learn when to use them.

READ *EVERYTHING!*

If we didn't want to sound so repetitive, every article in this manual would include a list of the other articles that you should read to fully understand the subject. The problem is that you ultimately have to read everything to know everything about anything.

Let's take, for example, the Klingons. After reading the section on Klingon tactics, you should also read the sections on disruptors and drones, as well as the general sections on phasers, power, maneuver, etc. Then read the special article on the stasis field generator. Then you should read the Hydran and Kzinti sections, and of course the Federation section, and maybe the Tholians so that you'll know what to expect from your enemy. Of course, read the Lyran section to see what your allies can do for you. By that time, you've read just about everything except cloaks and plasma torpedoes (which your Romulan allies use).

One of the most important things to read is the SFB rulebook itself. Space is too valuable in this book to reprint the rules themselves. The rulebook has always included hundreds of items of a tactical nature, ranging from examples of when something could be used to a list of potential uses.

THE ONLY TEST IS COMBAT, AND OTHER THOUGHTS

The only test of a tactic is combat. If a textbook tactic fails, it does not mean that the book is wrong, only that you were out fought. If a stupid tactic works, it does not mean that the book needs to be amended, only that you got away with an unusual tactic. The "book" consists of things that have been tried *repeatedly* and have worked *consistently.* Competent use of the basic tactics increases your chances of survival and victory, but does not guarantee it.

Not everyone agrees on every tactic. As predicted in the 1987 edition of this book, we received hundreds of letters thanking us for providing a basic discussion, and a handful proclaiming that the tactic on this page or in that section is "certain suicide," at least when played against that player with the house rules of his local campaign, or when countered by new tactics that they have developed.

Not every tactic in this book will work in every case. We shall attempt to teach you the basic principles and to help you become more effective as a captain. After all, if you lose 30 battles in a row, you'll probably quit playing the game, right?

You should study your own ship, and the enemy ship, thoroughly before filling out the Energy Form for the first turn. Check the SSD, the rule reference, the refits, and the Master Ship Chart for hidden assets. Be sure to check the breakdown rating. If it's 4-6 or worse, you can't count on an HET, even with your bonus. Look for vulnerabilities to hit-and-run raids.

There is a distinction between a tactic that sounds reasonable but has never been tested and a tactic that was used in combat with success. Before entering a serious competitive tournament, play several practice games and try out your tactics.

When someone tells you about a great new tactic, ask him if he's tried it in combat yet.

There are two different forms of scenarios: those with a past and a future (i.e., campaigns), where the survival of the ship is more important than winning, and "pick-up battles" (i.e., patrol scenarios), where players can fight to the death out of sheer bloody mindedness without any reason to disengage. Rather than philosophize about which type is "wrong" or "right," we'll simply advise you to make sure that you are playing the same scenario your opponent is playing, or at least that you understand what he is doing and why.

WHAT IS SFB COMBAT?

Most players of *STAR FLEET BATTLES* have come into the game from other types of wargames. It is important to point out that starship combat is not like any other form of warfare; it has a feel and pulse all its own.

Land combat is characterized by relatively slow movements and relatively long-ranged weapons compared to unit speed. A rifle bullet will travel a mile in about 3 seconds; an infantryman will take 20 minutes (400 times as long) to cover that distance, when he is moving at all. Land warfare is dominated by terrain.

Naval combat is characterized by steady (and relatively fast) movement of the units, which have, again, weapons that far exceed the speed of the units. The shells of a battleship will carry 30,000 yards or more in a few seconds; a battleship will cover that distance in about 35 minutes, firing about 100 salvoes during that period.

A starship in SFB will, at medium battle speeds, cover about 160,000kms during a turn. The effective range of its weapons (about 80,000kms) is only half that distance, and it can fire those weapons only once per turn. This alone makes spaceship combat radically different from naval ship combat. But also note that 1980s naval combat (considerably different that 1940s combat) is just as different from starship combat. A single missile with 500 pounds of explosive can disable a 1980s ship, while a nuclear missile will not penetrate the shields of a starship.

A starship duel in SFB resembles nothing so much as an aerial dogfight, although fought on a two-dimensional plane and with heavy WWII bombers (with guns facing in all directions) substituting for the fighters. Even here, however, the comparison is inaccurate as the ships in SFB change speed far more often, and over a far wider scale, than fighters. Starships can even stop!

Wargamers used to ground combat games have a tendency to think in terms of zones-of-control. They set up their SFB fleets with a ship in every other hex simply because this arrangement of counters on the map looks familiar and comfortable. Unfortunately, this will put the ships out of interlocking weapons range, allowing the enemy to close to point-blank range against some ships without being within the effective range of others.

STAR FLEET BATTLES is a simulation game about an imaginary subject (an oxymoronic statement, but a true one). While based on a series of fictional presentations, it has a consistent structure on which the rules are founded. Things work the way they do because the background says that they will.

Wargamers must realize the differences between starship combat and other forms of warfare and avoid bringing "bad habits" into SFB from other games.

HOW TO LOSE STAR FLEET BATTLES

Experts generally agree that there are several ways to quickly lose the scenario:

* Breakdown while performing an HET.
* Surrender the initiative to your opponent.
* Fail to use your ship to its maximum potential.

PROFOUND COMMENTS FROM HISTORY

Here are a few comments from famous military leaders, SFB players, and the Star Fleet Universe. Perhaps these will inspire you to a higher understanding of tactics.

* Rove your assigned airspace, find the enemy, and shoot him down. Everything else is rubbish.—*The Baron von Richthoffen*
* A general should say to himself many times a day: If the enemy should make an appearance in front, on my right, or on my left, what should I do? And if he is embarrassed for lack of an answer, his arrangements are bad. There is something wrong; he must rectify his mistake.—*Napoleon*
* War is a continuation of state policy by other means.—*General Carl von Clausewitz, author of ON WAR.*
* No soldier ever won a war by dying for his country. He won it by making the other soldier die for his country.—*Patton*
* Build a golden bridge for a fleeing enemy.—*Roman proverb*
* Make him play your game; don't play his.—*Deth O'Kay*
* The best surprise is the unexpected.—*Hydran proverb*
* One thing has been true for as long as I can remember. Any opponent who has used a wild weasel against me has lost the initiative and has been destroyed within two turns.—*Fleet Captain Mark Schultz, 1985 National Champion*
* If you put yourself into a position where you must HET, Weasel, or Emer Decel, you more than likely are losing the battle and are just prolonging your death. Avoid doing any of the three.—*Fleet Captain Tom Carroll, 1990 National Champion*
* When in doubt, overload. When in trouble, retrograde.—*Kenneth Kaufman, cadet famous for his inspired tactics, lost in space before he could achieve command.*
* Speed is life in SFB.—*unknown*
* Reserve power is the heart and soul of SFB.—*Steve Petrick*
* Use your tractors, dammit!—*sign over doors to training simulator room at Star Fleet Academy.*
* Never fight a battle you do not have to win.—*Ardak Kumerian, Admiral of the Red Fleet, Klingon Deep Space Fleet*

CAPTAIN'S EDITION RULES

This Edition of the *TACTICS MANUAL* has been completely updated and revised to reflect the rules changes that came about during the transition from the 3rd (Commander's) edition to the new 4th (Captain's) edition. Those changes are far too extensive to list here, but have been detailed in Captain's Log.

A FORUM FOR INTELLIGENT DISCUSSION

One of the greatest problems with learning tactics for the game *STAR FLEET BATTLES* is the lack of instantaneous communications between players. At the time the 1987 edition of this book was published, every ship captain on Earth had read articles, studies, reports, and analyses on the Exocet missile that hit the frigate *Stark* in the Persian Gulf only six weeks previously. How that missile could have been stopped (activate the Phalanx cannon, fire chaff, turn the ship to reduce radar signature) was debated and discussed and, finally, doctrine resulted.

But if someone in Ohio develops a new way to employ his plasma torpedoes, someone in New Jersey won't hear about it until the term paper appears in Captain's Log, at which point someone in California will complain that the tactic is "old hat" and doesn't work against their new tactic with electronic warfare.

We are trying to solve this problem with more tactics articles in Captain's Log, and hope that the *TACTICS MANUAL* will provide a basis for developing formal discussions. The previous edition of the *TACTICS MANUAL* helped an entire generation of SFB players learn basic tactics, and this updated edition will bring them up to warp speed and help train the next generation.

WHY A TACTICS MANUAL?

One day back in 1975 I invented *STAR FLEET BATTLES.* The next day I taught Jim Brown, one of my college friends, how to play it. The next day he was asking me what tactics I thought he should use against the guy down the hall.

Questions on tactics have been asked every bit as often as rules questions. The problem has been that answering a rules question usually requires only a few words, while explaining tactics requires, well, 112 pages (to start). Many people have developed their own tactics or learned tactics from their opponents. Others have never been able to develop tactics and, feeling lost at the helm of a starship, simply quit playing the game. It's hard enough to understand the rules; to *win* you have to understand how to *use* the rules. We hope that this book will help.

If you have friends who no longer play SFB because they couldn't get a grip on it, let them read your copy of this manual and encourage them to try again.

This manual will be most valuable to new players, who have not had the years of experience veterans have. Most of the top aces came into the game system years ago and have acquired their skills, along with the rules, in small doses over a long period of time. (Of course, reading this book will help them find new wrinkles from the new rules.) New players find themselves expected to master hundreds of pages of rules and develop tactical skills and winning instincts in a few weeks. It has been done, but this manual will make it far easier.

What is obvious to one player is new to another. We have tried to make this manual as comprehensive as possible, covering all of the basic material and as much advanced material as possible. We have (perhaps unconsciously) avoided the incredibly obvious and have made efforts to avoid simply quoting the rulebook. If you don't think that one section was covered well enough, let us know, or (even better) write a more thorough discussion yourself.

Plans exist for an Advanced Tactics Manual, and we are accepting tactical articles for use in that product or in Captain's Log.

We would like to hear your comments, suggestions, and tactics. And if you still can't figure out what Kosnett did wrong, or aren't sure, you'll find the answer in the back pages.

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Very special thanks to Leanna Cole, who continues to work diligently to correct my weak grammar, poor spelling, and hopeless punctuation, and Steve Petrick, who understands the tactics of the game better than I do.—*Stephen V Cole* ✪

TWO KEYS TO VICTORY

by Stephen V Cole

There are two things which you can do that will give you an edge over anyone who doesn't do them. One is rather simple; the other is more complex. Both tend to make playability suffer.

The first is to learn to use fractional accounting. This may seem difficult, but it really isn't. By combining leftover fractional points of power, you'll gain one or two points each turn, and those can be critical. Maintain the fractional points in your batteries, no matter how intense the accounting, as even tiny fractions can activate systems that might bring victory, or at least avoid defeat.

The second, and more difficult, is to learn the rules and master the concepts for mid-turn speed changes. This is a complex subject, but the benefits can be devastating. You'll gain a few points of power. You'll badly scramble enemy attempts to read your Energy Allocation Form. You'll gain tactical flexibility and, more importantly, tactical surprise. Ace players have mastered this technique. It isn't easy and requires practice. (You may want to practice flying that way against a non-player target, then in a friendly non-competitive game.) The technique is so difficult that some playing groups outlaw it entirely, just to save themselves the trouble of learning to master it, and that's a shame, since you really should learn the technique and will get blown away by the first opponent you meet who knows it.

Reserve power could be considered the "third key," but we never had to talk anyone into using that rule. ✪

COMBAT GLOSSARY

Alpha Strike: A ship's maximum single-impulse firepower, involving all available weapons, overloads, etc.

Ballistic: An unguided seeking weapon launched in a direction, rather than to seek a specific target.

Battle Pass: Movement past the target, allowing side/rear weapons to fire and allowing the moving ship to reach rear areas.

Battle Run: Movement toward the target with a turn-away at short range, bringing rear-firing weapons to bear.

Close Combat Maneuvering: A special rule (J4.5) under which a fighter can turn to face any shield of a target ship.

Daisy Chain: A maneuver involving two wild SWAC shuttles alternately attracting seeking weapons.

Death Dragging: Holding a shuttle in a tractor beam and moving at a speed sufficient to destroy the shuttle.

Drone Swarm: A group of drones moving together in one hex, often toward the same target.

Flashcube: Using a mine or T-bomb to expose a cloaked ship, allowing a lock-on to be gained.

Follow Pursuit: Close with the target from behind it.

Glory Zone: Any range bracket in which one ship is markedly more effective than its opponent. Most often applied to plasma ships, which can bolt their torpedoes from range 9-10, outside of the overload range of other direct-fire weapons.

Gorn Anchor: Holding the enemy in a tractor beam to prevent WW launch during seeking weapon movement.

Housekeeping: Power for shields, fire control, life support.

Impulse of Decision: Impulse #25, the last impulse in which weapons can fire and be available impulse #1 of the next turn.

Impulse of Truth: The first impulse of the next turn, so called because a ship which moved at high speed on a given turn can switch its power to weapons during the Energy Allocation Phase and fire on the target before it can change shield facings.

Kaufman Retrograde: A fleet formation moving in reverse to keep weapons facing a superior pursuing enemy force.

Klingon Saber Dance: Maneuvers producing a series of attacks from beyond overload range as an attrition tactic.

Lead Pursuit: Close with the target from in front of it.

Mizia Concept: A theory under which the most effective attack is a series of small volleys against the same down shield.

Oblique Attack: Move to one side of the enemy; see article.

Overrun: Movement through the hex occupied by the target, creating opportunities for point-blank fire, rear-weapons fire, dropping mines in the target hex, etc.

Power Curve: An indefinite expression indicating the relative amount of power a given ship has as measured against what it needs to arm it weapons. In effect, a ship with a "good power curve" has surplus power and will be more effective in combat.

Shatter-Pack: A scatter-pack with twelve dogfight drones.

Sicilian Knife Fight: Combat at very short range and relatively low speed characterized by overloaded weapons, tractor auctions, and reinforced shields.

Sub-Hunt: A tactic against cloaked ships. Rather than waiting for the cloaked ship to uncloak, the hunting ship fires a series of small attacks to score enough damage that the cloaked ship realizes he cannot remain cloaked, while (the hunting ship) retains enough firepower to make uncloaking suicide.

Sudden Escort Death Syndrome: In fleet battles, there is so much firepower available that it is often possible to completely explode a small enemy ship with one massed volley, creating an explosion inside his formation and no end of trouble.

Tame Boar: A type–III drone launched ballistically which accepts the first target it finds within eight hexes.

Underrun: An overrun by a cloaked unit.

Wild Boar: A targeting method for type–III drones which allows them to be launched in the general direction of a target which they will lock-onto when they come within range.

Yo-Yo: Any maneuver which involves a shift in some parameter. Cloaked ships use the ECM Yo-Yo and Speed Yo-Yo to generate additional attempts to break a lock-on.✪

KICKING THE TIRES

by Bruce Graw

Before flying any starship, take a moment to make sure you know its capabilities. Everyone has a favorite ship that they know by heart, but no one knows everything about every ship. Weapons are easy to remember, but what about those other useful systems? Take a minute before the scenario begins to determine the following:

(1) Your warp output. This tells you how fast you can go during the scenario. Most ships will have no problem going speed 30, unless you have one of those obsolete boats like the War Eagle. If you have more warp than you need to go speed 30, note just how fast you can move and still HET. For example, a ship with 24 warp and a movement cost of 2/3 can go speed 31 and HET (20 warp and 1 impulse to go 31, plus 3 1/3 warp for the high energy turn, leaving 2/3 warp unused).

(2) Your batteries. This will, among other things, reveal if you can HET using reserve power. In the case of direct-fire ships, it tells you how many heavy weapons you can arm (or overload) on reserve; for example, Klingon cruisers (with their typical three-battery arrays) can overload only one disruptor using batteries. Plasma ships should take note of batteries for purposes of rolling delay or fast-loading heavy torpedoes. Cloak-capable ships can partially power the cloak and use batteries for the rest, if necessary. There are an infinite number of other reasons to use batteries, so know in advance how many you have.

(3) Your boarding parties. If you have few, you have reason to worry about being captured. If you have plenty, be sure to assign some as guards and allocate others to be ready for hit-and-run raids. While you're at it, note how many transporters you have so you know how much power you'll need to hit-and-run your opponent. Hit-and-run raids are almost another weapons system, so be prepared to use them and defend against them.

(4) Your shuttles. At Weapons Status–3 you can start with two of these already armed for special roles. This is a decision you should not take lightly. Drone-users should consider scatter-packs; others should think about suicide shuttles. Remember, you can always arm a WW on the first turn (completing it at the start of turn 2), but SPs and SSs take considerably longer to prepare. And, don't forget that SSs and WWs take power to arm and hold, so if you have a small ship or a poor power curve, they will be difficult to employ. Suicide shuttles cost more to arm, and are a better choice for "at start" shuttles. Note the number of bays; this will affect the rate at which you launch, land, or drop things.

(5) The number of phaser capacitors you have. Write this down somewhere, and keep it in mind at all times. Never forget that you don't ALWAYS have to keep your phasers fully charged. Some players make the mistake of keeping them full unnecessarily, especially when some phasers have been destroyed (or will likely be destroyed). Batteries can be an excellent way to power phaser capacitors as necessary.

(6) Other systems. A quick count of how many labs, tractors, sensor 6s, scanner 0s, and control spaces will reveal other vulnerable points on your ship. Advantages in these areas should be exploited, while disadvantages should be covered in some way (with guards or by repairing them quickly when they're lost). Note the hull. Is it center, or fore& aft? Is it evenly distributed? Cargo is good padding.

A good captain knows his ship. If you don't, your opponent will soon remove it from your command.

Speaking of your opponent, run the same checklist on HIS ship before you fight so that you know what you're facing.✪

COMMANDER'S OPTIONS

Tony Zbaraschuk

Rule (S3.2) allows players to purchase extra equipment for their ships. Take advantage of this! Study your opponent (if you know what ship(s) he will have or what the scenario will be about), and decide what options will make your ship most effective.

Does your enemy use drones? Buy one or two transporter bombs to stop his scatter-packs. If your enemy can cloak, buy all the T-bombs you can to take advantage of the "flash-cube" exposure effect. T-bombs are also useful for discouraging pursuit and for destroying fighters.

Some ships (mostly carriers and Kzintis) have extra points for buying special drones. Use them wisely; automatic terminal guidance (ATG), electronic counter-measures (ECM) drones, and multi-warhead (MW) drones are the most useful, but other types can be handy. Some modules (e.g., armor) don't cost you anything extra. Don't forget you can trade (at a nominal cost) ADDs for type-VI drones, and you can also purchase extra drones to get more options. Remember that drone speeds are sometimes upgradable as option items, and sometimes are standard depending on the year. In some years your only option may be "moderate" speed (speed 12) type-II and type-V drones, but you can improve these by installing extended range on their frames.

Does your opponent have one or two crucial systems that are vulnerable to hit-and-run raids (e.g., cloaking device, only one '6' sensor box, UIM, security stations)? Buy one or two commando parties. Buy extra boarding parties for guards if you might be vulnerable to hit-and-run raids. If your opponent has a penchant for boarding actions, additional boarding parties will make it easier for you to defend your ship, guard critical systems, and attack his ship. Remember that you (and your opponent) cannot buy more than ten extra boarding parties, but you can buy two commando and two heavy weapons squads above this number for a total of fourteen.

Is your ship a carrier? You can speed up fighter operations by purchasing extra deck crews, though the number of these you can purchase is, like the boarding parties above, restricted.

Do you and your opponent use electronic warfare? If so, and your ship is qualified to carry an MRS shuttle, buy one. If nothing else, you can use it as an extra-large scatter-pack (if your ship is equipped with drones).

Are you expecting ground combat? Trade in one or all of your shuttles for a Ground Assault Shuttle(s) (GAS), and buy extra boarding parties and heavy weapons squads. Commandoes have no inherent advantage in ground combat, but they could be purchased above the maximum of ten BPs and two heavy weapons squads to provide some additional firepower or defense for your ship. They might even provide a surprise hit-and-run raid on your opponent's ship.

When going up against a monster, buy extra probes, if the scenario allows it, or probe drones, if your ship can use them. More information is always useful, and you may need several probes to kill the monster.

When using Tactical Intelligence, you can purchase deception devices such as dummy weapons or blow-away panels. Klingons and Kzintis can purchase backup UIMs.

In a fleet battle, you can afford to specialize. Have some ships carry a full load of T-bombs. (You might even buy a minesweeper and equip it with a few nuclear space mines to surprise your enemy.) Others can carry large loads of special drones. Still another might have extra boarding parties for use on an enemy planet or base.

Remember, though: you can't buy everything, and points spent on purchasing this equipment give your opponent extra victory points. Buy only what you need.

CHECKLIST FOR COMBAT

by Ardak Kumerian

There are certain basic principles which apply to starship combat. These do not apply in every case, but they apply in enough cases to be considered as fairly standard doctrine.

1. Have transporters ready to take advantage of downed shields with hit-and-run raids and T-bombs. The 1/5 point of power is probably better allocated than relying on the reserve.

2. Post guards on the most critical systems: security, bridge, sensors, cloak, weapons, etc.

3. Use labs to identify any drones that come within range.

4. Use scatter-packs to increase your rate of drone fire.

5. Roll a T-bomb out the shuttle hatch just before an overrun to give your opponent a surprise on a down shield.

6. Have all of your batteries charged; don't use them needlessly. Always empty your batteries in energy allocation and use warp power to fill them, giving you reserve warp power.

7. Charge all of your phasers early in the scenario; unfired rear or side phasers provide power to the forward ones on the next turn.

8. Fire no later than impulse #25 to ensure that your weapons can fire again on impulse #1 of the next turn.

9. Kill every shuttle you see as soon as it's convenient. You never know what is in the pesky things.

10. Don't forget the small target modifiers at long range.

11. Charge two or more WWs when entering combat against ships with seeking weapons. Think at least two WWs ahead, especially in fleet battles where there are plenty of enemy ships to engage any of your own ships.

12. Allocate a point or two to tractor/negative-tractor to give you an edge in any auction.

13. When starting at WS-III (against an enemy without seeking weapons), charge up a suicide shuttle (assuming availability) or scatter-pack (assuming drones are available).

14. The most important rule of all is to ruthlessly violate any and all of these principles whenever the situation warrants.

The only valid test is combat; the only valid result is victory. ✪

ENERGY ALLOCATION

by Graeme Bayless

No single feature of *STAR FLEET BATTLES* has more impact on play than the allocation of energy. Without a proper allocation of energy each turn, it is impossible to implement your best tactics. In order to win at SFB, you must first understand how energy allocation limits and defines the choices available to a player as the turn progresses.

Although energy allocation, hereinafter referred to as EA, is a simple task in and of itself, there are many pitfalls lurking there that will help us "snatch defeat from the jaws of victory." One of the first things that many experienced players learn is that forgetting the simplest of things during the EA process can lose the game. Simply forgetting to allocate energy to shields is a good example. Just because you forgot this little thing, your ship is going to be blasted into scrap. To avoid this, try pre-allocating the areas that get power every turn. These areas are usually:

* Life Support (1/2 to 1+1/2 points)
* Shields (1 to 4 points on ships provides full strength)
* Active Fire Control (1 point, unless you are using low-power or passive fire control)

These three areas (collectively known as "the housekeeping costs") should be pre-plotted at the beginning of the game so as to prevent forgetfulness. If, for some reason, you need to change something later, you can always do so. Ships with cloaking devices must pay special attention to active fire control. It's wasteful to use when cloaked and vital when uncloaked.

Once you have taken care of the necessities, the next task is to allocate power to weapons and movement. Arming every weapon means lower speed, while higher speed means some weapons must be left uncharged. Let the tactical situation dictate your choice. Don't get caught in the rut of always arming every weapon and moving with whatever is left. You'll find yourself with overloaded weapons and not enough speed to get in range.

Federation ships, with their photons drawing energy directly from the warp engines and AWRs, cannot afford to pay the second turn of arming and the entire overload cost on a single turn (total 6 points per tube, 24 for a cruiser) as this limits the ship's maximum speed to a crawl (7 for a CA). Unless you are positive that the enemy will come to you, you'd be better off to use fewer overload points per tube and move at a better speed.

Another problem area in EA is in regards to partial points of power. Partial points can be critical to smaller ships. For instance, a frigate with a life support cost of one-half and a movement cost of 0.5 can squeeze out an extra hex of movement by plotting an odd number of hexes of movement. Of course, that half point could be used for other things, such as powering up to two transporters, a single ph-3, or part of an HET. Never forget your fractions; the math is well worth it. If no specific use makes itself apparent, you can always recharge your batteries with the fractional points. If the batteries are already full, you can use the fractional points for contingent allocation (H7.6). In fact, it's better to *ALWAYS* charge the batteries and commit any leftover fractions to systems you can later complete with reserve power.

BATTERIES ARE VITAL!

One major rule to remember during EA is that batteries are vital. If your batteries are empty, charge them and use them as reserve power. Reserve power is the most versatile power you have; always have it handy. Unless you need top speed, use warp engines to recharge these batteries. (Use your reactors and spare impulse engines to run the shields, fire control, life support, etc.) This way your reserve power will be warp qualified and usable for speed changes, warp tactical maneuvers, or HETs. Note, however, that this power is classed as warp only because it hasn't gone to the batteries yet (it doesn't do that until the end of the turn), so on the next turn any batteries which were filled from warp sources on the previous turn no longer qualify as warp energy. These must be emptied (into phasers or something else) during energy allocation and then refilled with warp power.

Several conservation techniques should be used. Charge your phaser capacitors early in the game as the unused energy from the rear phasers can power the forward phasers on the next turn. If you expect to take damage before you can complete the arming of all of your multi-turn weapons, leave one of them empty. Lyrans (at least those without power packs) never have enough power for all of their ESGs; the secret is to charge them before engaging and then recharge only some of them. Small ships should not use impulse power for movement as it's better to use a fractional point of warp power; DNs use impulse as it saves them half a point. If you have a choice of arming two weapons as standard loads or one as overloads, it is generally better to arm two weapons, as this is more flexible. Mid-turn speed changes can conserve power for weapons and EW while leaving you a burst of speed to catch the enemy at the critical moment.

NEVER, EVER, WASTE ANY POWER!

An interesting area to consider is the allocation of "waste" energy, or energy that you're not sure what to do with. Most players simply put this energy into their shields by default. This is inefficient. Reinforcing your shields is not, in and of itself, bad; it's simply that the power can often be used better elsewhere.

For instance, let's say that you have a cruiser and you're facing another cruiser in a duel. You have allocated all but 5 points of your energy and were preparing to place that energy into your forward shields. Well, think again. You could prepare an HET with that energy (assuming it is warp energy), a very useful thing. Another idea might be to prepare a little bit of tractor energy, say 4 points, and then charge up to 5 transporters with that last point. The tractors could be used to either stop your opponent from using the "Gorn Anchor" maneuver on you or to perform it on him, while the transporters could be used to drop T-Bombs around or marines into his ship if/when he is kind enough to drop your front shield. Electronic warfare is always a useful place for otherwise unused energy points. Any way you look at it, shield reinforcement should be the last refuge for your energy.

Many captains disagree with this approach, citing the need for at least some reinforcement energy during many phases of the game, such as an approach when a disruptor-armed enemy will rap your shields just to see if you reinforced them. Reinforcement should be used when and as needed; it should not become a dumping ground for homeless energy points.

Speed should not become a dumping group either. Decide how fast you need to go to accomplish your tactical plan, and use that much energy. Speed and weapons must share the energy.

A game is usually won or lost during the EA step, and often on decisions like: "Do I charge my disruptors or my phasers?" Decisions like that must be weighed during the EA process and the power put where it will do the most good. After all, once allocation is completed, it is done for the turn. There is no turning back once you say, "I'm ready... let's go on to impulse #1." Use reserve power as much as possible, and never forget to use ALL of your ship's power, for shields if nothing else. When power is in short supply, you have to make hard choices. Generally, phasers are more efficient power-to-damage converters than heavy weapons, except for the last turn of arming of a multi-turn weapon, or if the range and EW shift are unfavorable.

One last general rule to remember here—always be aware of how much power you have and how much your opponent has. Knowing how much power your opponent has will help you tailor your EA to suit what he could do.

This, of course, falls under simple "know thine enemy" concepts, but is invaluable nevertheless. ✪

RESERVE POWER

by Felix Hack

Energy allocation is a crucial part of SFB, as it locks ships into tightly specified programs of operation, defining which systems may be used each turn. The reserve power rules allow players some flexibility in the middle of a turn to spend power in ways they didn't anticipate or originally allocate for.

SOURCES OF RESERVE POWER

There are two ways to get reserve power. One is to discharge one or more batteries; the other is to draw on power allocated to "recharge batteries." The second method allows the specific kind of power (i.e., normal, warp, or impulse) used in recharging to be used for reserve purposes. Further, batteries may be discharged at the start of a turn during allocation and then recharged that same turn to facilitate the latter use. This is, in fact, the standard practice. Never think that you can't have reserve warp power just because your batteries are full. Spend the power for something that doesn't take warp, and use the warp engines to recharge the batteries. The only time you don't do this is when you need every point of speed to disengage or run down a fleeing enemy.

Unused reserve power (that is, power in batteries at the end of the turn) may be placed in the phaser capacitors. This isn't generally too important except for Andromedans who may want to clear their batteries as quickly as possible.

USES FOR RESERVE POWER

Reserve power may be used for many different systems or functions, including weapons arming, overloading, EW, tractors, transporters, shield reinforcement, etc. Indeed, some weapons (e.g., the rolling delay plasma) virtually require the use of reserve power to function at peak efficiency. An extensive (but still incomplete) list may be found in (H7.2). Reserve power may be used to complete "contingent" allocation where one or several systems are partially charged, the balance of the required power coming from reserve only if needed.

Reserve power allows a player to effectively modify his energy allocation after observing what his enemy is doing. A good example is electronic warfare, especially using contingent allocation. By spending normal EW points at least equal to the enemy's battery strength and then seeing what the enemy is doing with EW, a player can judiciously apply reserve EW to eliminate firing disadvantages or create them for the enemy.

THE NEED FOR EFFICIENCY

Some of the uses of reserve power are more efficient than others. One point of reserve ECM may save 10 points of shield reinforcement (few ships have 10 reserve power points) if it causes a weapon to miss. Using reserve power for EW may be more efficient than using it for shield reinforcement after you are hit.

When used with contingent allocation, reserve power can be used to finalize one of several options which were too expensive to prepare simultaneously. Nevertheless, such a use presents a waste of power in those systems not ultimately used, or may completely restrict a system from ordinary use, as in a partial overload. Consider a ship with small movement cost paying three of the five movement points required for a HET (a cost of 1.0 or 1.5), putting some power into tractor beams, and putting a couple of points into EW. If the enemy closes too aggressively, one point of reserve warp power will complete an HET with which to avoid destruction. If the range closes sufficiently, the reserve power can be used to help reinforce shields or defend against a tractor beam. Lastly, if the enemy uses a lot of ECM, thus threatening to make the power spent on weapons largely worthless, reserve power can quickly bump up ECCM.

Increasing speed with reserve power is inefficient because of the extra power required, but may be required by the situation. If you can allocate it in advance, certainly do so. Note that reserve impulse power may be a more effective way to gain speed, and that you might not allocate impulse power to movement so that you can use reserve impulse power later.

On the other hand, plasma torpedoes benefit greatly from reserve power. Their rolling delay arming may be finalized with reserve power, if deemed necessary, or they can fire in two turns as a type-F with reserve power.

OTHER USES FOR RESERVE POWER

The uses of reserve impulse power (beyond those of normal reserve power) are few. One application is that it allows large ships to adopt erratic maneuvering at a relatively low cost. EM for such vessels would be very expensive if warp power were to be used, but six points of impulse power will suffice.

To successfully use reserve power for tractor beams, the enemy must have his reserve power reduced or eliminated. This can be done by firing weapons at him. He may use up his reserve power in shield reinforcement.

Players can make use of reserve power for multi-turn-arming weapons. If the original allocation did not begin arming the weapons, then reserve power could make the current turn the "first turn of arming" at any point *during* the current turn.

There are many other uses of reserve power allowed in the rules. Many work best when the enemy has no reserve power left, so keeping accurate track of his reserve power usage will give you important clues. Because reserve power is so limited (excepting Andromedans and X-ships), each use must be carefully weighed in comparison to the other options which are given up. A little reserve power put into tactical maneuvers, tractors, or weapons can make the difference between victory and defeat. ✪

TRACKING ENEMY POWER

by Jim Steward

One of the most important techniques for winning *STAR FLEET BATTLES* is to track your enemy's expenditure of energy. Knowing how much power he has used can provide clues as to when his weapons are being loaded (or overloaded), whether he has an HET planned, or whether he has a wild weasel armed. The system is not perfect, but it will provide valuable clues.

Get a second Energy Allocation Form, and start filling it out on your opponent's ship. Any info he gives you (as required by the rules) goes into the form. You will usually know if his shields are up, if his fire control is active, and if his life support is on. His speed and EW output are known. As weapons are fired, you can calculate backwards to see when they were armed.

At the end of each turn, try to determine how much power you haven't tracked down. This could indicate multi-turn arming weapons or other things. Whenever he fires a multi-turn weapon, adjust your records of his prior turns to reflect this. Eventually, you could even be able to track back to turn 1 and find out how many phaser capacitors are still full.

Your enemy may be doing the same thing, so make an effort to avoid the obvious. Mid-turn speed changes can deceive him as to how much power has been spent on weapons, overloads, etc.

After the battle, exchange energy forms (they aren't secret at that point) and compare what he actually did with your guesswork. This will improve your skills and serve as a final check against "creative accounting." ✪

BASIC COMBAT

by Stephen V Cole

Combat is not an end in itself, but a means to an end. It is the means of exerting power and control over an area. Warships exist first to block the movements of competing cargo vessels, and second to protect friendly cargo vessels, ports, and trade routes from enemy warships. There need not be a cargo vessel anywhere in the area; the point is that it cannot go where enemy warships operate unhindered.

Combat in *STAR FLEET BATTLES* comprises the major part of the game, it being understood that if diplomacy would have resolved the situation there would not have been a scenario written about it.

The purpose of combat against another warship is to prevent that ship from conducting its mission. This can be accomplished by destroying or capturing the ship, or by forcing it to leave the area (without allowing it into even more sensitive areas).

Everything in the game relates to combat. Every system is either a weapon, a defense, or a means to employ a weapon or defense.

The object is to deliver the maximum amount of firepower inside the enemy ship. This means knocking down one or more shields and then concentrating as much firepower as possible against the down shield, producing internal damage with greater efficiency. The Mizia Concept can improve this efficiency.

The creation of down shields is a means to an end. Every weapon should take every opportunity to strike at a down shield, as every damage point will make the enemy that much less capable of combat. A medium-range phaser–2 shot against a down shield will produce more internal damage than a short-range phaser–2 shot at a strong shield.

One concept important to the proper application of firepower is anticipated damage. Learn the damage tables for your weapons by heart. Don't decide to fire a phaser and then look to see what damage it will do. Know instinctively how much damage can be expected, and plan your tactics accordingly. Don't overkill your targets.

It is perfectly acceptable to withhold one unfired phaser (or more) from your volley. This can complicate enemy planning as many tactics are defined by the term "after the enemy has fired (everything), you can..." ✪

FIRING ARCS

by Felix Hack

SFB would not be half as exciting as it is if it weren't for the many detailed restrictions on starship operations which exist throughout the game. One such facet which keeps SFB from merely being a glorified "space war" boardgame is the concept of limited firing arcs. Clearly, if players wish to survive and succeed, great attention must be paid to placing the enemy in your best firing arcs, ideally while avoiding the arcs of his primary weapons. This discussion will provide a few pointers toward this goal.

ARCS DEFINE TACTICS

Maneuver and firing arcs are closely related; the former is a tool for achieving firing positions with the enemy in arc. Conversely, the distribution of firing arcs of a ship's weapons helps dictate the kind of maneuvering that may be expected or required. For example, most ships can be divided into two categories: forward-centerline firepower and FA firepower.

Those ships with forward-centerline firepower can only achieve the maximum damage potential if they can line up the forward hex row (the one extending directly in front of the ship) on the target. An example here is the Gorn BC (with its LP/RP arcs) or the Hydran cruisers and command cruisers and unrefitted Kzintis (with their LF/RF heavy weapons).

Those ships with FA firepower can deliver roughly the same firepower across the entire FA arc. These include the Klingons (with FX/FA weapons), the Lyrans (largely FA), and Romulans (FP). These ships can utilize the more effective Oblique Attack.

Indeed, the Klingons are a special case, with the two hex-rows 60° either side of dead ahead being the most deadly arcs they have. The D7, for example, can fire all four disruptors and seven of its nine phasers on these rows. This is the basis of the Oblique Attack, which is covered in another section.

There are various exceptions and borderline cases. The Federation CA is truly an FA firepower ship, but is all-too-often flown as a forward-centerline ship to gain the effects of the extra two phasers (as all six can hit the same target only if it is directly ahead). The Lyran ships are largely FA types, but much of their firepower is based on the offensive use of the ESG, which requires them to come to very close range. At these close ranges, the LS/RS phaser–3s become a factor and force the ship to fly as a forward-centerline type. In either case, the off-side phasers could be assigned other targets (or fired as a follow-up attack after a change of facing) to allow the captain out of the mental rut that requires him to fire every weapon.

Those races with forward-centerline weapons should maximize their firepower by maneuvering their vessels so that all weapons may be fired in a single turn. This may be done by placing the enemy in the forward hex row (sideslips help). Conversely, if fighting such a ship, this hex row must be avoided. Since the ship is forced to point at the enemy, the range will generally be closed faster, making a breakoff more difficult. (This typifies Hydran maneuvers as they generally want to close the range as quickly as possible). A better solution would be to close and fire, then turn the ship 60° across the enemy bow, bringing a new shield and unfired weapons to bear for a second salvo. Note, however, that any time you turn you tell the enemy exactly where you will be for the next several impulses (barring an HET).

SPECIAL CASES AND OTHER CONSIDERATIONS

Beyond the obvious kinds of moves that will have to be conducted by a specific ship to use all of its weapons, extra possibilities must not be overlooked. Klingons can generally fire their forward phasers directly to the rear. Any ship pursuing such a Klingon had better be wary of the firepower that can come his way if he maneuvers into the same hex row. Klingon D5 war cruisers have extra wide disruptor arcs which can allow them to stay at 13-15 hexes from the enemy, crossing back and forth with the flank exposed and continually firing weapons. At that range, disruptors have a pronounced statistical advantage over photon torpedoes.

Players using ships equipped with plasma torpedoes should be careful to examine precisely which arcs the torpedoes can track and in which directions they launch or fire as bolts. Swivel mounts can allow a plasma-armed ship to close, launch (or fire them as bolts), and separate without being forced to point directly at (and rapidly close the range with) the enemy. On the other hand, if both LP and RP torpedoes are to be used, the ship must point at the enemy to place him in their narrow overlap or use the launch-turn-launch approach.

HETs are useful for suddenly bringing weapons to bear that the enemy thought would not be available yet due to speed and turn mode restrictions.

The weapons with the narrowest firing arc in SFB are the mauler and the probe, which are covered in separate sections.

Firing arcs are a fundamental component of the tactical planning required for SFB. Only through proper maneuvers that bring your weapons to bear can success be achieved. ✪

THE MIZIA CONCEPT

by Walter Mizia

The tactical principle that became known as the Mizia Concept first appeared in Nexus #7, in the first selection of Term Papers ever published. Since that time, it has become one of the most basic principles of the game *STAR FLEET BATTLES*.

The Mizia Concept holds that, instead of delivering a single massive volley on your target, you should distribute these same weapons over several consecutive impulses.

This is to take advantage of the structure of the Damage Allocation Chart. The first, or "A-Row," includes 11 possible items, distributed over 36 possible die rolls. Of these, 8 items (20 die rolls) are "one time per volley" hits, including numerous weapon, control, and power systems. These one-time hits are the key to the Mizia Concept. After a massive volley passes through the "A" and "B" rows, it won't reach weapons again until it works its way through a dozen less critical systems.

Consider the chart below, which shows the distribution of 72 damage points delivered as one massive salvo, as four separate 18-point mini-volleys, and as eight separate 9-point mini-volleys. The chart assumes perfect distribution of die rolls and assumes that the target ship doesn't run out of any systems.

SYSTEM	MASSIVE	MIZIA-4	MIZIA-8
Control	4	4	4
Transporter	2	2	0
Tractor	2	2	0
Drone	2	4	4
Phaser	8	8	12
Torpedo	2	4	4
Warp	8	8	16
Hull	32	28	20
Cargo	12	12	12

The difference in the four-volley distribution is in the four extra weapon hits, which, significantly, are heavy weapons. The eight-volley distribution (as you can see) shows greater tendency toward power and phaser hits.

In either case, the control hits are more likely to be concentrated on the Bridge and Aux Con, rather than distributed across all four types of control systems. This can be critical if the target ship is using legendary officers, but otherwise will not tend to cause the target to go uncontrolled.

Because few ships have 32 (or even 28) hull boxes (not to mention cargo), some of these hits will become power hits, but the distribution of these will be the same in each case.

The eight-volley attack is tactically unlikely due to target countermeasures. Even so, it could be possible to arrange a large number of volleys, particularly if seeking and direct-fire weapons can be combined on each of four impulses.

THE POINT OF THE MIZIA CONCEPT

Generally speaking, a Mizia Concept attack (several mini-volleys) will tend to produce more weapon hits and fewer hull and power hits. This will tend to leave a ship which has the power to escape, but lacks the weapons to fight. Such a ship will usually take the tactically prudent option and disengage. This leaves the successful ship in possession of the territory, but leaves the defeated ship undestroyed. In wartime, when the strategic objective is to destroy enemy ships, the Mizia Concept can work to your disadvantage in the long-run.

A single massive volley will tend to produce more power and non-weapon hits. This will leave a ship that has weapons to fire, but lacks the power to successfully disengage. If the volley is not truly massive, it will leave a ship that is stripped of all non-essential systems but still a dangerous opponent.

It should also be pointed out that mini-volleys will often produce the only chance (however unlikely) of destroying all of a target's weapons. Four phaser–3s fired separately could theoretically destroy four drones, four torpedoes, and eight phasers. Even though this is very unlikely, it would be totally impossible if all four phaser–3s were fired as a single volley. This also explains why a couple of shuttles that survive until the end of the game can have an importance out of all proportion to their size.

To be successful using Mizia-type mini-volleys, it must be arranged for the damage to strike a down shield. A ship which has just turned (and which cannot turn again — short of an HET — for several impulses) is a prime target for this form of attack. This requires careful study of the impulse chart. Even if the number of impulses the down shield will be facing your weapons is limited, there are several possibilities to create additional volleys within the same impulse. Seeking weapons and direct-fire weapons are always separate volleys. Mine damage is also a separate volley, being scored in the Movement Segment, thus making a T-bomb attack a valid option.

Hellbores have the option of firing before and/or after other direct-fire weapons, creating even another volley. More importantly, they can still hit the down shield regardless of which way the ship turns. Hydrans thus become the premier users of the Mizia Concept.

Enveloping plasma torpedoes are also resolved as a separate volley and have a Mizia effect.

PPDs have a tremendous advantage since a PPD produces several volleys over successive impulses, and every PPD counts as a separate volley even if striking on the same impulse.

DEFENDING AGAINST A MIZIA ATTACK

A ship subjected to a Mizia-type attack has relatively few countermeasures available. Putting reserve power into general shield reinforcement is ineffective with one shield down and can be countered by minimal damage scored on a different shield.

The best defense is to present another shield to the enemy. This usually requires turning the ship, and if the enemy has done his job properly, it won't be possible until all of the volleys have arrived. Sometimes a turn isn't required to bring a new shield to bear. If the ships are approaching at oblique angles, simply increasing speed or sideslipping might take the down shield out of the line of fire.

Even if you do manage to turn another shield toward the enemy, some weapons (hellbores, enveloping plasma torpedoes, or plasmatic pulsars) can strike a non-facing down shield, or another ship could fire from this position. Hydrans often put fighters out to both flanks, insuring that after the ship has knocked down an enemy shield some of the fighters will be able to hit the down shield even if the target turns.

If you expect such an attack, you could fire your own mini-volley of one torpedo-hit weapon, two phasers, and one drone-hit weapon. Thus, the damage will fall on empty weapons. As each enemy mini-volley arrives (and assuming it destroys the expected weapons), fire another mini-volley of your own to provide unloaded weapons on which the next enemy volley can be scored. This will allow your ship to continue closing with the enemy, with your firepower becoming more effective as the distance narrows.

Another defense is to use electronic warfare to lessen the effect of the subsequent volleys. A ship which is vulnerable to a Mizia Concept attack would be a prime candidate for the assistance of the squadron's scout. ECM drones could be launched to gain a quick benefit; an MRS shuttle will also work but has a quarter-turn delay. In desperation, and if eligible, a wild weasel could provide massive ECM support. ✪

DISRUPTOR TACTICS

by David Zimdars

The disruptor bolt is the most common direct-fire heavy weapon in the Star Fleet Universe. Klingon, Kzinti, Lyran, and Tholian ships carry them as standard equipment. Orion Pirates (rarely) and the WYN auxiliaries (commonly) install them in option mounts.

The key to the disruptor is that it is classed as a heavy weapon, but fires every turn. Since the firepower of most heavy weapons is averaged over their arming cycle, this means that a disruptor has the same total firepower as a photon or plasma-G/S, but spreads it out over more turns. This has advantages in that it creates more firing opportunities, but disadvantages in that it lacks the ability to deliver a single knock-out punch. Disruptor-armed ships must pound their enemies to death over an extended period. This requires them to get to their fighting range and stay there.

The use of the disruptor is fairly straight-forward. However, by themselves they lack the necessary punch to cripple the enemy quickly. Therefore, careful strategy is required to use them to best effect.

BEFORE COMBAT

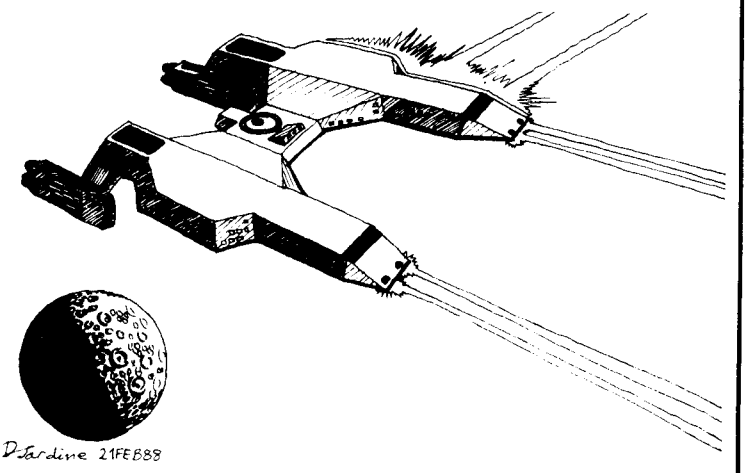
A thorough knowledge of the vessel you will pilot is a prerequisite to victory. There are several traits common to disruptor-armed ships that can be helpful to note.

First of all, most ships carry secondary heavy weapons in addition to the disruptor. Klingon and Kzinti ships carry drones while Lyran vessels sport the ESG and Tholians have the web. The use of these secondary weapons in conjunction with the disruptor can deliver a one-two punch impossible with the disruptor alone. Expertise in the use of these weapons can tilt the game in your favor.

Secondly, not all disruptors are created equal. Disruptor range varies with the type of ship, as are noted on their SSDs or (for Orions and WYNs) in Annex 8A. You should also note if your ship is equipped with either DERFACS or UIM.

Remember to study the Disruptor Bolt Chart if you are not totally familiar with it. You do not want to pass up firing opportunities later in the game.

Disruptors are not restricted to the FA arc like the photon torpedo. Examine each ship closely for varying arcs (e.g., the restricted arcs of the Kzinti CS or the expanded arcs of the Klingon D5). Knowledge of your arcs may allow you to fire from an unexpected angle (hopefully through an open shield).



Finally, a captain should be familiar with the power curve of his particular ship. A few quick mental calculations of your maximum speed at different levels of disruptor arming can be quite helpful. Unlike ships equipped with multi-turn arming weapons, the power curve of a disruptor-armed ship is relatively stable. This allows you to keep a constant speed and power secondary systems, such as tractor beams, every turn. You can skip the arming of some or all disruptors on one turn without affecting their use in future turns.

Note particularly that non-X disruptors cannot be held. A Federation ship can hold loaded photons for half the arming cost (or full overloads for an amount equal to the normal arming cost), but a disruptor-armed ship must pump power into these weapons every turn in order to fire them every turn.

LONG-RANGE COMBAT

If the scenario begins with both combatants at long range (i.e., 16-40 hexes), it is often to your advantage to fire your disruptors at the enemy during the one or two turns spent closing the distance. If you are in a fleet battle, effective long-range firepower can bloody the nose of a small ship, possibly giving it a few internals. Remember to concentrate your long-range firepower on a single enemy vessel in order to maximize the chances of shield penetration.

The rate of closure between you and your enemy is a significant factor in determining when to fire. Above all else, make sure you will not enter overload range without your disruptors armed. While fire in the 9-15 range bracket has attractive damage, and at 13-15 disruptors have better expected damage than photons, it can be dangerous. There is a significant chance that you will allow your opponent an unanswered shot within overload range.

A good tactic is to start the game slow, closing over a period of two turns. Fire your first shot at range 22-30. With standard disruptors you have a 33% chance to hit. If your ship is equipped with DERFACS, this is icing on the cake. Firing volleys at this range allows you plenty of time to recharge for a second shot. If both you and your opponent are moving slowly, fire your second volley at range 16-22. Do not risk disabling your UIM at this range since it is much more effective in conjunction with overloads. If your opponent is really burning the antimatter, hold your fire until range 8. Overload disruptors (with reserve power if necessary).

A narrow salvo can be useful when firing disruptors at long range. Although you are virtually guaranteed a hit with four or more individually-fired disruptors, you may not break through your opponent's reinforcement. Since reinforcement power is lost at the end of the turn anyway, you're wasting your time if you can't get a few "real" shield boxes.

One tactic often used is the "Klingon Saber Dance." Here, the disruptor-armed ship maneuvers at long range, moving into the 9-15 hex range bracket to deliver a narrow salvo of disruptors (followed by a volley of phasers), meanwhile staying out of overload range. If the target doesn't retaliate, its shields will be steadily worn down. Eventually, the Federation (or other multi-turn arming ship with overloaded weapons on hold) will tire of a one-sided long-range duel. If he can't catch you, he must eject the overloads and start loading normal torpedoes so that he can hit you. That's the time to charge!

If your opponent has multi-turn arming weapons, he may choose to hold his long-range fire in reserve. If he does fire, you may be able to close and fire your overloaded disruptors before he has rearmed. In any case, as long as it does not delay your close-in attack, long-range fire is nearly always to your benefit.

Disruptors have a tremendous advantage over multi-turn arming weapons at WS-0 or WS-I. A disruptor-armed ship is able to fire immediately during the one or two turns the enemy spends charging his weapons. If you are at short or medium range at the beginning of the scenario, you may be able to score internal damage before your opponent can reply in kind.

Lastly, consider firing your ship's phasers in conjunction with your disruptors. The tactics are generally the same. Above all, be sure to have them recharged in time for the close-in battle.

THE CLOSE-IN BATTLE

At range 8 or less, the performance of every direct-fire weapon improves dramatically. Most weapons can be overloaded at this range, doubling the damage scored. The disruptor bolt is no exception. Therefore, mastery of short-range disruptor combat is the key to victory.

Remember, the disruptor is a relatively weak heavy weapon. To win, you must take advantage of its ability to fire every turn. As such, there are several goals in a successful plan of attack:

1. Fire at a range where you can achieve maximum damage while ensuring that your ship is not crippled by return fire.

2. Use your secondary weapons to maximum benefit in order to supplement your disruptors.

3. Maneuver your vessel so that you will able to fire your disruptors immediately at the beginning of the next turn, in addition to firing toward the end of the current turn. The optimum attack is with overloaded disruptors at point-blank range on a ship that is reloading multi-turn weapons.

4. Utilize the Oblique Attack to maneuver in and out of the enemy's overload range, scoring damage while he wails in frustration at the lack of a clean shot.

5. The UIM gives larger Klingon and Lyran ships the same chance of a hit at range 8 as you will have at range 1. However, you'll do only 60% as much damage, and it can break down and leave you unable to fire for 32 impulses.

Careful planning is necessary to implement this plan.

KNIFE-FIGHTING RANGE

First of all, remember that weapons fired on the previous turn may not be fired without at least an eight-impulse delay. Don't get caught inside overload range without your disruptors ready to shoot. They may be destroyed before you can fire them.

Secondly, the correct choice of speed is essential. You want to close with your opponent, fire, and have enough time to maneuver your ship in preparation for next turn's attack. Some hints:

DON'T go so fast that you cruise out of overload range and make it difficult to fire your second volley.

DON'T go too slow and end the turn at very close range (0-2). Inevitably, your weapons will be out of arc, and a down shield will face the enemy.

Your goal is to end the turn within range 5-8, facing the enemy, and with eight impulses since you last fired your weapons. This is not an easy maneuver. Picking the right speed can be a real judgment call. Turn modes and the movement of your enemy are terribly important. Plotting a theoretical energy allocation for your enemy can be a big help in predicting his speed. In general, your rate of closure should not exceed 20 hexes per turn.

Consider an HET to set up your second attack. Keep in mind that you cannot HET on the first impulse of any turn. Perform your HET before you are ready to fire. Only use it if you are able to bring your weapons to bear on a weak shield.

OVERLOAD RANGE

Choosing the most advantageous range to fire overloaded disruptors is very important. The damage of the overloaded disruptor varies greatly with range, but the odds of hitting do not. Consult the Disruptor Chart for specifics. Note that standard disruptors may not fire at range zero, and overloaded disruptors will generate feedback.

In general, the closer the range to your opponent when you fire disruptors, the better. However, to successfully fire your second close-in volley, you must avoid being crippled by return fire. Therefore, unless your opponent is unable to retaliate, an overrun attack (at least for the first volley) is not very profitable.

Many players allow "me-too" fire (making a decision to fire simultaneously after hearing your opponent's fire decision). While unrealistic, it isn't uncommon. Don't allow yourself to be suckered into unloading your entire volley. If he won't be able to turn, fire only one disruptor and a couple of phasers (all you are likely to lose to a single penetrating volley) and save the rest for your next impulse of movement, when you will be closer. Watch his turn mode, and don't let him split your fire over two shields. If he does an HET, he is either burning his bonus or taking a risk (or both), and is probably giving you a weaker shield in any case.

If your opponent holds his fire, it is best to fire your disruptors at range 3-4. (You can add phaser–1s if at range 4, phaser–2s if at range 3.) Depending on your luck and your opponent's shield strength, you have a decent chance of scoring 10-20 point of internal damage.

Try to have your secondary weapons impact at this time too.

If, however, they impact at a greater range, and your opponent can turn before you move again, fire your disruptors anyway. This will provide your attack with a one-two punch. Not only does the previous damage weaken the shield for your disruptor fire, but if internal damage was actually scored, the Mizia Concept comes into play. Obviously, timing is the key to successfully executing this type of attack.

If your ship employs ESGs, and they are set for range less than 3, it is likely that you will want to close further before firing your disruptors. Your opponent will likely know this and hold his fire. Again, while the ESG will do substantially more damage at small radius, you are gambling and may come out crippled.

OTHER CONSIDERATIONS

Deciding when to employ the UIM module can be difficult. Using it during the first turn of attack is a real gamble. If it burns out, you cannot fire your second volley for 32 impulses. The UIM is beneficial on the second volley, however, since it can help balance the odds if a disruptor has been destroyed. Remember to guard the UIM module since it is a particularly tempting target for a hit-and-run raid.

If you received the short end of the stick during your exchange with the enemy, consider repairing a disruptor with continuous damage repair instead of a phaser. Torpedo hits are relatively rare on the DAC, making such repairs more durable. More importantly, a typical heavy cruiser can repair a disruptor to range 10 in one turn for 4 points (see Annex #9). Remember, once a hasty-repaired disruptor is declared to be repaired, further repair cannot extend its range. You shouldn't need the longer range, but the short-legged disruptor should be the first fired and the first given up to subsequent damage.

If your opponent is caught in a web, or he is moving slowly, you essentially control the attack. In this case you have much more freedom in choosing a speed.

Its rapid-fire capability and accuracy make it worthwhile to fire at drones, even despite the penalty from (FD1.52), which can be offset with electronic warfare.

Once you have fired and damage has been resolved, begin maneuvering for your second volley immediately. Avoid closing any further with your opponent. Assume he is a resourceful captain and has several tricks remaining.

The tactics for the second attack run are similar. If your opponent has multi-turn arming weapons (and if he survived), be particularly conscious of your position when they are about to come back on-line. Hopefully, you will have given better than you got, and you are not about to receive too much punishment.

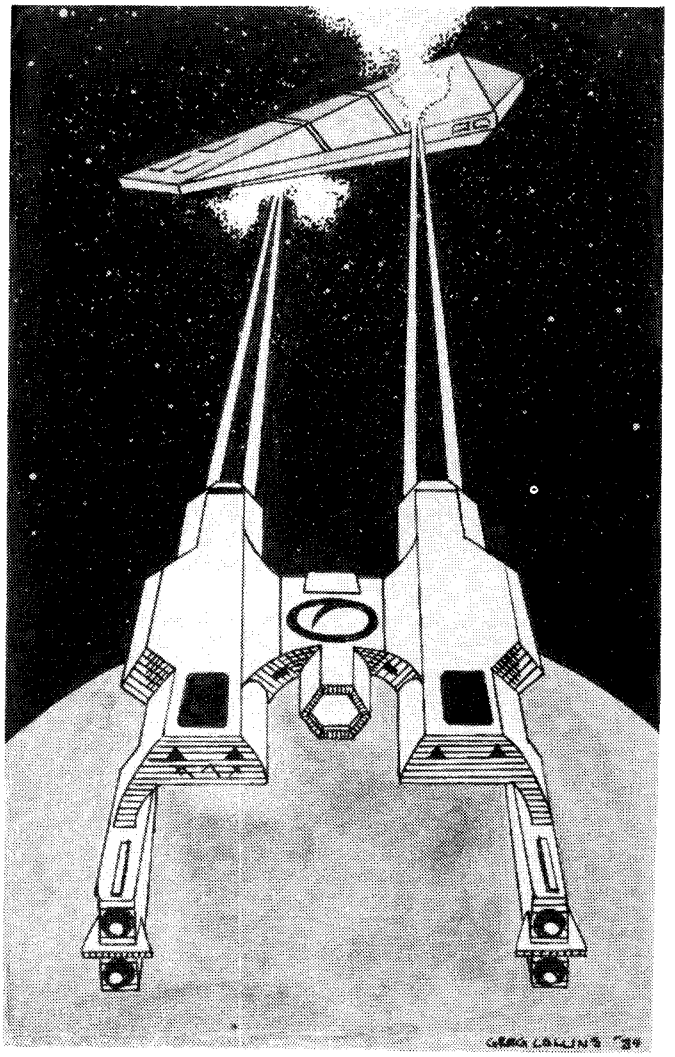
Disruptors have a special effect on Andromedan PA panels, creating a leak at lower levels than other systems, but this simply makes up for the inability of a disruptor-armed ship to penetrate PA panels with one turn of firing.

Finally, realize that these tactics were designed to defeat a reasonably intelligent, tactically sensible opponent. Unfortunately, there are always Federation captains that live (and die) by narrow salvoed photon torpedoes at range 8. If he hits, you are virtually fried. Returning fire at this range will score relatively few internal hits. Consider showing the Federation captain that you can gamble too. Withhold your fire. If he misses, overrun the poor boy and blow his doors off. Or convince him that only novice captains fire that way.

CONCLUSION

In closing, realize that a good captain shouldn't follow textbook tactics blindly. If your opponent presents you with the ultimate opportunity for instant victory, by all means take it. Or if you are about to be violently broken down into your component atoms, don't commit suicide by the book.

It is not practical to cover all possible tactics for the disruptor in an article of finite length, but we have illuminated the basics for the novice and provided an alternate view for the veteran commander. In any case the best way to become proficient with the disruptor is to play the game. A captain with experience doesn't miss opportunities, he creates them. ✪



PHASER TACTICS

by Frank Crull and Stephen V Cole

Phasers are truly the most adaptable weapons in the game. Besides the obvious use against enemy ships, they are excellent defensive weapons. Phasers are very effective against drones and shuttles and are the only weapon that can affect plasma torpedoes. Phasers tend to take up the defensive slack, in part, because most ships have phasers facing in every direction, while the heavy torpedo weapons face only toward the front.

TYPES OF PHASERS

Phasers come in five different types, all of which have their own missions. Phasers can be evaluated on their killing capability (against ships, shuttles, or drones) and by their effective range. Generally, you should only fire at targets beyond effective range if you can afford to waste the shot.

The phaser–1 (or ph–1) is the standard ship-mounted phaser. It is used by all races (except the Andromedans). A ph–1 will score at least some damage out to a range of 5 hexes, with an excellent chance of a hit out to a range of 8 hexes. At very short ranges, ph–1s become one of the hardest-hitting weapons in the game. They have a guaranteed kill against a standard type–I drone at a range of 1 hex, an 84% chance of a kill at 2-3 hexes, 66% at 4 hexes, and 50% at 5 hexes. Ph–1s are considered effective out to 5 hexes, marginal to 8 hexes, and ineffective out to 75 hexes.

The ph–2 is generally considered to be the poor relation of the ph–1, mostly because it consumes the same power while doing less damage. (It is, of course, the same phaser with a "lowest bidder" fire control gyro.) Only the "western races" (Klingon, Lyran, Hydran) and the Andromedans use it, and they consider it something of an embarrassment. The ph–2 is, however, an entirely different weapon from the ph–1 in a tactical sense. A drone kill (on a standard type–I) is guaranteed only at range zero, and effective range extends only to 3 hexes, with marginal effectiveness to 8 hexes and shot-in-the-dark capabilities to 50 hexes. Against heavy drones, however, it takes two ph–1s *or* two ph–2s to guarantee a kill out to 3 hexes. The Klingons attempted to match the six ph–1s of the Fed CA with nine ph–2s on their D7 and, in that specific case, came out ahead in the bargain with the poorer weapon (causing the Feds to add two more ph–1s in a refit).

The ph–3 is a short-range phaser designed primarily for defensive work, although it is fired at ships when the opportunity presents itself. It is effective to two hexes and rapidly slides from marginal to hopeless beyond that range. The only good thing is that it takes only a half-point of power to fire it, and they usually come in pairs. As a drone defense weapon, it never met the expectations of its designers as it has only a 66% chance of killing a type–I at range–1 and 50% at range–2. Like the phaser–2, however, it is as good as a phaser–1 against heavy or armored drones (or targets at range 2-3) as it still takes two of them to do the job. A pair of these will consistently produce more damage points (for the same power) than a single ph–1 (out to a range of 2 hexes).

The ph–G is a Hydran weapon with some use by the Federation and Orions. It has two advantages (it can fire four times, and yet consumes the power of two ph–3s) and one drawback (a single hit destroys the equivalent of four weapons). Tied to Aegis, it can make a ship drone proof against all but the heaviest attacks. Carried on a fighter, it turns a shuttle into a ship-mangler. Teamed with the dual-fusion beams on a Hydran fighter, it turns a shuttle into a ship killer. For short-range work, a ph–G will do more damage to a ship than a ph–1, and for the same power.

The ph–4 is mounted only on bases (and a couple of monsters). This is a true heavy weapon, with all of the phaser advantages. It has a guaranteed kill on a type–I drone out to 10 hexes and a 50% chance out to 17. It is effective to 13 hexes, marginal to 25, and can reach out and touch someone at 100 hexes, the longest-range direct-fire weapon in the game. At 3 hexes or less, a pair of these monsters will penetrate the shields of a cruiser, and they can probably do so out to 5 hexes.

Effective range is closely tied to the EW status. Within their effective ranges, phasers are "range of effect" weapons that will always score damage; you just don't know how much. Outside of those ranges, when zeros start appearing on the lower lines of the chart, an EW shift can change a few points of damage into a complete miss.

A QUESTION OF POWER

The ph–1 is the most efficient converter of energy points to damage points in the game, with the exception of a gatling phaser or ph–3 at point-blank range. For this reason, phasers normally have first call at the power smorgasbord.

It is standard procedure in duels to power all of your phasers early, and then refill the capacitors as much as you can. This way, the power will be there to fire other phasers in later turns. Since all of the capacitors are linked, the unfired off-side waist phasers on a D7 can provide power to fire the forward phasers on the next turn.

If it comes to a choice of arming the phasers or the heavy weapons, priority should probably go to the phasers except at very short range, and then only if a heavy weapon can be armed and fired immediately.

If a ph–3 will do the job, don't fire a ph–2 or ph–1. If all you have is one of the heavier phasers, fire it as a ph–3 and save the half-point of power for the next turn.

PHASER TACTICS

Phasers are the "swing" weapons, able to serve in offensive or defensive roles. Whether you use your phasers against his ships, or save them to pick off seeking weapons, depends on how many seeking weapons (shuttles, fighters, etc.) you can expect to face in the next turn and how many other weapons you have available.

In a single-ship duel, this is relatively easy as you know exactly what weapons are available and have a very good chance of guessing their target. In a fleet battle, this becomes increasingly complicated, and you will have trouble balancing efficiency (firing every turn at a worthwhile target) with safety (engaging every incoming threat).

Generally, you will need to analyze the seeking weapon threat. How many shuttles does the enemy have ready? How many seeking weapons can he fire? How many can he control? How soon will they impact, compared to your weapon recycle times? This will give you some idea of how many phasers need to be held in reserve. Of course, you don't have to stop every drone that he can fire (you don't get any bonus points for undamaged shields at the end of the scenario!), and an exact count will be impossible because of the probabilities involved.

Keeping an unfired phaser available at all times is an excellent concept in a short-range knife-fight as many of the tactics for those situations start with "after the enemy has fired all of his weapons...." Fire at least one phaser by impulse #25 (so it will be ready on impulse #1 of the next turn) and hold your last phaser until impulse #32, and you will always have something in case of unexpected threats. Of course, you can gamble on this. If it's impulse #29 and he's about to turn a down shield away from you, the 4-8 points that a ph–1 can score at range–1 may look awfully tempting. While he may have a suicide shuttle warmed up in the bay, you may nail it with internal damage anyway, and your one phaser has only a 66% chance of killing it. Of course, if you have some idea of what weapons he has available and whether a ph–1 would make any difference, the decision becomes easier.

When using ph–3s against drones, engage at a range of two hexes. While your chance of a kill is only 50%, you will get another chance at range–1, and that shot will be a guaranteed kill. If you didn't have time to identify the drone, fire anyway at range–2. If you score four points but don't kill it, it's either an armored drone or a type–IV. Either way, you have a guaranteed kill with another ph–3 at range–1 (given four points on the first shot, and assuming it's not both armored *and* a type–IV, but then, you did use labs to identify it, right?). If you have only one ph–3 available, wait for range–1 as this will have a slightly better chance. If you are firing drones at a target with ph–3 defenses, you can see the advantages of larger and armored drones and of firing your drones head-on to a closing target. If timed correctly, the drone will jump from range–2 to range–0 (or range–3 to range–1) in a single impulse (when both the drone and ship move), eliminating this defensive strategy. This can be countered by watching the drone as it moves toward you and calculating its likely approach. A sideslip several impulses earlier may avoid the range jump. It is possible to time it so that the drone is in an adjacent forward-flank hex when movement is scheduled. If you sideslip away, the drone will spend two impulses at range–1 and should be in the arc of your rear phasers for the second shot.

This does not mean you do not fire on drone-armed ships. You simply do not if you could be hit that turn. If your opponent is reloading or can't hit, fire away if you can spare the energy for reloads. If he tries to chase you down, simply recharge your phasers and dump your heavy weapons. Phasers are cheaper and will recycle faster. If your opponent gets too close, forget the phasers and plan alternate measures of dealing with the drones or plasmas, like tractors or WWs.

When one is fighting in a fleet action, one must try to determine the target of seeking weapons to help assign defenses. Keep some phasers available. If the seeking weapons are moving away from you, you can fire the reserve phasers. If they are moving in your general direction, you must consider the possibility that you are a target and retain your phasers for your own defense.

LOSING PHASERS

Phasers have a unique damage rule, which says that only facing phasers can be hit. Consider this when deciding which phaser to score any damage on. Naturally you will want to score damage on already-fired phasers most of the time, but you may not have the choice with volleys from some directions. You can arrange to turn your ship in such a way that the enemy fire will strike shields facing away from your unfired phasers. Generally, you will want to give up the ph–3s first although an unfired ph–3 may be more valuable in some cases than an already-fired ph–2 (or even ph–1).

Phasers are the most commonly hit weapon on the Damage Allocation Chart, making them particularly vulnerable to a Mizia-type attack. Most Klingons don't realize that since all (or most on some ships) of the phasers can fire to the rear, all of them can be struck from that direction. A Mizia-type attack on the #4 shield can give him the opportunity to prove that disruptors are, indeed, the most useful weapon.

Phasers are relatively inexpensive to repair. They can even be repaired to a lower status even faster. However, due to the frequency of phaser damage, phaser repairs may not be very survivable.

Always hold your charges in your phasers if you don't get a clear shot at a down or weak shield (or can fire several phasers at once). You are only wasting energy and the energy saved will help you later. ✪

NON-VIOLENT COMBAT

by Graeme Cree

While "non-violent combat" seems at first to be as great a contradiction in terms as "military intelligence," it is a section of the *STAR FLEET BATTLES* rulebook that deserves attention in a comprehensive TACTICS MANUAL.

Basically, the NVC targeting system replaces the DAC with an alternative table that is designed to concentrate damage on the weapons and engines, rather than on the more populated hull areas. This cuts down on the loss of human (or whatever) life.

The whole idea is an exercise in overactive idealism.

Simply put, there are very few circumstances under which this combat system should be used. One possibility is when a pirate is attacking a freighter, and the victory conditions are based on captured cargo boxes. Another possibility is when two players agree to be bound to the system for a single scenario, just to see how it works. Otherwise, you can safely ignore the entire concept and rightfully insist that no one else use it.

Lest anyone waste any more good gaming time trying to think of some possible situation in which NVC could be used, let's look at the percentages:

System	Control	Power	Hull	Wpns	Miss
DAC	6%	22%	44%	28%	00%
NVC	2%	15%	07%	12%	64%

This analysis includes the distribution of random hits. All percentages have been rounded to whole numbers. The target is assumed to be a cruiser-sized ship with no cargo, struck by a 36-point volley with perfect distribution of die rolls.

As you can see, the NVC system does avoid damaging the hull, but it also reduces the hits on the weapons and power systems. If your intention is to avoid killing enemy crew units (something that is seldom if ever a consideration within the *game* system), NVC will do the job. But don't think that you are going to get *more* power and weapon hits with NVC that you will with the DAC. ✪

SHIELDS: BASIC CONCEPTS

by Stephen V Cole

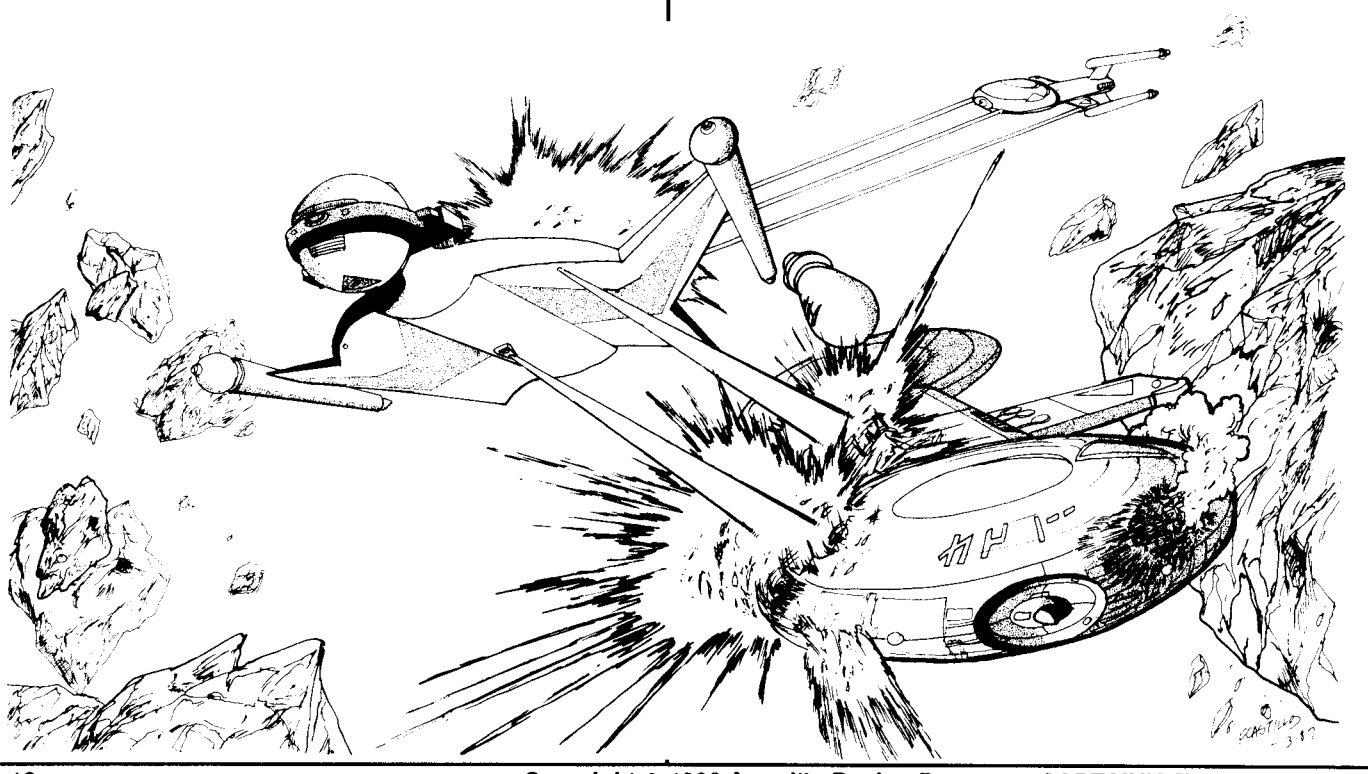
Shields are the primary defense of most ships in the game. Other defenses (weapons, tractors, electronic warfare) are intended to prevent damage from striking the shields. Shields can absorb tremendous damage, but are very slow to repair. In a scenario, the only really effective repairs possible are to create a couple of points of shielding that can be reinforced or to balance two or more weak shields and distribute damage from hellbores or enveloping plasmas less destructively.

Even though most players fly their ships as if there were, there are no bonus points for winning a scenario with one or more undamaged shields. If a drone is about to hit a non-facing shield that is strong enough to take the hit, and your only defense is a phaser that can also bear on a down enemy shield, let your shield absorb the drone while your phaser scores another couple of points of internal damage. This must be balanced with judgement. If the shield gets too weak, it will force you to maneuver to turn it away from potential damage.

The #1 shield is the most crucial as you need this shield (preferably in conjunction with either the #2 or #6) to approach the enemy with your weapons facing toward him. You should maneuver during the initial encounter to take the first enemy salvo against either the #2 or #6 shield, preferably under circumstances where the shield cannot be penetrated.

If a shield is reduced to only a couple of points, it may be preferable to drop it entirely. This is particularly so when the enemy has fired most of his weapons, and when your ship is undamaged and can absorb some internals without losing combat power. Doing so allows you to raise that shield next turn, when energy allocation can provide reinforcement, to use transporters.

Finally, don't forget your "seventh shield," the hull boxes and other expendable "soft" systems of your ship. These can absorb some of the first damage to penetrate the actual shields. This must be accounted for tactically. If an approaching drone will penetrate a weak shield, you might let it do so (firing the phaser at the enemy) if your ship's "fat" can take the damage. ✪



OVERLOADS

by Felix Hack

Without overloads, there is no victory. At least not very often. Overloads lead to crippled and destroyed ships. Long-range duels lead to disengagements — a victory, but not a decisive one. Overloads allow you to achieve maximum damage with direct-fire weapons. Overloading weapons, however, does suffer from some drawbacks which somewhat counterbalance the benefits. This is a discussion of those factors and their bearing on the decision to overload.

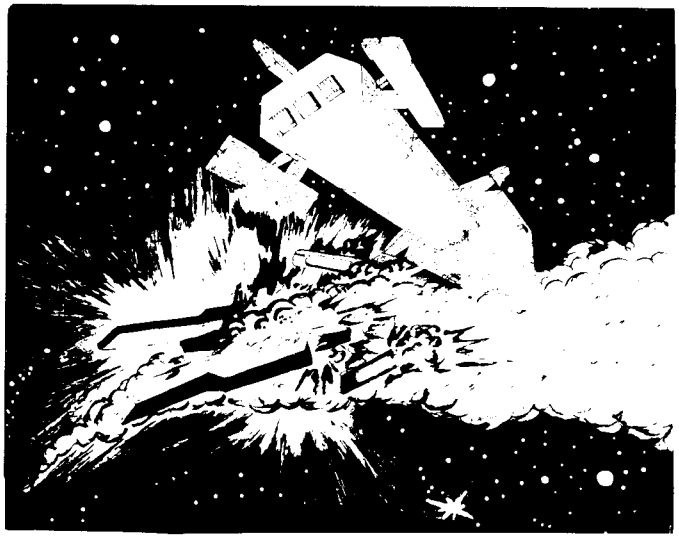
The benefits of overloading are, first, the greatly increased damage output and, second, the ability to fire at point-blank ranges where fire might otherwise be prohibited. Drawbacks are the large power requirements, the inability to fire beyond eight hexes, the feedback damage taken at point-blank range with some weapons, and other restrictions on normal operations, such as a higher holding cost or the inability to hold them at all.

If during a battle a ship is in a position to fire at close range at an enemy unit, if it has the requisite power and weapons available, and if maximum damage is desired, then by all means overloads should be used. Similarly, if ships start a turn at point-blank range, overloads may be the only way to even allow fire (since some non-overloaded weapons have minimum ranges). Holding back and loading regular weapons may leave the ship gutted before the enemy opens the range. Since feedback damage is usually only scored if the weapon hits, it should not be a deterrent to firing overloads as the benefits greatly outweigh the risks.

A problem with overloading is the large power requirement. If a ship is short on power, it may find that arming phasers in addition to normal loads on the heavy weapons (or perhaps just by themselves) instead of overloading can do more damage for the same power. The photon torpedo has an advantage here as it can be selectively overloaded to the highest affordable level.

OVERLOADS: WEAPON OF DECISION

Deciding whether to overload a weapon may also depend on such complex factors as short-term anticipated damage. Suppose a captain expects to take sufficient damage to possibly lose one or two heavy weapons before he can fire them. In that case he (or she) should allocate the available power into however many weapons can be expected to survive, probably overloading them. Leaving a weapon completely unarmed may seem foolish, but it is better to have it destroyed without any power having been allocated to it than to have six points of overload energy go down with it.



Overloading weapons can also provide some of the statistical effect of narrow salvoes. For example, you definitely need to score 16 points of damage (even one point less just won't do the job). You have two photon torpedoes available, each of which does 8 points with normal loads and 16 points with overloads. (You are within overload range.) Assuming a 67% chance of a hit, you have a 44% chance of two hits (winning the scenario), a 44% chance of one hit (in this case, the same as no hit at all), and a 12% chance of no hits. Fired as a narrow salvo, you have a 67% chance of two hits (16 damage points) and a 33% chance of no hits. But one overloaded torpedo has a 67% chance of doing the required damage, and if there is enough energy to fire two overloaded torpedoes (independently), you have an 89.1% chance of at least one hit (and the 16 needed damage points).

A player can assess how much damage is required for the situation and tailor his weapons loading to improve the odds. Alternatively, a player could fire several consecutive narrow salvoes of normal loads, but that requires the situation to be fixed (slow speed) for several impulses. In the reverse situation, wanting to do at least some damage, the player should fire as many weapons as possible to decrease his deviation from average expected damage, even if this means overloading none of them.

TACTICAL LIMITATIONS OF OVERLOADS

Most overloaded weapons produce additional damage in proportion to the additional power applied. Some weapons (fusion beams) only increase damage by 50% for an 100% increase in allocated power. If a power shortage exists when they are fired, it is probably better to fire two standard beams for 200% damage than one overloaded beam for 150% damage.

If ships are closing on each other from long range, the 8-hex limitation on fire may be a serious drawback to overloading. Once a weapon is overloaded, it can't be un-overloaded without wasting it and starting the arming cycle over again. The large power requirements will likely be broadcast in the form of lower speed to which the enemy may respond by firing outside of 8 hexes and turning away (the Oblique Attack).

One tactic would be to overload some weapons and not others, giving you enough speed to get into overload range and something to fire if that is not successful. This approach, however, leaves the ship somewhat short of firepower either way. It can use only two torpedoes at long range, and at short range it will fire two normal and two overloaded weapons (as opposed to four overloaded ones). Reserve power to finish the other torpedoes is useful here, but then there is never enough reserve power to go around. It may be helpful to try to end the movement for a turn close to or within 8 hexes range although the enemy can possibly escape an overloaded shot early in the next turn. In any case, don't overload the weapons until you are sure of the range. Nothing is more frustrating than to chase your opponent around the board for six turns with the overloads you prepared before the scenario begins. During this time, of course, your opponent is picking at your shields with standard loads.

On a weapon-specific note, observe that fusion beams fired at point-blank should definitely be overloaded if the power is available, e.g., not needed for phasers. Even a suicide overload is possible here since the battle won't likely continue much beyond a point-blank situation, and such a use can only bring it to an end more quickly. Note that only suicide overloaded fusion beams will cause internal damage to the firing ship.

PPDs fired in the overloaded mode are somewhat tricky to use; the enemy has to stay within range and arc for six consecutive impulses. Tractoring the target (by a second ship) may help keep it in range.

To win a game of *STAR FLEET BATTLES*, a player will probably have to use overloads sooner or later. It had better be sooner if the player wants to have a later. ✪

DRONE TACTICS

by Alan M Gopin

Drones are the descendants of the tactical missiles used by wet navy ships and aircraft during the twentieth century on Earth. A drone is a small, uncrewed, warp-capable vehicle that contains a short duration constant speed engine, a warhead, and a guidance system that seeks reflected scanner energy. Some advanced types generate their own scanner signals, and some smaller anti-fighter types seek the energy output of their targets.

Drones are, second only to phasers, the most commonly used weapons in the game. They have the advantage of potentially doing more damage than a phaser-1 at no energy cost to the launching ship, and the effect of a drone warhead does not decrease with range. However, they can be intercepted, are available in limited quantities, and are relatively easy to destroy individually.

BASIC PRINCIPLES

The essence of all offensive drone tactics is mass and timing. An effective drone attack involves massing so many drones on the target that they overwhelm the defenses. However, the degree of concentration is the critical decision for the drone-using attacker. To minimize drone losses from ADD and phaser fire, it is desirable to mass all the drones in a single group. This makes the drones unacceptably vulnerable to wild weasels and transporter bombs and also allows the drones to be avoided by maneuver.

The best compromise is to launch several groups, with a mixture of type–I (single space) and type–IV (double size) drones in each group. This allows enough dispersal to make the drones hard to avoid and also maximizes collateral damage if the target uses a wild weasel. The drones should be spread across a 3–5 hex front so that they can't be avoided by maneuver and timed so that each group arrives on consecutive impulses. This will maximize the probability of follow-on groups hitting an open shield and will also tend to do more damage to weapons and power systems (i.e., the Mizia Concept). Avoid spreading out your damage over two shields. If you can, launch your groups so that they will all hit before he can turn.

WHEN TO USE DRONES

There are several cases when drones should be used as part of your coordinated attack.

First, there are targets of opportunity. These are ships that cannot effectively defend themselves from drones for some reason. A ship that is not moving fast enough to evade the drones and will not have time to cycle its phasers before the drones arrive is a prime example of this.

Second, drones can be used for attrition. If a wave of drones is large enough to be considered a threat, it has to be dealt with by the defender or it will cause unacceptable damage. To be considered a threat, the wave of drones must be large enough to knock down a shield and cause internal damage. About four type–I drones are the minimum to use against a cruiser. Because they are a threat, an incoming wave of drones will tie up phaser fire that might otherwise be used against the attacker's ship(s). If the attacker follows the inbound wave of drones closely, the defender is forced to choose between stopping the drones or firing at the attacker. By following the drones in, it is possible to launch a second wave that will arrive before the defender's weapons can recycle after stopping the first wave.

Third, drones can be used *en masse* to overwhelm the defender. This option is particularly attractive when you know that the defender cannot launch a wild weasel, either because he has no shuttles remaining in the bay, or your analysis of his energy allocation tells you that he has no power allocated to holding one. When the target has wild weasels available, you must (as with plasmas) launch enough drones to draw the weasel without launching everything you have available. Then you can destroy the weasel and (after the explosion period) launch more drones.

Drones can also be used defensively. They are an excellent weapon to cover an attempt to disengage. They require no energy expenditure, other than for active fire control, and will draw fire that would otherwise be used against the disengaging ship(s). Also, because the opponent is pursuing, the closure rate between his ship(s) and the drones will be increased. This decreases his reaction time to deal with the drones or forces him to break off pursuit (which is what you wanted anyway).

Drones are also useful when defending against an ESG ram. A properly-timed launch of drones will absorb a significant amount of damage from an ESG that would otherwise be applied to your ship. Alternatively, if the drones and their launching/controlling ship strike the sphere at the same time, the shields and drones will both survive. The Lyran will then have to divert his phasers to pick off the damaged drones instead of using them on your ships.

DRONE TARGETING

In a fleet engagement, the successful use of drones is often a function of appropriate target selection. There are three questions to consider in drone target selection. The first is which ships to target. The second is how many and what types of drones to employ against the target selected. And the third is what timing to use on the drone launch.

Drone target selection should depend on the opposing formation and the tactical situation. It is impossible to cover every situation, but there are several guidelines that will help.

If all other things are equal, a closer target is better than one farther away. By targeting the closer opponent, the drones will hit sooner, freeing the control channels to be used for future launches. Also, the drone will not have to fly through the enemy formation (giving him the opportunity to fire at the drones with rear firing weapons of the bypassed ships that would otherwise not have been able to bear on them, and providing the opportunity for more lab attempts). Enemy ships that are separated from their formation and have been deprived of supporting fire from the rest of their fleet are also good targeting choices. Generally, a target moving toward you is preferable to one moving away from you. The closing speed will give him fewer firing opportunities and less time to react.

The quantity and types of drones to use are also a function of the tactical situation and the target type. When determining how many drones to launch against a given target, you must calculate how many drones you want to hit the target and add how many will probably be destroyed on the way in. This sum is the number you need to launch against the target. (Unfortunately, that number may not always be available.) Launching too few drones is a waste as the target will simply kill them without cost or damage. Launching too many drones will overkill the target and waste drones that could have been better used against another target.

If you are trying to get a kill with drones, the number of drones that you will need can be determined by dividing the number of internal hits that the target will take (including excess damage) by the warhead strength of the drones with fractions rounded up. You need to round up fractions to account for hits on the sensors, damage control sections, etc. Add to this total the number of drones you expect your opponent to stop on the way, and the number required to penetrate the facing shield, to get the total number of drones you need to launch. These need not all be launched on one turn; you will be limited by the number of control

channels. This is why it is important to follow your drones toward the target, so that you can quickly add more drones to the wave.

A good rule of thumb to use when calculating drones that will be stopped is as follows:

Each phaser–3 will stop one type–I drone. Two phaser–3s will stop one type–IV drone. Count all the phaser–3s that will bear because they are all likely to be used against the drones, and subtract one to account for the possibility of rolling one "six."

Each phaser–1 or phaser–2 will stop one type–I drone. Three phaser–1s will stop two type–IV drones (the third shot finishing off the statistical cripple from the first volley), and two phaser–2s will stop one type–IV drone. In the case of phaser–1s and phaser–2s, you will have to use some judgment to determine how many of the available weapons to include in the calculation. If you are following the drones in, expect a significant fraction of the ph–1s and ph–2s to fire at your ship(s) instead of the drones.

Each phaser–G will kill three drones.

Expect an ADD to stop two drones if it gets all three shots.

Expect an ESG to stop five type–I drones or three type–IVs.

Finally, each tractor available will stop one drone.

This rule of thumb produces a conservative estimate of how many drones to launch at the target. It does not take armor into account, and the various armor packages (internal, external, half-space, etc.) confuse the situation. Only lab identification can make a kill certain when armored modules are available.

Also, the use of specialized drones can further increase the probability of the explosive drones reaching their target, either by making them harder to hit (ECM drones) or by drawing fire early (swordfish drones).

Proper timing of a fleet drone launch is critical, particularly when you are simultaneously engaging multiple targets. You must time your launch to maximize simultaneous arrival of the drones at the target from multiple launch points. If you are using drones of different speeds to beat the cycle time of the defender's weapons, you must consider this as well. Also, you must time the drone launches to avoid having the explosion of your first target destroy the drones heading for your second target. Always maintain enough separation (laterally or sequentially) of your drones to avoid taking damage from exploding ships.

DRONE TYPES

There are four different speeds of drones (8, 12, 20, 32), two different sizes, five different frame types (standard, ATG, extended range, external armor, and type–III), and many different types of payloads (explosive, probe, MW, ECM, swordfish, spearfish, starfish, stingray, internal armor, null). These can combine to form a great many drone configurations, and there are also dogfight drones. Rather than try to cover each combination, this article will make some general statements about each parameter.

The first point, however, is that the rules effectively prohibit you from using the most advanced versions exclusively. Because, at most, half of your drones will be advanced types, you must learn to select and use these advanced weapons to increase the effectiveness of the standard drones that make up the bulk of your supply.

DRONE SPEED

Normally, drone speed is selected for you by the year in which the scenario takes place [there are a few exceptions during the transition years from slow to medium (Y166-167) and from medium to fast (Y178-179) drones, however]. Generally, the faster the better, so try to convince your opponent to set the scenario in Y180 or later.

Speed-8 drones are useful in a few situations, notably asteroid fields. They are much less likely to accidently hit an asteroid than faster drones are. It is, however, very difficult to hit anyone with a speed-8 (or even speed-12) drone; the enemy ship will simply out-run or (in some cases) outmaneuver the drone. Very careful timing sometimes works, but the best method is to tractor the enemy and then launch your drones (this variant of the "Gorn Anchor" is known as the "Kzinti Anchor"). These drones are useful and cost-effective in some situations, e.g., against fixed targets (bases), in asteroid fields, and perhaps defensively against an opponent with more drone racks. The rules allow slower drones to be purchased as "extra" drones, and some campaigns allow their use in "special situations."

In scenarios set in Y178 or Y179, it can be cost-effective to have a medium-speed bus for MW drones, while paying for fast sub-munitions.

External armor slows a drone down, but provides it with increased protection in return. During speed transition years, some deception advantages are possible by proper use of external armor modules, especially if the enemy is short on labs. For instance, a speed-32 type-I drone with an external armor module moves at speed 20, but takes 6 damage points to kill. This can be very annoying to an enemy (especially if the drone was one of six type-I drones released from a scatter-pack).

Fast drones tend to be destroyed by striking strong webs; if you are attacking Tholian bases, take slower drones or as much external armor as possible.

First-generation X-drones can be set to run at speed 8, 12, 20, or 32 at launch. Although you will usually set them for speed 32, the slower speeds are occasionally advantageous. Since you cannot change the speed after launch, however, plan carefully.

DRONE SIZES AND FRAMES

The proper size drone to use is based on launch rate and specialized need. It is a common fallacy that it is always better to launch two type–I drones than a single type–IV because they are harder to destroy. The reason that this is a fallacy is that a drone rack has a constant launch rate that does not depend on the size of the drone being launched. Thus, while it is better to launch two type–I drones than a single type–IV, it is impossible to do so from a single launcher in a single salvo. The real question is whether it is better (over two turns) to launch two type–I drones (and have two left in the rack) or two type–IV drones (and start reloading an empty rack). Normally, it is better to launch two type–IV drones because they are harder to destroy and do more damage. However, the launch rack will be empty twice as fast, and a target with ADDs will destroy the two type–IV drones more easily and surely than four type–Is. In a prolonged engagement, emptying your racks can become a problem if the launching ship cannot separate long enough to reload. For ships that have a launch rate lower than one drone per rack per turn (e.g., early Klingon ships and Kzinti tugs), it is always better to use type–IV drones than type–I drones. Everyone else needs to establish a mix of type–Is and type–IVs based on the opposition expected.

The standard frame is the one you should use most often. ATG frames are useful for ships that have a higher drone launching rate than they have control channels available. For example, a Kzinti CS/BC can launch 8 drones over the span of 9 impulses if they are timed correctly, but can only control 6. ATG drones allow it to use its full launching rate. Extended range is useful against targets that you expect to maintain high speed. They are particularly useful against Andromedan ships that not only can maintain high speed, but can also use their displacement devices to increase separation from incoming drones.

Type-III frames are used mainly for long-range attacks from specialized drone bombardment ships, but do have some abilities (tame boar, wild boar) beyond those of normal ATG drones; see (FD5.25).

DRONE PAYLOAD MODULES

The most common payload is the explosive warhead. All of the other payloads should be used only for specialized missions.

The probe payload is useful for gathering scientific information against monsters or for gaining tactical intelligence against an opposing fleet.

The Multiple Warhead payload is useful against fighters, PFs, and incoming drones, but is less effective against ships. Note that the two-space MW payload is particularly useful against PFs if the submunitions are concentrated on the primary target. The submunitions will do 20 points of damage, as compared to 24 points for a two-space explosive warhead, but they are much harder to stop, requiring 15 points of damage spread out among 5 targets instead of 6 points of damage on only 1 target. Also, the damage is not all or nothing. It is very likely that some of the submunitions will get through and that the target PF will be too busy defending itself to engage in any offensive action. The two new drones added in Doomsday (starfish, which has multiple ADDs in place of the dogfight drones, and stingray, which has only a single-dogfight drone) use variations of the MW drone tactics, and tactics for them are provided in Module J.

ECM modules are useful in helping other drones get to the target and in providing the launching ship with a sudden ECM shift when it is most needed and without requiring the expenditure of reserve power for it. Drone-using races rely on ECM drones, rather than scouts, for much of their electronic warfare.

Swordfish modules do less damage than explosive modules, but they do it from range. A salvo of swordfish drones can disrupt the opponent's defensive calculations and, with proper timing, cause him to waste phaser fire on expended drones. Since drones are often targeted by the defender's weapons at range one or two, setting the swordfish drones to fire at these ranges can result in simultaneous launching of the drone and the target ship. The target ship effectively wastes its fire by using it on a target that has already expended its offensive punch.

Spearfish drones are less effective than they appear. Because of their limited size, they will cause only a few points of internal damage. This will, however, probably fall within the Mizia Concept. If you get lucky, this might hit a critical system. But you can't count on it, and the points would probably be better spent on other special types, except in certain cases.Spearfish drones are quite useful against Andromedans, who have very few internals in any case.

Armor modules increase drone survivability but reduce payload (internal) or speed (external). Armor modules are most useful against opponents that do not have ADDs since ADDs are not affected by armor. Armor is particularly useful against Lyrans (with their ESGs) since the increased damage rating of the drones may allow a group of them to penetrate a range-zero ESG that would have stopped them otherwise, and the all-armor "slug" drone can be particularly useful in leading drone waves (or your ship!) into an ESG.

DRONE GUIDANCE

It should be obvious that the number of drones you can control is limited. Most ships can control 6 drones, with a few controlling 12 and, in very rare cases, 18 (i.e., 12 plus 6 by a scout channel). The significant point is to know your limits and design tactics to work within them, rather than surprising (or embarrassing) yourself by launching more drones than you can control.

There are ways around the limits. Double-size drones provide more hitting power than a single drone with only one control channel. Launched from the racks they do not cut down on your launching rates. Launched from scatter-packs they take up two spaces, but save you a control channel. Drones with ATG guidance can be released to clear channels for other weapons. Dogfight drones don't require guidance, but watch their range and tracking limits.

Another way around the limits is to pass control to another ship. This assumes, however, that there are other ships around. Klingons facing a Kzinti fleet should count drones (and ships) now and then to see if all of the channels are busy. That can be a good time to blow up a frigate or two.

Fighters can guide their own drones, but become prime targets if they are easier to kill than their drones are.

A final way around the limits is to get more channels. Two-seat fighters, SWACS, and MRS shuttles can be launched to provide more channels. Scouts can switch one (and only one) of their channels to drone control and handle six more.

DRONE MOVEMENT

Despite the restriction on how drones may be moved, there will be a number of decisions that must be made when they are approaching their targets.

If a drone can move into either of two hexes that are at the same range to the target, the choices can create two very different situations. Normally, this situation occurs when the target is travelling at an oblique angle to the drone. Moving the drone into the hex closer to the tail of the target will establish *follow pursuit* and will tend to encourage the target to continue in the direction it is travelling to escape the drone. Moving the drone into the hex closer to the head of the target will establish *lead pursuit* and will tend to force the target to turn away from the drone to escape it. Normally, it is better to establish lead pursuit than follow pursuit because it forces the target to turn away from the drone as opposed to cutting back around it and toward your ship. However, there are some instances, notably when the drone is much faster than the ship and the bearing weapons have already fired, when it is better to establish follow pursuit. Of course, if one of the target's shields is down, you can base your decision on which hex would have a better chance of striking that shield.

When moving a drone, it is also necessary to determine whether to turn it or to sideslip it. If the drone is self-guiding, this decision needs to be made based on where each type of movement will leave the target with respect to the drone's FA arc. It is important to remember that a self-guiding (either ATG or warp seeking) drone must keep its target in its FA arc to maintain lock-on. When the target is close, the drone should always turn instead of slip. If the drone slips into a hex adjacent to the target but is not pointing directly at the target, the target may be able to move into a hex that the drone cannot reach (or see) on its next move. A drone that turns into a hex adjacent to its target is more likely to be pointing directly at it and less likely to be bypassed.

DEFENSE AGAINST DRONES

There are two keys to defending against drones. The first is to use your labs to identify the incoming drones so that you know what kinds of drones you are facing and what their targets are. This allows you to make intelligent choices when you are targeting the incoming drones. Failure to use labs results primarily from laziness, and lazy captains do not win battles.

The second is to remain calm and not to panic. Most ships can stop a surprisingly large number of drones if they are handled properly. If you spot a large incoming wave of drones and say *"Oh my God! I'm gonna die!"* that is precisely what will happen. It is easy to get psyched out by a large number of incoming drones. Don't get killed because you lost your head.

The best defense against a drone is another drone. Any explosive drone will always kill an incoming drone. If your ship has a low drone launching rate with respect to your opponent (e.g., most Klingons vs. most Kzintis), the best use for your drones is to shoot down incoming drones. If you have MW drones available,

this is the time to use them to get a higher kill ratio. Using drones to kill drones will free some of your phasers for use against the other ship. This can be countered by shooting down drones targeted on your drones. Fighters can also use their drones, especially their dogfight drones, to stop incoming drones. This can be countered by crippling the fighters. (You don't have to kill them, and that takes more firepower anyway.)

Speed buys time. If you can, keep your speed above your opponent's drone speed. If necessary, you can simply turn away and separate until the drones run out of endurance. This only works if you have space and time to run and can be countered by extended endurance drones and speed-32 drones. It is most effective if your ship uses energy-based weapons (just about anything except drones) as you can constantly rearm these while a drone-using ship must, eventually, run out of drones. This is what makes the early (speed–8) drones ineffective; once they are on the board, your opponent will simply move 25 hexes over yonder and wait for you (with your now empty racks) to follow him. Extended range can counter this to some extent.

One transporter bomb, properly placed, will stop a full drone swarm. Turn tail, start to run, drop it out the hatch, and wait for the drones to extinguish themselves in the explosion. This can be countered by staggering the drone launch so that a single drone (ahead of the main swarm) will clear the mine, and counter-countered by setting the mine to ignore the first target.

A variation on the T-bomb is the exploding escort. If the drone-launching fleet has a small ship in a hex adjacent to a drone swarm, destroying that ship will also destroy the drones in the explosion. Timing is important to make this work, as is the availability of enough firepower. (Check the explosion strength of the target; if it is 9 or less, the explosion will not extend beyond the hex the escort is in.) It may appear strange to concentrate your fleet on a frigate or escort, but it can do double duty and save one of your own ships in the long run. The counter to this is never to put an escort in a position where it can be made a target for this purpose (or conversely, never move drones next to a ship vulnerable to sudden death). Escorts should be on the flanks or rear of a drone launching formation for precisely this reason.

Phaser–3s are a primary drone defense weapon. Using them properly requires that you identify the incoming drones with your labs so that you know what you are facing. Also you must know how many phaser–3s you have to stop how many drones. If you have more phaser–3s than there are incoming drones and you know that the incoming drones are unarmored type–Is, the optimum range to fire is 2 hexes. You have a 50% chance of a kill and a 100% chance of a kill with a second phaser–3 at range 1 if you miss. If you wait to range 1, the single shot kill probability is only 67% and the higher speed drones might not give you a second chance to fire (depending on movement sequences). Naturally, if you are short of phaser–3s, you have to wait for the range-1 shot. Admin shuttles can be released to provide additional drone defense firepower, but they need 8 impulses to be ready to fire, and they limit the speed of the ship they are trying to protect if they are to maintain station keeping. Some MRS shuttles are particularly good for this.

ESGs are a very effective drone defense weapon. Set the ESGs to radius zero and be sure to announce the fact that you are raising them at least 5 impulses before the drones will arrive. If you have identified some of the incoming drones, you can calculate exactly what the ESGs will do to them and how many phasers you will have to fire beforehand to stop them all. Note that ESGs as a drone defense weapon can be countered by a reverse ESG ram. The drone launching ship moves at the same speed as the drones or faster and deliberately rams the ESG field. If this has been properly arranged, the result of the point-blank pass is two damaged ships, but one of them still has a drone swarm coming in with no way to stop it.

ADDs are also a very effective drone defense weapon. Remember that ADDs are most effective at range 3, and their effectiveness decreases with decreased range. Two ADD-armed ships can operate as a team to attack drones targeted on each other at optimum range. Klingon G1s (with their ADD) are good at this.

Tractor beams can be used to hold drones at bay until your weapons recycle or until the drones run out of fuel. Holding a drone until it runs out of fuel is an energy expensive and dangerous way of killing it (lose the tractor for any reason, and you get hit by the drone), but it is an option that lets you shoot at your opponent instead of at the drones. A tractored drone can also be rotated into the firing arc of an otherwise unoccupied weapon. Naturally, if the drone is near the end of its endurance, tractor beams become the weapon of choice. If your drone is caught, don't cut the tracking until the start of the next turn since this will tie up his tractor for the entire turn.

Scout channels can be used to break drone lock-ons out to 15 hexes, and each scout channel will have an opportunity to make the attempt three times a turn. Scout channels can also loan additional ECM to the target.

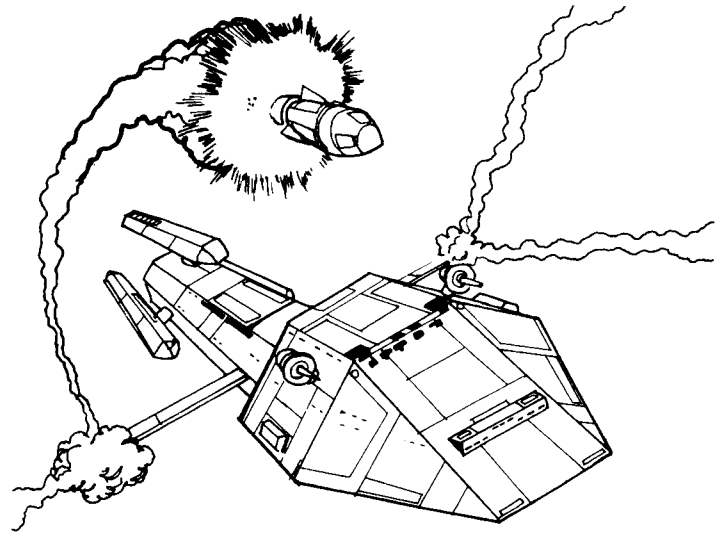
ECM shifts can degrade the effect of a drone hit. Both generated ECM and ECM from other sources (erratic maneuvering, terrain, loaned from scouts) are useful for this. A shift of at least 2 is needed to significantly degrade expected drone damage. In a similar vein, going under cloak can also break drone lock-on.

Terrain can also be used to avoid drones. Duck behind a planet, moon, black hole, or asteroid field. These may break the lock-on or "intercept" the drones.

Wild weasels are useful against drones as well as plasma torpedoes. When expecting large incoming drone swarms, keep a wild weasel warm and on deck. Set it for a speed that will insure that it leaves your hex on the first impulse after launch to avoid collateral damage. Usually, you should launch the weasel toward the drones, to minimize the time under weasel restrictions. If you expect the enemy to destroy the weasel in your hex, however, launch it facing so that the collateral damage will hit a strong shield rather than a weak or down one.

Note that wild weasels can be countered by tractoring the target ship before it launches a wild weasel (i.e., the "Gorn Anchor") and also by dropping tracking to a drone about to hit the wild weasel. If the drones are sufficiently staggered, the target ship will be unable to void the wild weasel for fear of the drones still incoming, allowing the firing ship to close and attack with direct-fire weapons.

One final note. Review the section on plasma torpedoes as it provides additional insights into the use of seeking weapons in combination with direct-fire weapons and wild weasels. ✪



MULTI-WARHEAD DRONES

by Alan M Gopin

MW (multiple warhead) drones are a special type of drone, made by using a MW payload module during drone construction. The payload of an MW drone is not an explosive warhead, but rather a group of type–VI (dogfight) drones that will individually track their targets once they are released from the bus drone. There are two MW payload modules. The single-space module carries three dogfight drones and must be the forward module if used in a two-space drone frame. The two-space module carries five dogfight drones.

In either case, the dogfight drones may be set to track the primary target of the bus drone frame, or they may be set to track random targets. If set to track random targets, the first dogfight drone will track the primary target of the bus drone frame (unless the size-class discriminators exclude it) and the remaining dogfight drones will track whatever other targets they can lock-on to, choosing them in order of proximity to the primary target and also to avoid multiple lock-ons to the same target. When launching a MW drone, the following must be specified: the primary target, the range from the target at which the drone will release the submunitions, whether the submunitions are randomly targeted, and (if random) the acceptable size class of the targets.

MULTIPLE USES OF MW DRONES

There are four basic targets for MW drones. These are drones, fighters, PFs, and ships, listed in order of decreasing desirability.

Probably the best use of MW drones is against other drones. Since any explosive drone will kill any other drone, a single MW drone can stop several incoming drones. This is particularly useful if your opponent has a higher launch rate than you do. In this case, you will normally be using your drones to defend against the opposing drones, and the use of MW drones makes this much more effective. If you are going to use MW drones for drone defense, it is important to hold your fire on the drone racks containing them until there is a drone swarm incoming. If you use another drone from the rack containing your only MW drone to attack a target of opportunity, you may end up paying for it when the enemy drones impact. Launch drones from such a rack near the end of the turn so that you can launch the MW at the start of the next turn (after the 8-impulse delay for the rack to cycle).

MW drones can also be used to full effect against fighters. The eight points of damage done by each of the submunitions is enough to cripple almost any known fighter. A single type–IV MW drone can force half a fighter squadron to defend itself, either by firing at the dogfight drones or by running away from them. One drawback here is that fighters may be able to distract the submunitions with chaff. Even so, a single MW drone will force several target fighters to expend their chaff, and one-third of them will statistically be forced to take additional measures to defend themselves. This makes MW drones extremely useful as the drone armament for fighters that expect to engage other fighters since MW drones allow a single fighter to engage three opponents simultaneously (fighters cannot carry the larger two-space drones). If you are using fighters to attack an enemy formation protected by fighters, this allows one-third of your fighters to effectively engage a defending fighter squadron equal in size to your entire squadron, allowing the remaining two thirds of your fighters to penetrate to the target. Note carefully, however, that the MW drone must release the submunitions within their own guidance range, or you may overload the guidance ability of the fighter. The new starfish drone (effectively a multi-warhead ADD) can be devastating against fighters since there is no opportunity to shoot down its submunitions. Combining MW and starfish drones together can confuse the target and make both more effective, even though both are under the same limits as to availability.

MW drones do reduced damage against PFs (only four points per submunition), but they are still effective against them. There are two reasons for this. First, the limited size of the PF's shields and of the PFs themselves means that four points of damage will be significant. Second, the total damage done by the submunitions of a MW drone will be equal to the damage done by an explosive warhead for a single space drone (12 vs. 12) and are a significant fraction of the damage done by a two-space explosive warhead (20 vs. 24). Note, however, that the submunitions will be significantly more difficult to stop in either case. For a single-space drone, the difference is three targets that take three points each to stop vs. a single target that takes four points to stop. For a two-space drone, the difference is five targets that take three points each to stop vs. a single target that takes six points to stop. Also, the damage is not all-or-nothing. It is very likely that some of the submunitions will get through and that the target PF will be too busy defending itself to engage in any offensive action.

MW drones are almost ineffective against ships because they do severely reduced damage (only two points per submunition). There are two instances when MW drones should be used against ships. The first is when there is nothing else available. Here, a little bit is better than nothing, and while the damage done will be small, the effort required to stop the attack will be way out of proportion to the potential damage from the attack (scoring three damage points to stop two). The second, and more important instance, is to escort other drones into an ESG field. Since the total submunitions of a MW drone can absorb more damage than even a slug drone (and even the empty bus vehicle continues on to hit the field), they are the best means available for clearing an ESG field so that other drones may penetrate. They are also an effective defense against an ESG ram, when available, for the same reason. It could also be stated that massive numbers of MW drones could do serious damage to a ship, but the costs and availability rules effectively limit such uses to intellectual exercises.

One case where these drones are effective against ships is in the case of a cloaked ship. If you suspect that a particular enemy ship will cloak, use MW drones to get the warp-seeking dogfight drones into his area. These must be released before the lock-on is lost, but afterwards will not lose lock-on when the ship cloaks. Multiple MW drones (as well as more warp-seekers from fighters) can be used. Remember, too much of a good thing is terrific.

A final valid case for use against a ship is when the ship has strong ADD defenses, and large numbers of small drones have a better chance of scoring some damage.

LIMITATIONS ON MW DRONES

MW drones appear to be a panacea based on the above section, particularly in an environment where you expect to deal with fighters and PFs. Unfortunately, there are some limitations on them. First, they are limited availability items. The Kzintis are limited to 20% of their spaces, and all other races are limited to 10% of their spaces. There will be very few of these drones available for use.

MW drones are vulnerable to destruction prior to the release of their submunitions. To insure that the submunitions are released, set the release range to equal or exceed the range of the primary drone defense weapon of the target, two hexes if the target is defending itself with phaser–3s and three hexes if the target is defending itself with ADDs. Note that an MW drone that has been successfully identified will probably be targeted by heavy phasers before it can release its submunitions. In an environment where this is likely to occur, the release range may

have to be extended. Note, however, the effects this will have on the endurance of the submunitions (see below).

MW drones are also very expensive in terms of BPV. A type–IM explosive drone costs 1.5 BPV (1 point for the speed-20 propulsion module and 0.5 points for the explosive warhead). A type–IM-MW drone with M-speed submunitions costs 4.25 BPV (1 point for the speed-20 propulsion module, 2.5 points for the MW payload module, and 0.75 points to upgrade the submunitions to speed 20 — note that costs to upgrade 1/2 space drones are halved). For two-space drones, the costs are 2.5 BPV for the IV-M and 6.25 BPV for the IV-M-MW. The situation for fast drones is comparable. One way to ease the cost of MW drones is to use a slower propulsion module on the bus frame.

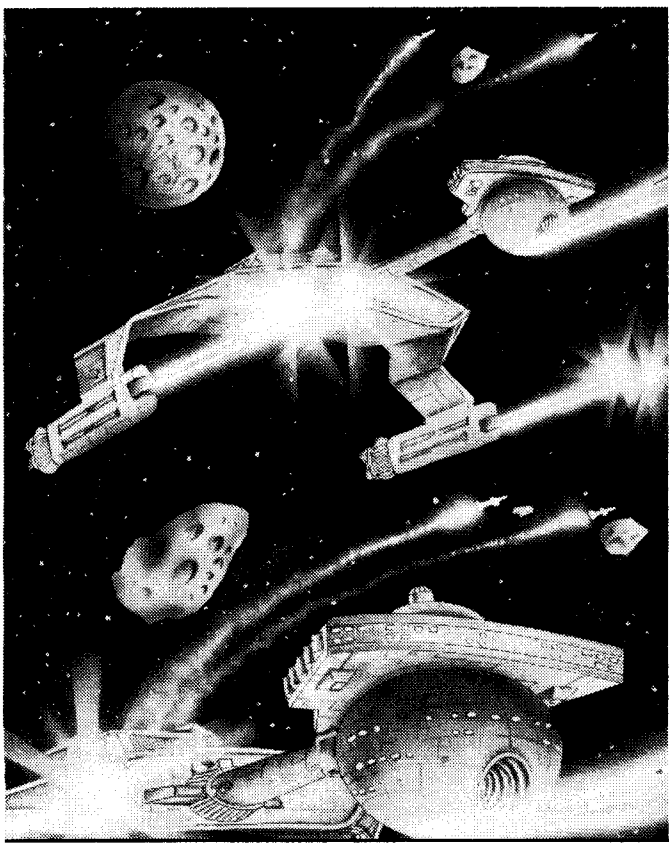
The endurance limit of the submunitions is another problem. All dogfight drones have an endurance of 12. This can severely reduce their effectiveness against PFs. Since the normal operational speed of a PF is 30, a PF may be able to outrun the submunitions and still get back into the fight during the same turn. Fighters equipped with warp booster packs can do the same thing.

Scouts able to break the lock-on of the bus vehicle leave the submunitions ineffective. Avoid using MW drones within 15 hexes of a scout, or use it in combination with enough other drones that it is not likely to be spotted or selected at random.

One other problem is target acceptance during random targeting. Dogfight drones are not smart enough to distinguish friend from foe. When the MW drone releases the submunitions, they will lock-on to any target they can track, even friendly ones. This means that it is imperative to stay away from the target of random MW drones to avoid being attacked by your own weapons.

CONCLUSION

MW drones can be an effective weapon when properly used. The best targets are drones, followed by fighters, PFs, ESG fields, and ships. They have several limitations to keep in mind so that they may be properly used, including availability, cost, and submunition endurance. ✪



USING SCATTER-PACKS

by Alan M Gopin

A scatter-pack shuttle is an administrative shuttle that has been specially outfitted to carry up to six spaces of drones and launch them all in a single impulse. Fighters may also be used as scatter-pack shuttles; they launch all their drones (a standard load, not necessarily six) on a single impulse in this mode. MRS shuttles make the best scatter-packs, but can rarely be spared for that mission.

Scatter-pack shuttles are unmanned and track their target as a seeking weapon. The drones in a scatter-pack can all be set to accept the primary target, or they can be set to accept random targets in the vicinity of the primary target. The primary advantages of a scatter-pack shuttle are its ability to significantly increase the drone salvo rate of the ship that launched it and its ability to provide the "sudden impact" of a six-drone swarm.

Scatter-pack shuttles do have several problems. First, the drones cannot release until at least eight impulses have elapsed since the shuttle was launched. Second, the drones cannot release if the range to the target is less than two hexes. Third, until the drones are scattered, all the drones in the scatter-pack are vulnerable to destruction by the destruction of the shuttle or by breaking its lock-on. Note that this dictates the launch parameters of a scatter-pack shuttle if the opponent has scout channels. The scatter-pack must be launched from more than 15 hexes away from the scout and must be set to scatter its drones more than 15 hexes away from the scout.

ATTACKING WITH SCATTER-PACKS

Scatter-pack shuttles can greatly complicate the drone defenses of an opposing ship if properly used since they can create a swarm of up to six drones instantly.

When launching a scatter-pack, it is important to be sure that there will be sufficient channels available when the drones scatter to control them all. For most ships, this implies that no other drones are being controlled since most ships have only six drone control channels. If a ship has a scatter-pack in flight along with other drones, it should pass control of either the scatter-pack or the other drones to another ship that will not be put over its drone control limit by them. If you are short of channels, you can launch the scatter-pack on a ballistic course (FD7.321).

A scatter-pack is normally used when making the decisive battle pass as you must concentrate your firepower at the point of the attack and don't have enough scatter-packs to use them for feints. One tactic is to leave a scatter-pack behind when starting an overrun and launch another one after passing the enemy. This will trap him between drone swarms. Another tactic is to leave a scatter-pack behind when expecting an overrun as it will probably release just as the enemy passes your ship with empty weapons and shattered shields.

Carriers, which have fighters available, could use two or three fighters for scatter-packs. After release, the fighter can be tractored and pulled back into the bay for re-arming. This saves the admin shuttles for other uses. Except in a few cases, fighters carry far fewer than six drones, making them less effective. MRS shuttles, while available in limited supply, make excellent scatter-packs. They are faster, harder to kill, and can carry more drones.

Scatter-packs should definitely be launched outside of enemy weapons range, at least 9 hexes and preferably 15.

Several other parameters need to be considered when preparing to launch a scatter-pack shuttle. These include the range from the target to release the drones, the damage level to prematurely release the drones, the loadout of drones in the scatter-pack, the speed of the shuttle, and the timing of the shuttle launch.

SETTING RELEASE PARAMETERS

The most critical parameter is the release range, i.e., the range (from the primary target) at which the drones will be released. This is dependant on the tactics to be employed.

The most common range used is 35, the maximum possible. This allows the drones to be scattered as soon as the minimum eight-impulse delay is satisfied. Doing this conveys the advantage of getting the drones in flight as soon as possible, but it is tactically unsubtle. Note that range–35 is normally used only when the shuttle is actually launched at a shorter range than 35, when the target isn't moving, or when fast drones are used. This avoids the embarrassment of having your drones lose tracking at range-36.

By setting the scatter-pack to launch at a shorter range, the scatter of the drones can be delayed. This allows you to control rack-launched drones all the way to the target without overloading the control channels. Alternatively, it could allow you to maneuver the opposing ship between your ship and the scattered drones.

A good short range to set for a scatter-pack is 9 to 15 hexes. This is outside the effective range of most weapons that would be used against the shuttle with the exception of disruptors, and at 12 hexes or greater, the scatter-pack shuttle gains the small target bonus.

There are appropriate times to use both types of range settings. If you have more than one scatter-pack shuttle available, it is often useful to launch one at long range set to scatter its drones at range 30+ to establish a drone threat and launch a second scatter-pack shuttle as a "sleeper" (one that waits for a long period) set to scatter its drones from shorter range. Watch your control limits!

All scatter-pack shuttles should be set to release their drones when they take the first point of damage. This will increase the probability that the drones will be released if the shuttle is damaged but not destroyed. (Keep a sharp eye on your control limits!) Note that the shuttle will not scatter its drones until it has been in flight for eight impulses, whether or not it is damaged. If it is set to scatter its drones on the first damage point, it will release them on the first possible impulse if it takes damage beforehand no matter what range it is set to release them.

SETTING THE LOADOUT

One of the most important decisions related to a scatter-pack shuttle is the loadout of drones it contains. The loadout determines what enemy unit can be effectively targeted.

Of course, the drone loadout is a function of the number and type of drones available. Kzinti ships normally have an advantage in this area because their large number of drone racks and greater latitude in drone selection provide a large and varied supply of reload drones to arm scatter-pack shuttles. Klingon and Federation ships will normally have a more limited quantity and selection to choose from. In some cases, most notably the early D6/D7, it may be desirable to partially unload one of the drone racks to provide enough drones to load a second scatter-pack shuttle.

The most common drone loadout is six type-I drones. This is the maximum load for a (non-MRS) scatter-pack and provides the most potential damage in the most flexible package. ECM and swordfish modules, along with internal armor modules, can be used to modify this basic mix in any of the loadouts that contain non-dogfight drones.

A second useful loadout is three type-IV drones. This provides as much damage potential as six type-I drones but uses only three drone control channels. The type-IV drones sacrifice some flexibility, and three of them are easier to destroy than six type-I drones (taking half as many ADDs, drones, or phasers), but they do twice as much damage per drone control channel. Type-IVs should be used if they are all that is available or if drone control channels are in short supply. In some cases, adding armor to these drones will have advantages.

Another loadout is three type-I drones, one type-IV drone, and two dogfight (type–VI) drones. This loadout is primarily useful for its deception value. Unless the type-IV drone or one of the type-VI drones is identified (scout, lab, aegis), this loadout is indistinguishable from the six type-I loadout. As such, the type-IV drone may supply a nasty surprise for the target ship. This can also be done with two type–IVs and four type–VIs, and there are other variations. Note that if this is used with slow drones, type–II and type–V drones must be used.

For special occasions, you can use the "dogpack," which has six type–VI drones. The enemy may assume these to be type–Is and use a wild weasel, which type–VIs ignore.

Twelve type-VI drones can also be used. This loadout, known as a "shatterpack," is extremely useful in three situations. Set for random targets, this loadout will stop a large drone swarm or can distract an entire fighter squadron. It is also useful for busting an ESG field since it will absorb 36 points of damage as opposed to 24 points for the standard type-I loadout. Finally, if all of the drones are set for the prime target, they can do significant damage on a ship while being incredibly difficult to defend against. This load will cause control channel problems if it does not release within the 8-hex tracking range of the dogfight drones.

Three type-I drones can also be used as a loadout, primarily to fool your opponent into overkilling these drones and wasting firepower because he assumes that three drones in a scatter-pack must be type-IVs. It is also a useful loadout if you are short of drones (three is better than none), or if you have more shuttles available to use as scatter-pack shuttles than you have drones to fill them. Two scatter-pack shuttles with three type-I drones in each are more flexible (and less vulnerable) than a single scatter-pack shuttle with six type-I drones. Two separate ships can be targeted. It is also harder to destroy two scatter-pack shuttles than it is to destroy one. All that this costs is the extra shuttle since it takes no longer to load the drones onto two scatter-pack shuttles than it does to load them onto a single one.

Finally, an occasionally useful loadout is no drones. Scatter-packs are often destroyed before they can launch. By using rule (FD7.45), you can create a pseudo-scatter-pack shuttle that takes no time or energy to prepare, and while it cannot launch drones, it cannot be distinguished from a real scatter-pack shuttle. Launching several pseudo-scatter-pack shuttles along with a real one forces your opponent to gamble or destroy all of them. This is very useful when a scenario starts at weapon status 2. Since your opponent knows that you can only have one scatter-pack shuttle prepared, he will destroy the first shuttle that appears, especially if he identifies it as a seeking weapon. At longer ranges, a manned shuttle can pretend to be seeking.

SETTING SPEEDS

Scatter-pack shuttles can be launched at any speed between zero and the maximum speed of the shuttle. This fact can be used in conjunction with the range setting for release of the drones to appropriately stagger the drone release, especially for slow-moving or non-moving targets (e.g., bases). For example, a scatter-pack shuttle launched 16 hexes from a base (outside the range at which the sensors can break lock-on) at speed zero and set to release its drones at range 16 to the target will release its drones 8 impulses after launch. A scatter-pack shuttle launched 18 hexes from a base during the first half of a turn at speed two and set to release its drones 16 hexes from the base will release its drones on the last impulse of the turn. A combination of these two examples could be used with proper timing to create two waves of drones one hex apart. (Set them three hexes apart if

T-bombs are available to the defense.) Warp packs can be used to increase the speed of a scatter-pack shuttle, but the warp packs double the probability that the shuttle will be destroyed before it can release its drones.

It is very important to properly time the launch of scatter-pack shuttles. As shown above, proper timing can maximize the drone impact against stationary targets. By launching one scatter-pack shuttle before over running your target ship with direct-fire weapons and launching a second scatter-pack after the overrun, it is possible to catch the target in a drone crossfire, possibly with no direct-fire weapons charged and weakened or down shields. If your opponent fires a full volley of direct-fire weapons at you, you may be able to launch a scatter-pack shuttle that will release its drones at close range before his weapons can recycle, particularly if he fires early in the turn. This is a case where it may be useful to have a scatter-pack shuttle equipped with warp packs. The increased vulnerability to damage is unimportant if the target ship cannot fire. Avoid launching such a shuttle in the presence of ADDs.

DEFENDING AGAINST SCATTER-PACKS

The first thing to do when faced with enemy shuttles is to note the impulse of launch so you can compute the first impulse that they will be able to release drones if they are indeed scatter-packs. (Use the Event Record Form, or have the controller warn you. In a fleet action, assign this task to a junior player to allow him to gain experience.) From this information, you can determine what the range will be on the impulse before the scatter and plan your fire accordingly. Remember, it is much easier to destroy a single shuttle than it is to destroy six drones. It is very important to identify which enemy shuttles are seeking (and might be scatter-pack) shuttles and to destroy them before they can release their drones. If the shuttles are close enough, they can be identified by labs, aegis, tactical intelligence, etc. Note that a positive ECCM shift of two will allow a ship to determine whether or not a shuttle is manned at a range of six hexes by rule (D17.26). (Labs are cheaper, but limited in number and uncertain in results. TacIntel is automatic, but requires a positive ECCM shift.) Beware, however, of wasting firepower on a pseudo-SP. Only destruction or drone launch can reveal for certain if a shuttle is really a scatter-pack.

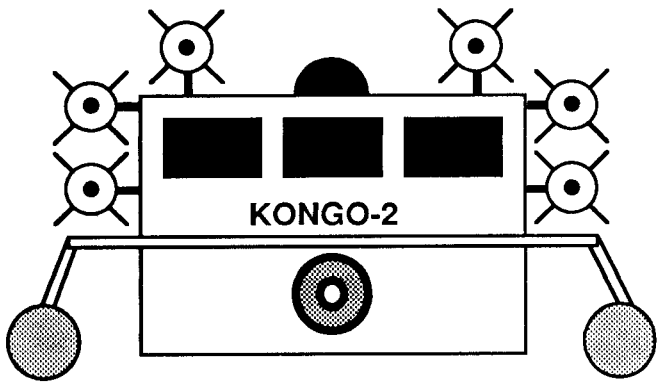
Once you have identified seeking shuttles, you have to kill them. Note that because they will normally be set to release their drones upon taking any damage, you will have to kill them in a single volley if they have been in flight for eight impulses or more. Scatter-pack shuttles are often launched outside of effective phaser-1 range. At a range of 9 to 15 hexes, a phaser-1 has an expected damage of one point. It would take six phaser–1s to reasonably expect to kill a scatter-pack shuttle, more if it's an MRS. If the shuttle has not been in flight for eight impulses and reaches range 15, you have the option of firing two phaser-1s per impulse in an attempt to kill it. On the seventh impulse, you must allocate enough fire to kill it, or it is almost certain to release its drones on the eighth impulse. Another way, and one that is more efficient, is to fire two disruptors at the shuttle in a narrow salvo. This has a 67% chance of killing it out to range 11 (range 15 if you supply enough ECCM to offset the small target modifier), and three disruptors are effective to range 30. Also, by using a narrow salvo, you will not damage it without killing it. Photon torpedoes and bolted plasma torpedoes of sufficient size are also kill-or-miss weapons, but they do not have the good hit probability of disruptors, and they are often overkill against a shuttle. Then again, there is no such thing as an overkill of something that is going to kill you if you don't kill it.

The best scatter-pack killer (when you can afford to fire it) is the proximity-fuzed photon. Unfortunately, the long re-loading time leaves the ship vulnerable to a direct-attack.

There are other ways of stopping a scatter-pack shuttle than killing it with direct fire. A plasma torpedo or fast drone can kill it if it can reach it before it can release its drones. A scout channel can break its lock-on out to 15 hexes. A transporter bomb can kill it or kill the drones it launches. A ship moving fast enough can crush it in a tractor beam. In any case, an identified scatter-pack shuttle must be stopped from effectively releasing its drones.

CONCLUSION

Scatter-pack shuttles can suddenly and significantly increase the number of drones an opponent is facing. When used with proper timing and proper loadouts, they can severely complicate an opponent's tactical problem and cause major damage. However, they can be countered by various means, including direct fire, seeking weapons, and scout functions, among others. ✪



ANTI-DRONES

by Geof Mahl, Rick Peterson, Jim Weisser, and Tony Zbaraschuk

Anti-drones are a kinetic-kill defense system designed primarily for use against drones (henceforth the name "anti-drone"). These come in two varieties: the standard 6-shot system and the vastly superior 12-shot model.

Anti-drones are very useful in a variety of ways. They can engage drones at ranges where phaser-2s and phaser-3s cannot guarantee a kill. They do not require power, are unaffected by electronic warfare, and are only minimally affected by erratic maneuvers of the firing ship. They are always ready to fire, regardless of weapon status (other than total surprise). They can destroy any drone, regardless of its armor. They are effective outside of phaser range, allowing you to use them against the drone without giving up a phaser opportunity on the next impulse. Even a 12-round ADD is far less expensive than the drones it can nullify.

One of the most overlooked uses for anti-drones is in the anti-fighter role. They can fire every impulse, can't be distracted by chaff, aren't affected by ECM pods, and can't be destroyed (as drones can) by phasers. Anti-drones are particularly effective against Hydran Stingers.

In other cases, such as against the Romulans, anti-drones are of little use as there are no drones to hit, and plasma fighters usually fire at ranges beyond the ADD's capability. In this case, load the ADD racks with dogfight drones (and note that they will be limited to a range of 6.

Two other ADD delivery systems are the RALAD (J12.0) and the starfish drone (FD15.0). The RALAD effectively gives fighters a one-shot ADD rack. The starfish, designed as an anti- fighter weapon, can be useful against drones. ✪

T-BOMB TACTICS

by Stephen V Cole, Michael West, and Leonard Byrd

Transporter bombs, usually known as T-bombs, are one of the most important and dangerous weapons in the game. Proper use of T-bombs can save your ship; improper use can cause its destruction. T-bombs are one of the most widely used optional rules.

T-bombs are, of course, small mines. They can be placed by transporter (although not into a hex occupied by a ship, planet, or shuttle) or dropped out the shuttle hatch. Their primary purpose is as a deterrent to fighters and a barrier against drones, although the two-impulse delay limits the utility of the weapon. They can also be placed to keep a ship out of an area or to damage it when it will be unable to avoid the bomb.

The greatest problem with T-bombs is that there are never enough of them. A cruiser carries only four of them, a dreadnought six, and small ships only two.

PLACEMENT OF T-BOMBS

The standard means of placing T-bombs is by using transporters. This allows the bomb to be placed pretty much where you want it, but has some limitations. First, everyone will know exactly where it is (which is why you have dummy T-bombs). Second, there is a two-impulse delay before the bomb becomes active, allowing the enemy to maneuver around it.

Dropping T-bombs out the shuttle hatch is effective in many cases. When you are about to be overrun, rolling a T-bomb off the tailgate will give your opponent something to think about. This threat is often enough to convince players to make battle passes or Oblique Attacks instead of overruns. Dropping T-bombs is also effective against pursuing drones and can deter a ship that is trying to prevent you from disengaging.

In fleet battles your escorts could drop a row of T-bombs set for drones. Your ships could then retreat through or behind the barrier, shaking off a massive drone attack for little cost.

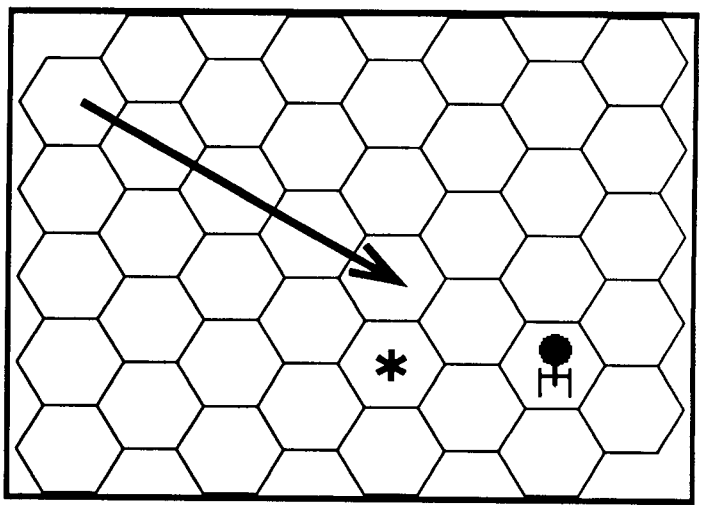
Note that T-bombs, being mines, can be set for any size class of target. Carefully select what classes you will use. If you are trying to destroy fighters, don't set them to accept drones as he can penetrate the barrier by firing drones through it. If your opponents are in different size-class ships (e.g., a cruiser against two frigates), you can set T-bombs that will accept them as targets, but not yourself.

Using transporters to place T-bombs presents greater opportunities and greater risks.

You must drop a shield to place a T-bomb, opening your ship to attack. This makes the most logical time to use transporters to place T-bombs the impulse after an exchange of fire, when your shields are down (due to damage) and the enemy has already emptied his weapons. Place bombs ahead of and around his ship, where they cannot be avoided.

Another way to use T-bombs is to drop a non-facing shield and use all of your transporters to create a mini-minefield in that direction. This gives you a terrain feature you can use. The risk is minimal as your opponent probably can't get around your flank before you can restore the shield. Don't do this when hellbores are in range.

While a non-facing shield can be dropped, much can happen in a quarter-turn (before you can raise it again), and if your opponent has hellbores or enveloping torpedoes, it may happen sooner than you think. Even so, it is often the only solution. Note the illustration below.



Target ship has dropped its #5 shield, placing a T-bomb in the hex marked "*" to block drones approaching along the arrow.

DEFENSIVE EMPLOYMENT OF T-BOMBS

Dealing with fighters is a little more difficult though because they are guided by (supposedly) intelligent beings and can make the emergency maneuvers that a drone can't. Also, some fighters are able to live through a transporter bomb explosion (albeit crippled). Therefore, while the general ideas will generally work, you must be prepared to tailor the actual tactics with the circumstances.

T-bombs are devastatingly effective against fighters, particularly when they are operated in tight groups. The mere presence of T-bombs in the scenario will force fighters to spread out, making them less effective. It is possible to drop a shield facing the fighters when the fighters are 5+ hexes away, place a bomb in front of them, and turn the shield before they can effectively employ their weapons. While the fighters could do some damage from range 6, this will be minimal. Note that a few heavy fighters can do significant damage at that range.

T-bombs are an excellent defense against drones as one bomb can destroy every drone within a seven hex area. (Heavily armored drones can survive a T-bomb, but will be so damaged as to be easy targets for phaser-3s.) They are generally superior to wild weasels as a drone defense. Drones are most effective when employed in mass. This is also when they are most vulnerable to T-bombs. One tactic here is to set one or two of your bombs for sizes larger than drones. The approaching enemy ship

will presume that his drones have cleared the path. Another is to set the bombs for fighters and not drones. The fighters will see the drones going through and assume it is safe. (Arrange other defenses for the drones.) Another is to use (M5.16) and set the bombs to ignore the first target. If the drones come in a swarm, the bomb will get them. If one drone is sent ahead to trick the bomb into detonating, the swarm will still take the full blast. Evading this technique requires drones to be launched in a stream of individual drones, rather than a swarm of four-to-six.

T-bombs can destroy pursuing drones. Drop one out the hatch. Or drop a forward shield, transport the bomb one hex out, then move (or sideslip) on top of it. This keeps the bomb from arming until you are clear and draws the drones across the bomb.

OFFENSIVE EMPLOYMENT OF T-BOMBS

Transporter bombs have a significant offensive (anti-ship) potential. The best time to use them is right after the infamous overload exchange. Since your opponent has just done the favor of lowering your shield, you should return the favor by giving him several "presents." You can place them in front of your fleeing enemy to try to cut off his escape. Place two bombs since you can guarantee that the second bomb you place will do internals if he can't turn away. And if he can turn, he will come back to where you want him. If the enemy stops to avoid setting off the mines, detonate them with your own drones or shuttles. Another tactic is the "bracket" where T-bombs are set in front of and behind the enemy ship. No matter how he turns, sideslips, or HETs, he'll have to hit one of them.

T-bombs are the most effective weapon against a cloaked ship. You can drop shields to place them without fear of retaliation and should try to surround the cloaked vessel. If it sets off a bomb, it will be exposed for that impulse, allowing you to produce the worst nightmare of any Romulan commander, a lock-on to a cloaked ship. You can also set a bomb near the cloaked ship and detonate it with a drone or shuttle to expose the cloaked ship.

SPECIAL CASES FOR T-BOMBS

T-bombs can be used to cover your escape. Consider the Oblique Approach. At the option point, the Klingon fires and turns 60° right; the Federation ship turns 60° left and pursues the Klingon. The Klingon ship moves several hexes straight ahead (to satisfy his turn mode) while the Federation ship is sideslipping left to maintain a pursuit course. During this leg, the Klingon ship is leaving a T-bomb in selected hexes. After fulfilling his turn mode (or possibly a bit more), the Klingon ship makes another 60° right turn, placing the pursuing Federation ship on the opposite side of his minefield.

Andromedans (who never understood shields) are the champion T-bomb users of all time. This makes them effectively immune to drones, and fighters become much less of a danger to them (until they run out of transporter bombs). Be careful when launching drones or shuttles within six hexes of an Andromedan. He can set a bomb for size-6 or size-7 targets and place it next to your ship. The drones/shuttles will set it off, damaging the ship.

T-bombs are mines, and even a hidden T-bomb (dropped out the shuttle hatch) can be detected when a ship moves next to it, even if the T-bomb is not set for ships of that size class. You can set multiple T-bombs in the same hex, set for different size targets. That way, all of them will be detonated by an advancing enemy combined arms force.

Those ships with a large number of transporters (e.g., Klingon D7, any commando ships) can make very effective use of T-bombs. They also have large marine detachments who compete for the use of the transporters. ✪

A QUESTION OF RANGE

Throughout this rulebook, various terms are used to describe the range to the target. These terms are based on the situation and weapons and cannot always be expressed in a specific number of hexes. This brief list defines the most common terms.

Point-Blank range is generally zero or one hexes, or the lowest range bracket for the weapons being fired, or the point at which an automatic hit is assured.

Knife-Fighting range is generally two hexes or less, and refers to the slow-speed tightly-maneuvering dogfight.

Drone-Defense range is generally two or three hexes, depending on the weapons. Phaser–3s are ineffective beyond two hexes; anti-drones are effective at three hexes.

Tractor range is a maximum of three hexes.

Close range is generally considered to be about four hexes, the point at which a range bracket changes on the weapon table.

Myopic Zone usually refers to the no-fire zone within the minimum range of the plasmatic pulsar device. Other weapons (such as the non-overloaded photon torpedo or the scatter-pack) also have minimum ranges.

Transporter range is a maximum of 5 hexes.

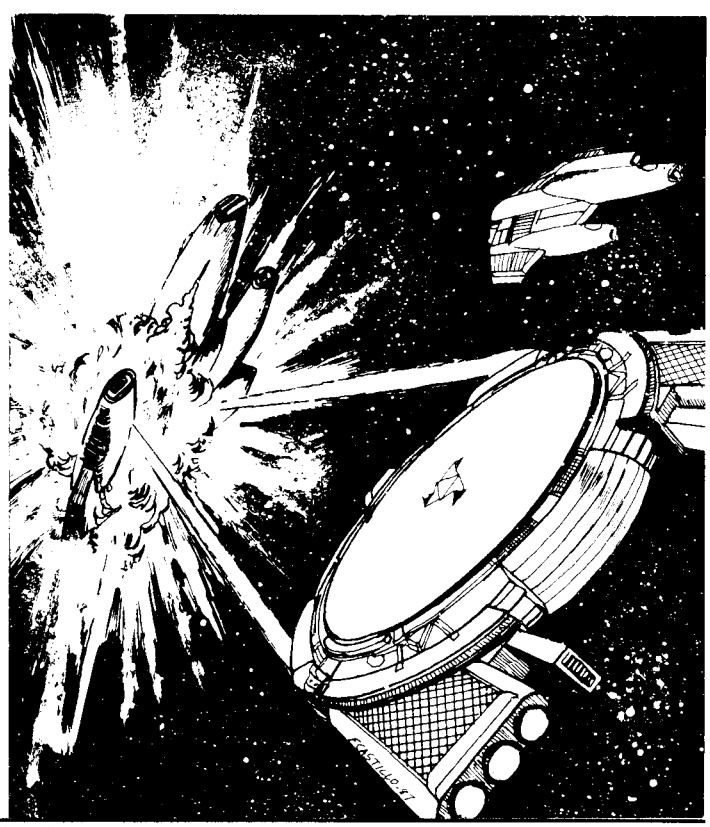
Overload range is anything of eight hexes or less.

The Glory Zone is the range 9-10 area, where plasma bolts are in their second bracket but the plasma ship is outside the overload range of direct-fire weapons. Ships with plasma torpedoes can attempt a long-term attrition battle from this zone.

Medium range starts at the edge of overload range (usually 9 hexes) and extends to a point somewhere between 15 and 20 hexes where the weapons tables drop to a lower damage possibility. This is 15 hexes for phasers, disruptors, plasmatic pulsars, type–G plasma bolts, fusion beams, and hellbores; 12 for photons; 17 for phaser–4s; 20 for type–S plasma bolts; etc.

Long range starts just beyond medium range and extends to about 30 hexes.

Extreme range starts at 31 hexes and extends to the maximum range of the weapon. ✪



MAULER TACTICS

by Graeme Bayless

Upon quick examination of the Mauler, and its associated rules section (E8.0), we can easily see that the weapon is limited in nature but very powerful within its constraints. It is capable of dishing out enough damage to cripple a cruiser, but only if the cruiser is polite enough to offer itself directly in front of the Mauler at point-blank range, an unlikely occurrence at best. Like other weapons and tactics, the Mauler is difficult to employ, but devastating if successful.

The Mauler is almost useless in a one-on-one situation where the opposing vessel can maneuver to stay out of the firing arc of the Mauler while pounding the Mauler-armed ship with direct-fire and seeking weapons. Of course, the later variants of the Mauler that were installed on ships not originally designed for the weapon were much more flexible. The Mauler, when combined with a full complement of phasers and a reduced torpedo complement (SparrowHawk–F, FireHawk–F), can be very deadly.

COMBAT WITH MAULERS

Tactics with the Mauler are simple enough; just close the range, keep the enemy in arc, and shoot. However, there are some considerations that complicate the situation just a bit.

First, the Mauler-armed ship has the option of tying in the ship's warp and impulse engines to provide a tremendous blast of energy that will fry an opposing ship. This has one serious side effect, however: half of the firing ship's engines are destroyed. This can be a useful trade if it cripples a key enemy ship (or if the Mauler is, as usual, facing impending destruction), but is generally too expensive a technique to use.

Another problem to keep in mind when using a Mauler-armed vessel is that Maulers take forever to recharge. The shot you take must be the best one possible as you are unlikely to get a second one for some time. (On the average, Maulers take from 3 to 6 turns to fully recharge their batteries.) Of course, you must avoid the common mistake of letting a good shot go by because you want a better one. Many Mauler-armed ships end up merely as damage absorbers because they waited too long to shoot.

However, the Mauler does have some advantages. It can cause damage, even in small quantities, out to a range of 10 without a die roll (assuming a non-ECM environment). By selecting and combining various battery groups within the Mauler, you can do as much, or as little, damage as the situation requires. This, combined with the ability to fire every impulse, makes the Mauler the ideal weapon to implement the Mizia Concept.

Of course, we must not forget the last major factors on the Mauler: firing arc and range. The weapon is only capable of a very narrow arc of fire, expanding out from the hex row directly in front of the firing ship. At a range of 5 (the maximum useful range), the weapon can only hit 7 hexes total! This is very limiting and can prove critical. While it would seem likely that an enemy could approach the Mauler through the blind zones, this isn't necessarily true as combinations of movement and sideslips can usually bring a target to bear after several impulses of trying. The new directed turn modes make it possible to engage targets in a wider area, but at the penalty of restricted mobility.

The range, as just mentioned, is also a problem. If the Mauler doesn't want to cripple itself, it must be at a range of 0 or 1 to seriously damage an opponent. This can be very difficult to arrange. Note that Maulers must carefully protect their #1 shield as the narrow firing arcs do not allow fire through #2 or #6 shields.

THE MAULER AS A WARSHIP

Maulers have a tactical advantage in their huge battery capacity. This allows them to make an HET entirely with reserve power and to absorb huge amounts of damage by reinforcing the shields. They can breach minefields and anchor enemy ships.

These factors combine to make Maulers one of the most difficult types of ship to play. However, there is a solution. Actually, there are two solutions: play one of the Maulers that has other weapons with which it can fight (D6M, STT, KRM, SPF, FHF, MD5, STJ) or play Maulers only in fleet battles. The latter is the more recommended approach, for reasons that should become clear.

A good way to evaluate a weapon's effectiveness is to try to counter it, and then see how easy it was to do so. For the sake of example, let's say that we are flying a Federation NCL against a Klingon D6M Mauler Cruiser. This is a fairly even fight, at least on the surface. However, if we try the scenario, using a standard "Duel" type setup, we will discover that the NCL cannot stay out of the firing arc of the Mauler unless it closes to very short range. However, that will make no difference. The Fed can merely sit and wait for the D6M to come over. When the D6M approaches, the Fed can blast him with photons at range 12 and then use ph-1s if the D6M closes further still. If the D6M takes a shot at range 5, even with self-crippling, the Fed will only take about 35 internal hits, crippling but not decisive. The Klingon ship is then reduced to dust as the Fed can close in and pound with the remaining weapons while the Mauler takes five turns to reload. Of course, the D6M could wait for range 1, but the Fed will fire his ph-1s at range 2 and cut the Mauler to pieces (30 hits average, not counting the previous photon fire).

Fleet battles provide us with another perspective, however. In a fleet engagement, one-on-one duels are virtually unknown. Most people try to congregate together in order to concentrate sufficient firepower to blast the enemy into scrap iron. In a situation like this, the Mauler becomes useful. A Mauler-armed ship can wait as a reserve, staying just behind the lead ships, where it can engage in combat, but where there are likely to be "better" targets for the enemy's weapons. Maintaining fleet speed, the ship should not fire weapons. Use reserve power to prevent shield damage from long-range fire only to the extent that you can recharge the batteries on the next turn, and even then only when you aren't going to need the Mauler on this turn. When an opponent has closed and fire has been exchanged, the Mauler can use its firepower at range 4 or 5 to seriously hurt a slightly damaged ship. Using the multiple shot system, the Mauler can also use its small battery groups to strip opposing ships, at least ones with down facing shields, of their weapons (see the Mizia Concept). A Mauler takes 3-6 turns to fully recharge its batteries, so remember when you use it that you can't do that every turn.

One special note about Maulers is their usefulness in attacking fixed objects. It's easy to get a base in your firing arc with a Mauler; just drive over there and blast it. Romulans with cloakable Maulers are especially useful for killing bases. One can just draw the base's fire with another ship and then uncloak the Mauler to deliver the coup-de-grace. An even better example is Maulers against a Tholian 3-Layer-Web Base. The Mauler can produce such tremendous damage at range 1 that a single D6M can guarantee a kill on any ship trying to power an outer layer of web. This can make assaults on Tholian bases much easier and the Mauler ship a prime target for ph–4s. When using a Mauler, you must deploy it quickly and use its power immediately, as it will likely be crippled.

The Mauler is a fleet fire support weapon. Using the Mauler in one-on-one situations is dangerous, and usually fatal. Tactics for the Mauler are simple. If a Mauler can reach range 1 fully armed, it usually leaves a flaming hulk behind. ✪

PLASMA TORPEDO TACTICS

by Stephen V Cole

Plasma torpedoes are the primary armament of the Gorns, Romulans, and ISC. They are also used by many pirates and a small number of Federation units. Plasma torpedo tactics are based on the aspects of the weapon itself. By definition, the aspects of a plasma torpedo include:

- It is a seeking weapon with a direct-fire option.
- It loses power with range.
- It takes three turns to arm (except in one case).
- It employs deception as a major factor.

These aspects define the tactics you will use to employ plasma torpedoes in combat.

RANGE

Torpedoes lose power with range. All torpedoes have a "short-range bracket" at which they are at full strength. The larger the torpedo, the wider this bracket is. You should seek to engage targets which can be hit within this bracket.

Because the plasma torpedo loses power with range, you should avoid engaging targets that are far away or which are moving away from you at high speed.

Plasma torpedoes can be used as a deterrent, even against an enemy that can turn away and outrun it. If an enemy is using an Oblique Approach against you, have a plasma torpedo meet him at the option point. He can avoid the torpedo easily, but only by breaking off his attack.

Plasma torpedoes can be employed a bit more easily against bases, which don't move, allowing you to select the range.

ARMING CYCLE

Because your torpedoes will take three turns to reload, you must work to ensure that the first ones hit. If you don't, you'll take a pounding while you reload. A Federation ship, with two-turn reloading, can afford to remain at knife-fighting range while he reloads. A plasma ship, with three-turn reloading, can't afford to hang around. You must launch, run/cloak, reload, and then attack again. Fortunately, the low power requirements on the first two turns of reloading facilitate this approach.

One break here is the so-called "two turn eff" which allows a partially loaded type-G/S/R torpedo to be launched in only two turns, but as a type–F torpedo. At short range, there is no difference between an F and a G, so this could be a good choice at knife-fighting range. The problem is that it specifically requires reserve power, which is always in short supply. Certain ships (e.g., NovaHawk) have huge batteries and can make effective use of this procedure on a regular basis. Most others will find that reserve power has already been spent for something else.

The primary solution to getting the arming cycle to match the tactical situation is the so-called "rolling delay" where torpedoes are kept almost armed and can be completed with reserve power when needed. Again, the problem is a shortage of reserve power, complicating the lives of all plasma ships. While other races can use reserve power at their option to overload a weapon, you are forced to use reserve power to complete the arming of a normal weapon. This is why the newer Romulan ships have such extensive battery arrangements.

SEEKING WEAPONS

As is noted in the Drone Tactics article, there are many things your target can do to avoid getting hit by a seeking weapon. What you have to do is to employ your weapons in such a way that you can avoid these defenses. Typical defenses, and their counters, include:

SPEED: To avoid being hit by a plasma torpedo, you need to maintain moderate speed and avoid approaching a plasma ship head-on. If a torpedo is launched, turn away and outrun it. (This, of course, means breaking off your own attack, presumably to return during the reload cycle. Knowing this, a plasma ship will launch just enough torpedoes to force you away and keep some for the next time you approach.) You can, if necessary and if at the start of the turn, use speed changes to put on a burst of speed that will take you out of the short-range brackets, then slow down (since you lack the energy to maintain high speed) and accept a hit from the weakened weapon. The counter-tactics to this include simply not launching until the enemy is committed to a closing course or bolting your torpedoes at the most opportune moment. The target could make an HET to avoid the attack, but HETs are expensive in power and can be risky.

ELECTRONIC WARFARE: Higher levels of EW shifts can reduce the effect of a plasma torpedo hit. To counter this tactic, use enough ECCM (coupled with the torpedo's own ECCM) to overcome any shift. This will require you to maintain control of the torpedo, which is not always possible. Note that using EW as a plasma torpedo defense will require huge amounts of ECM and will yield relatively meager reductions in the damage received. While better than nothing, EW is not the plasma defense of choice.

PHASERS: These weapons can reduce the effect of a plasma warhead. This can be enhanced by firing at the last moment before impact and by identifying the plasma targets with labs to be certain you aren't firing on a torpedo that's targeted on a ship six hexes behind you. To reduce this problem, launch several torpedoes, or launch them after the enemy has fired most of his phasers, or use pseudo-plasmas to absorb some of the damage.

WILD WEASELS: These shuttles can send your valuable torpedoes into never-never land. There are several ways to avoid or reduce this problem. Use deception to encourage the target to use its weasels at the wrong time, or not to use them at all. The Gorn Anchor can prevent the target from launching the weasel. Don't launch all of your torpedoes at once. Launch just enough to draw the weasel (or so few that he'd rather let it hit), then burn it with phasers and launch the rest of your torpedoes. If he launches another weasel, break away and rearm your torpedoes and repeat the attack when ready. You can reload your torpedo tubes; he can't reload his shuttle bay. If the target has a wild weasel available and you can't anchor him, fire plasma bolts. Make a practice of killing shuttles whenever you can, as they can be reused later as weasels. Select as your first targets ships with high firepower and few shuttles (e.g., Federation DDs).

TERRAIN: One of the few things that will damage a plasma torpedo is a large solid object, such as a planet or asteroid. Ships targeted by plasma torpedoes will try to dodge behind such terrain. Ships employing torpedoes near such terrain should seek launching positions that minimize its effect. Alternatively, they could utilize plasma bolts or the Gorn Anchor.

GENERAL PLASMA TACTICS

Plasma torpedoes dominate the tactics of the Gorns, ISC, and Romulans, but are not their only weapon. They must be combined with phasers to form the most effective combined attack possible. The availability of other systems will modify plasma tactics. Gorns have more phasers and more boarding parties, and many have the valuable "center" hull. Romulans can cloak to reload. ISC ships use the plasma torpedo as the primary firepower of their gunline to protect the heavier PPD-armed ships.

The ultimate plasma tactic is the Gorn Anchor, which is described in the Maneuver section of this manual.

As with phasers, you will normally use your smaller torpedo launchers to absorb damage and protect the larger ones.

One key element of plasma tactics is that the plasma torpedo launcher is the only weapon able to fire/launch AFTER it has been destroyed. This allows you to make a head-on pass, take whatever he throws at you, then anchor him and launch the torpedo. This does tend to be rather hard on your ship, however.

You can make use of the type–F torpedoes added to most modernized ships, in that they are always loaded at the start of a scenario and ready to fire. One tactic is to charge the enemy on the second turn of arming your heavy torpedoes, using the type–Fs to overwhelm the target. Torpedo hits on your ship will be absorbed by the now-empty type–F launchers. You will then start the next turn at short range with fully loaded heavy torpedoes and in a prime position for a tractor auction.

A good general tactic is to charge the target, launching your torpedoes and pseudoes one at a time. This will up the ante until the target launches a weasel, at which point the plasma ship will burn the weasel with phasers and close in during the explosion period to execute the Gorn Anchor. The deceived torpedoes, arriving at the WW hex one at a time, will provide a Mizia-type barrage of collateral damage. Take note of the direction the weasel is facing, which determines the direction your collateral damage will strike from. Do your best to maneuver for a shot on this shield, before the torpedoes begin to impact. This can cause a Mizia-type barrage on the now-downed shield, which your opponent cannot easily avoid.

In a fleet action, divide your torpedoes among several targets to complicate the defenses. Try to deceive the enemy as to which ships are the targets. If he tries to push small ships in front to phaser the torpedoes as they approach his large ships, target the small ships and destroy them.

PLASMA SHOTGUNS

Plasma shotguns are effective in several cases, most of which are noted in the rulebook. This tactic allows a single launcher to engage several targets, including drones, shuttles, or other ships. At short range it can be very effective as a type–F has the same power as a type–G for the first five hexes. Plasma shotguns are very useful at keeping pesky enemy fighters and PFs away from your ships.

ENVELOPING PLASMA TORPEDOES

Enveloping plasma torpedoes are useful in many circumstances. They are, in effect, the only overloaded weapon without the 8-hex range limit.

- Against an Andromedan, they will fill up both his front and rear panels, preventing him from lowering their level to transfer power from the front to the rear.
- If the target has a down shield, an enveloping torpedo should definitely be employed. If the shields are relatively equal, an enveloping torpedo will scratch them all without penetrating any.
- If using the "leaky shields" rule, enveloping torpedoes become frightfully effective as damage roars in from all sides, probably stripping the target of its phasers.
- Use enveloping torpedoes against a target with a large number of WW (such as a base) because they provide more collateral damage.
- In a nebula, enveloping plasmas are deadly. Their warhead will be reduced only slightly; ships are unable to flee effectively since they can be turned at random. Worst of all, ships can only use minimum shields, which can easily be crushed by enveloping plasmas.
- They have a Mizia effect when combined with normal torpedoes since they are resolved separately.

DECEPTION

The key to success with plasma torpedoes is deception. Obviously, the pseudo torpedo is a primary element here. In the simplest case (a ship with one torpedo and one pseudo), the tactic is to launch the pseudo, then destroy the inevitable weasel, and launch the real one. The problem is that the enemy knows this and might ignore the first torpedo. So now and then you launch the real torpedo first, or launch both of them on the same pass (not the same impulse) if you think he doesn't have a weasel.

One gambit is to launch a type–R pseudo-torpedo ballistically into space, making your opponent think that you have in fact launched a real torpedo that was armed during energy allocation and which (being an R) could not be held. The real torpedo is, of course, waiting with rolling delay for the enemy to take advantage of your "misfortune" and charge.

It is imperative to identify the pseudo-plasmas. Never allow a torpedo to run out of endurance. If you are outrunning a chasing torpedo, let it hit you near the end of its run. The few damage points don't matter, and you'll know if it was real or not. There is a counter tactic to this. If you are the one who launched the near dead torpedo, and it seems as though your opponent is going to let it him for very little damage to find out if it's real or not, fire some of your own phasers at the torp one impulse before it is going to hit him. Hopefully you will do enough damage to totally destroy the torp, thus not giving your opponent the opportunity to find out if it is real or pseudo.

PLASMA BOLTS

The seeking plasma torpedo can be transformed at will into the direct-fire plasma bolt. This is the only weapon in the game able to function in either mode as the situation requires.

This flexibility comes at a high cost.

- The bolt has only half of the warhead strength the torpedo would have it if hit at that range.
- The hit probabilities are fairly low. Even at long range, the enemy can reach you before you can reload your torpedoes.
- There is no overload feature. An EPT works as a normal torpedo in this case, losing the extra energy you spent arming it.
- Bolting sacrifices the ECCM of the plasma torpedo, and direct-fire weapons are more susceptible to EW in the first place.
- You cannot fire them from a destroyed launcher, as you can a standard plasma torpedo.

There are several cases in which the plasma bolt can be preferred to the plasma torpedo:

- Against a receding target, where the torpedo will have to expend range and power chasing the target.
- Against a target protected by a wild weasel, or a target suspected to have a wild weasel ready in the shuttle bay, in which case launching the torpedo would be a complete waste.
- When a down shield is facing you, but the target would be able to turn a fresh shield before a seeking weapon can reach it.
- When you don't have enough torpedoes to generate an effective seeking weapon attack, and won't get caught by a charge if he knows you have unloaded weapons.

Plasma bolts can be used effectively in the "Glory Zone" (range 9-10). At this range they have a 50% chance of a hit, the same warhead strength (except for types-F and-D) as bolts fired from closer ranges, and you are outside of the enemy's overload range. Here you must use the Oblique Attack to ensure that the enemy can't close to 8 hexes while you are turning away. This can cause problems for Gorns with LP/RP launchers as they will be able to launch/fire only half of their torpedoes/bolts on a given pass unless they chose to turn toward the target. The Glory Zone tactic can be countered, to some extent, with electronic warfare, normal loads on some heavy weapons, and speed changes. ✪

BASIC MANEUVERING

by Graeme Bayless

Maneuver is the heart (weapons being the soul) of any combat simulation. Learning how to maneuver properly is the path to victory and is the hardest thing to learn. One article cannot tell you how to maneuver in EVERY situation, but we will examine some guidelines on how maneuver is used.

The whole concept of maneuver is to place yourself in an advantageous position relative to your opponent while not exposing yourself to his firepower. In SFB, this roughly translates to placing your weapons where they can give more damage than you will receive. A primary goal is to place your weapons where they can hit a down shield. This is never easy, but it is how victory is achieved.

The other primary objective of maneuver in SFB is to control where and when tactical combat takes place. This means deciding ahead of time where you want to fight (in relation to terrain and such) and then getting there first and in good order. Of course, this requires a little second-guessing on your part in relation to your opponent's movement, but second-guessing is part of winning.

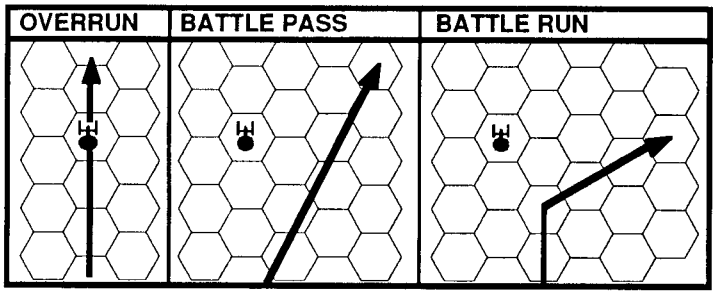
Speed is a key factor in maneuvering. Expert players widely agree that when in doubt you should go at medium to high speeds (15-25), the highest possible within the required turn mode. This gives you the initiative, the ability to control where and when the battle will take place, and the ability to avoid seeking weapons.

There are several types of maneuvers in SFB, some of them usable by any number of ships, and others only for fleets because of the need for multiple ships to execute the maneuver properly. Of course, there are actually hundreds of different types of maneuvers in SFB, but the ones presented here represent the most basic ones from which all others are derived.

THE DIRECT APPROACH

The most basic of all maneuvers is the direct approach. This can be anything from a headlong charge across the map at high speed to a careful advance on a fixed position. The whole idea of an approach is to close the range with the enemy. To do this, you simply move forward. However, there is more to it than that.

Approaching an enemy force indicates your willingness to engage. Because of this, you must be ready for that engagement. Before you advance on an enemy ship or fleet, be sure that your weapons are charged, that your shuttles and fighters are ready, and that your ships (in a fleet) are placed properly for maximum self-support. If you are NOT ready, then you should pause or even retrograde before initiating the combat, unless, of course, your opponent benefits more from a delay than you do.



The direct approach can terminate in a battle run or an overrun. An overrun enters and passes through the enemy hex, while a battle run approaches and turns away and a battle pass passes to one side. The objective of all three is to engage at point-blank range with overloaded weapons, then bring your flank and rear weapons to bear on the damaged enemy ship.

An overrun is appropriate when you want to get to range zero. One deterrent for overruns is to drop a T-bomb (or better, an NSM) out of the shuttle hatch while the enemy is approaching. For best results, this bomb should be two hexes behind you at the point of intersection. At that range, it will arm (as your ship has left the detection zone), while the follow-through of the enemy's overrun will carry him (shattered shields leading) into detection range. A scatter-pack could also be left behind for this purpose. Other ways to deter or avoid an overrun include firing seeking weapons (possibly after he fired at you), tractoring him, and maneuvering to avoid him.

A battle run is made when you do not seek a decisive engagement on the present pass, but simply want to fire or launch weapons and then move away. A battle pass would be appropriate when you want to get to the area of the map behind the enemy ship.

If you are closing too fast, you can use a number of maneuvers to slow down, including emergency deceleration (only under very specific circumstances), mid-turn speed changes (which must be plotted ahead of time), tractoring another unit to increase your movement cost, and using a series of alternating side-slips, which waste forward progress. If you are closing too slowly, you can avoid sideslips, straighten out some planned turns, and even use reserve power to accelerate.

A direct approach could also terminate in a Gorn Anchor, which is discussed elsewhere.

ANOTHER NAME FOR VALOR

The next basic type of maneuver is the retrograde. The retrograde, in this case, refers to all types of movement away from the enemy, not just the Kaufman Retrograde. In general, retrogrades are used to delay an inevitable battle — in other words, stalling. You can use limited retrogrades to keep the range essentially the same while getting the chance to prepare weapons, repair shields, fix damage, etc.

The main disadvantage to the retrograde is that it is difficult to retrograde far if you are defending a fixed position (or on a fixed map), although limited retrogrades still work wonderfully for delaying a battle. We must also remember that retrogrades can be used to drive "sideways" to an enemy force (using sideslips) in order to allow the range to close, but not as quickly as if you were approaching him as well.

Of course, if your opponent closes more quickly than you'd expected, you simply quit sideslipping and retrograde away from him. The retrograde is also usable as a powerful defensive maneuver in open space. If you don't mind giving up a lot of ground, then the Kaufman Retrograde is a VERY powerful maneuver (see the article on the Kaufman Retrograde in this Department).

PURSUIT

A third type of basic maneuver is the pursuit. This may be in reaction to a retrograde, but is more likely to result after the direct approach terminates in a battle run or an overrun. The object is to position yourself several hexes behind your opponent and stay in effective range and in his rear arcs. Many of his weapons will be unable to fire into that arc, while yours will continue to pound his rear shields.

The pursuit can be established most easily by speeding up and following your opponent after he turns away from an oblique approach or battle run. Alternatively, you can use an HET after an overrun, or you can attempt to "hook" an opponent after an oblique flyby. Once established, unless your opponent has a much better turn mode, he will not be able to change the tactical

situation without using an HET or emergency deceleration. If the pursuit can be maintained to the end of the turn, you will have an advantage in that you can fire at his rear shields on impulse #1, while he must wait until impulse #2 to move or use an HET.

The counter to the pursuit is to either disengage, move toward a target that he doesn't want you to attack, or try to bring your weapons into arc. The simplest (and riskiest) means is to use an HET. This should be done at the end of the turn to give him minimum time to react. A series of regular maneuver turns may bring your weapons into arc, but only if you have a better turn mode and plenty of time. T-bombs can be used to discourage pursuit or to give time and space to make a maneuver turn.

ADVANCED MANEUVER CONCEPTS

Having covered the three most basic maneuvers of all, let's look at some of the more advanced concepts in maneuver.

Counter: In any combat situation, responding to your enemy's moves is critical. You must watch what your enemy does, and then move accordingly. This is known as the counter. A counter in SFB consists of going at a speed slightly faster than that of your opponent and then turning/sideslipping in order to keep him in your appropriate weapon arcs and shield facings. Since you are faster, his ships must move first (assuming he is not nimble) on each impulse, allowing you to anticipate his movements. It seems pretty basic, but requires some thought. You must guess what your opponent will be travelling (speed-wise) during the Energy Allocation Phase, and then plan for a speed that will allow you to stay with him AND turn with (or inside of) him. This means that you are preventing him from executing flanking attacks and that you are prepared to fight. This really translates into staying aware of what your opponent's ship is doing as well as what your ship is doing.

Feint: Another important maneuver type is the feint. A feint consists of trying, through a variety of means, to convince your opponent that you're going to do one thing and then doing another. This is really an attempt to trap a player who counters (see above) too much. If he follows your every move, use a feint. In a one-on-one situation, this means using a superior turn mode (if you have it, an HET if you don't) to convince your opponent to turn one way (using a counter) with you and then quickly turning back the other way in order to flank him.

Overall, the feint is used in almost every game of SFB to some extent, especially in fleet actions, and is the fastest way to kill an opponent who is getting too predictable.

Speed changes during the turn can also be used to confuse your opponent. A good example would be starting out at a reasonably low speed, convincing an opponent who really wanted to stay at medium range that turning toward you would be fine because of your slow speed, and then accelerating later in the turn to get much closer than your opponent would like. (Remember, the only way to slow down in the middle of the turn, without plotting the speed decrease at the beginning of the turn, is to use emergency deceleration and stop.) A high speed at first may convince your opponent that you do not have overloads, while allowing you to get into range.

The greatest problem with speed changes is that you must plot your speed (unlike your actual movement) at the start of the turn based on a guess of how the battle will develop. Another problem is that to save any real power you must either start at low speed (limiting your top speed) or end with low speed (giving the enemy the initiative). Stay above speed 15 to allow yourself the maximum flexibility. Reserve power can be used to offset a planned deceleration or provide an unplanned acceleration.

Turn modes deserve comment. Look at the brackets and pick the top speeds in a given turn mode to achieve the best maneuverability. Going to a low speed to achieve a better turn mode won't necessarily achieve more actual turning and will leave you facing in the same direction (warning: Mizia Concept!) for several impulses while your ship doesn't move. Erratic maneuvers, often used while maneuvering toward or away from an enemy, delay your ability to turn.

Oblique: One last maneuver that's quite useful for both single-ship engagements and fleet battles is the Oblique Attack. This maneuver is considered a standard way to execute an approach in SFB and is very important to understand fully; it is covered in a separate article.

Other key maneuvers (Gorn Anchor, Kaufman Retrograde, docking) are also discussed in separate articles.

MANEUVER 'EN MASSE

Fleet maneuvers are an entirely different thing and are, because of the increased number of variables, necessarily more complex. When you are commanding a fleet, suddenly you gain the ability to execute multiple maneuvers simultaneously. Of course, your opponent (assuming he brought a fleet also) will also have this privilege. All of the maneuvers listed above apply fully to fleet combat, but there are a few more that are designed primarily for use during fleet actions.

The most basic of all fleet maneuvers is a flying wedge of heavily armed ships. This seeks to gain firepower superiority in a local area (a few hexes across), destroying the enemy ships there before other enemy ships can attack. Concentration is the key in a fleet battle, where four ships, firing together, can destroy one enemy ship per volley. See the article on Fleet Formations in this Department.

Flanking maneuvers in fleet battles are generally unproductive as they separate your force into smaller elements. The enemy will simply run toward one element (and by definition away from the other), destroying it before the second group can engage. This also allows the enemy to take the fire from your two forces on two opposite shields, rather than allowing you to concentrate it.

One exception to this is when a valuable and vulnerable enemy unit (e.g., a scout, a carrier without heavy weapons, an FRD) is in their rear area. Here, a squadron of PFs or a fast-moving war destroyer could get around the enemy, knock out a key unit, and distract ships from the main combat area. Small units such as these are often more dangerous to yourself than the enemy, if kept inside your own fleet, as they are easily blown up by massed enemy salvoes.

Another key maneuver is the sacrifice, where one ship is offered up for destruction in order to achieve a tactical advantage. For example, you are planning to attack a key point in the enemy formation later in the turn. You send a frigate into this area early in the turn (before your later attack is revealed by speed changes and a change in direction) to encourage the enemy ships to unload their weapons. As the frigate approaches the enemy, pay great attention to the tactical intelligence levels in order to conceal your true purpose. The essential concept here is to lose something that won't cost you nearly as much as it costs your opponent, once you execute the second half of the operation. Just be sure that it's worth it.

BUILDING BLOCKS

Although most every maneuver in SFB is derived in some fashion from the above tactics. The maneuvers shown here are only examples of the most basic concepts.

One must pay attention to the individual tactical situation and make judgments based on that current position, not just play a concept that you decided upon at the beginning of the game. This really means that SFB is a fluid game that requires fluid play.

"No plan ever survives contact with the enemy" is a quotation that applies well here. Always be prepared to alter your tactics to adjust to a new situation. ✪

DOCKING

by Stephen V Cole

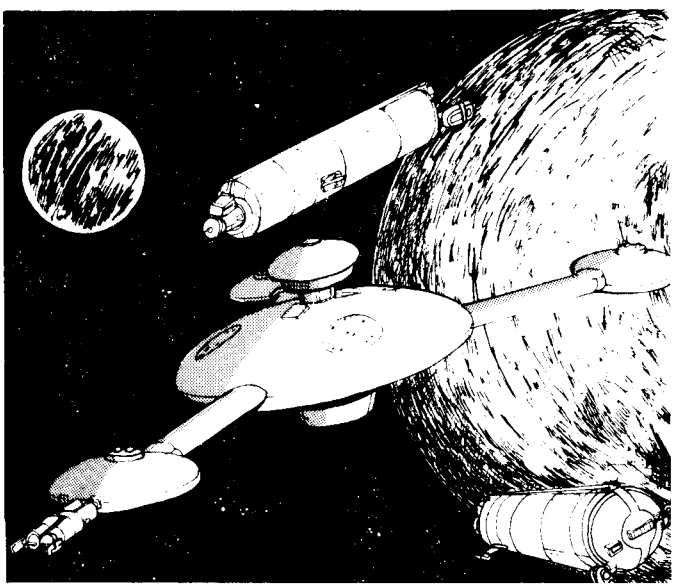
Docking is a seldom-used SFB maneuver, but can be important in some cases. The subject is covered extensively in rules section (C13.0), and the actual mechanics of docking need not be repeated here. This article will, however, briefly discuss the tactical situations in which docking is a viable option.

Docking to FRDs is the only viable way to move these massive units in a trans-light mode. When defending an FRD, having one or more of your ships (assuming that you have more ships available which remain undocked and able to provide protection) dock to the FRD allows it to move at speeds up to 16. While hardly fleet speed, it is far better than a speed of 1. Docking also provides power to the FRD, which can help it complete repairs in progress. Note that some of this material is covered by (R1.10) rather than (C13.0).

Docking to (rather than in) bases leaves the ship free to use at least some of its weapons, but the ship cannot absorb damage scored on the base. This type of docking allows the ship and base to transfer power and personnel. When you need to move a lot of people in a hurry, docking may be the most effective means.

Docking inside a starbase has advantages and disadvantages. While the ship cannot be targeted separately, it can (and will) be damaged by hits scored on the module it is in. Stuffing the modules with freighters can provide a substantial "padding" effect. A ship in the bay can still provide power to and exchange personnel with the base.

Docking to another ship is an awkward maneuver conducted only in very unusual circumstances. While it allows power and personnel to be transferred, it restricts both ships to a total speed of two hexes per turn while docked. This gives entirely too much initiative to the enemy. One (very limited) tactical use of this form of docking, however, could be to protect a valuable unit from certain destruction by seeking weapons. If a valuable unit is targeted by many such weapons, and if that valuable unit is temporarily unable to defend itself, another unit could dock with it and then separate. This would draw off some of the seeking weapons, although it will leave both ships at low speed and a huge tactical disadvantage. Naturally, any unit volunteering to dock with such a target should have its own wild weasel ready to launch, allowing the ships to separate and begin accelerating after the WW is destroyed. Alternatively, the ships could undock almost immediately, and the volunteer could then use his WW for his own benefit. ✪



THE GORN ANCHOR

by Frank Crull and Steve Cole

The Gorn Anchor is a tactic which involves approaching to within three hexes (preferably within one hex) of an enemy ship, grabbing that enemy ship with a tractor beam, and then launching a full spread of plasma torpedoes directly into him. The tractor beam accomplishes two important tasks: it prevents the target from launching a wild weasel, and it prevents the target from outrunning the torpedoes.

This tactic can be used by other races, but as the primary benefit is to make plasma torpedoes (which take a lifetime to arm) more effective, it is most commonly used by the plasma races. (Henceforth, the name "Gorn Anchor.")

Note that the Sequence of Play facilitates the Gorn Anchor maneuver. Tractor beams come after movement and before the launch of seeking weapons or the use of direct-fire weapons.

Holding an enemy ship in a tractor beam causes other problems for its commander. If the target is smaller, it cannot fire at any ship other than your own. In a fleet battle, this would allow another ship to approach the target and finish it off. It can prevent the enemy ship from cloaking and create other restrictions. You might be able to force the enemy ship into a minefield, terrain hex, or the ESG of a Lyran ship.

The tactic is particularly effective when used by a large ship against a small ship. At equal speeds, the large ship will have far more power available for tractor beams than the small one. Other ships particularly vulnerable to the Anchor include ships in the middle of a long rearming cycle, damaged ships short on power, ships which just penetrated the WYN radiation zone, ships which have been surprised, ships known to have used their reserve power, and carriers in the midst of rearming their fighters.

The Gorn Anchor utilizes, to some extent, the Mizia Concept. As the phasers (or any direct-fire weapon) and plasma torpedoes (or drones) strike as separate volleys, there will be at least two sets of rolls for the key A–row damage. You can stagger the fire of your weapons to create more volleys (and more A–row hits), using the Mizia Concept to its greatest extent, but you run the risk that the enemy ship will do something (see below) to reduce the effectiveness of your attack.

EMPLOYING THE ANCHOR

The successful execution of a Gorn Anchor can win a battle in a single salvo, leaving an enemy ship crippled, trapped in your tractor beam, and lacking enough power to break away by means of an auction during the next allocation phase. A typical heavy cruiser with two type–S and two type–F torpedoes can score 100 damage points (plus another 40 or 50 points of phaser damage), easily enough to penetrate a shield and cripple or destroy the target. A light cruiser (such as a SparrowHawk) could easily generate 100 damage points from all weapons. The focus thus becomes the successful execution of the maneuver (and the survival of the explosion of your opponent's ship, which under the new Doomsday rules is much easier than under the old rules).

The first step is to get close enough to the enemy to conduct the attack. There are several aspects here. Observe the speed and direction of the enemy ships, and avoid selecting a target which you cannot catch. You will need superior speed (or a cooperative enemy), fully-armed weapons, and sufficient tractor energy. This may require loading your weapons on a previous turn and holding them as you begin the attack. This, of course, extends the already long arming cycle even further. At the least, charge your phaser capacitors on the previous turn and don't fire them. You might even assign another ship to protect you from drones so that you can save your phasers for the anchored ship.

Another option, although a gamble, is to concentrate your movement energy into part of the turn by using a speed change. Fifteen points of energy will move your heavy cruiser at a speed of 15 for the entire turn, or at a speed of 20 for half the turn (10 for the other half). Slow speed at first might lure an enemy ship into approaching you. Fast speed early in the turn might catch him before he can get away.

Another factor is determining the range at which you will use your tractors. For non–X ships, your tractors have a maximum range of 3 hexes. Here again, we see that the essence of tactics is making a choice between options. The closer you are to your opponent, the less power it takes to hold him and the less likely that he can break the tractor. It takes three points of power to use them at a range of 3 hexes, two points at a range of 2 hexes, and only a single point to use them at a range of 1 hex.

More importantly, one point of negative tractor will counter each point of tractor strength, even if you paid two or three points of energy for that strength point. Thus, if you have six points available for tractors and he has only two points, he will be able to break your tractor if you grab him at a range of 3 hexes.

Obviously, from a power standpoint, it is better to close to a one-hex range, but that is not the only consideration. Observe the speed and turn status of the enemy ship. Don't forget that it can sideslip, gaining a hex of range, even when it can't turn. If it will be able to increase the range, you have little choice but to try and tractor it when you can. Also check the defenses section (below) to see what he may be able to try.

Do not allow the execution of a Gorn Anchor to become a fixation that blinds you to the true situation. If you get to close range and the enemy has no shuttles or is going too fast to use a wild weasel (or is slow enough for the plasmas to catch him), forget the tractor and launch.

Pay careful attention to the impulse chart. This will tell you when your opponent will move in relation to your own movement.

ANCHORS FOR ALL RACES

As noted, other races can use the Gorn Anchor technique. Drone-using races should arrange for the maximum number of drones to be launched at the target on a single impulse. This includes not only the ship's drone racks, but also a well-timed scatter-pack.

Orions can win any tractor auction if they have had enough warning to double their engines. Because of the tremendous amount of power that they have available, Orions can use the Gorn Anchor more effectively than most races. Fortunately, they have relatively few real warships; most of their ships are designed for convoy raids.

Hydrans (with their short-range weapons) can use the technique effectively, particularly if the fighters are positioned to fire on the down shield. The fighter squadron would follow the ship, with some fighters out to either flank where they can hit the down shield even if it rotates away from the ship's weapons. The Hydran could launch some of his fighters after tractoring you to increase their chances of survival.

The WYN AuxBC, with its multiple weapons and vast amounts of power, can use the Anchor to devastating effect.

WHEN NOT TO ANCHOR

Then there are the times you do not wish to perform a Gorn Anchor. To tractor an opponent while your weapons are reloading is ineffective. Your opponent can spend at least one turn trying to break the tractor and will be firing at you point-blank until your weapons are rearmed.

There are some opponents you don't want to anchor. Anchoring a Hydran at one hex is suicide due to the fusions (with their suicide overloads) and gatlings. Anchoring a larger ship is the kind of bold action that will earn you a posthumous medal for gallantry. Ships with 100+ points of plasma torpedoes should best be left alone (if only that were possible); they are probably trying to anchor *you*. Lyran ships, with their ESGs, can be difficult to approach.

It is usually pointless to anchor an Andromedan ship. If it has a displacement device that it has not used in the previous 32 impulses, it will simply leave. In any case, it probably has enough power in the batteries to laugh off any tractor auction you try to start. But like all ships, if you do manage to anchor them, you can seriously hurt them. Indeed, a tractor auction may be just the thing to empty his batteries and slow him down below plasma-dodging speed.

Neo-Tholians can block your approach with a web caster. However, once you have grabbed him, it will take longer for a cast web to solidify than it will take you to empty your weapons.

DEFENSE AGAINST THE GORN ANCHOR

Defenses against the Gorn Anchor involve avoidance (staying out of his tractor range) and reaction (things to do after his tractors grab you). Naturally, all of the standard combat techniques (e.g., having weapons armed, having transporters and marines standing by) apply in this case.

Avoidance takes several forms. When moving away from the enemy, you can try to outrun him, drop mines and transporter bombs to discourage pursuit, and fire at him with whatever weapons will bear in an attempt to damage his ship and slow him down. Obviously, if you remain outside of tractor range, you can't be anchored.

If you are closing with (moving toward) the enemy, your options are effectively limited to firing at him. Here you must judge carefully when to fire. Firing too soon (at too great a range) makes your weapons less effective. Waiting too long means you risk getting caught in the tractors.

If you have down shields facing the approaching enemy, don't fail to use transporters to place T-bombs in his path. This will force him to maneuver or accept damage to his facing shields (or all three). It is probably not worth dropping an active shield as you are about to enter close combat.

You can use a high energy turn to turn away from the rapidly approaching enemy ship, but such maneuvers are limited and risky. If you break down, you'll probably be destroyed when he closes to point-blank range. An HET can be combined, however, with a preemptive salvo. Fire your weapons on one impulse, then make an HET and move away on the next.

The Sequence of Play facilitates combining a preemptive HET with a T-bomb attack. Because the order is move-shield-transport, you would have to drop shields and place the T-bombs on one impulse, then turn away on the next impulse. Leaving facing shields down is asking for destruction. Once you have turned away, however, you can drop T-bombs to cover your withdrawal.

Generating large amounts of ECM could, possibly, prevent the approaching enemy from tractoring you. As your own power would be better spent on negative tractors, ECM to defend a ship from the Anchor will usually come from a scout. Don't overlook other sources (MRS, ECM drones, EM, terrain).

One desperate avoidance maneuver is to launch your WW before he grabs you with tractor beams (and after you have fired all or most of your weapons). Because a ship protected by a wild weasel cannot be tractored or targeted by seeking weapons (and has a strong ECM defense against direct-fire weapons), you will be safe from the Gorn Anchor. Safe, that is, until he destroys the WW (which he will do immediately) and waits out the four-impulse explosion period, during which time he will move to point-blank range. This only works if you are expecting rescue, or if you have plenty of mines that you can drop and hide behind, or if you determine that you are going to be destroyed anyway and just

want to make him work for it (or provide your crew time for religious observances).

Reactive defenses include winning a tractor auction, firing at the enemy, and maneuvering.

By all means, try to break the tractor. Your reserve power will be far better spent avoiding his torpedoes than soaking up a couple of damage points on the shields. Remember, the enemy has to arm all of his weapons, catch you, and tractor you. That takes a lot of power, and he may have gambled on limited tractor power. If you break the tractor, you will be able to launch a wild weasel before his torpedoes can hit you. His options are to close to zero range or fire the torpedoes as bolts and begin the long rearming cycle. One tactic is to allow him to win the auction (without using all of your reserve power). Then hit him with phasers or other weapons, encouraging him to use his reserve power for shield reinforcement. Then reopen the auction on the next impulse with your own reserve power and break the tractor.

Firing at the enemy is one of the avoidance options, but it sometimes becomes a reactive option. You may have decided to wait for point-blank range, or you may have guessed wrong, but if you didn't fire by now, you should fire immediately. This might damage his ship, destroy the tractor (or force him to release it to balance energy), expose down shields to feedback damage, destroy weapons before they fire, or otherwise discourage him. Try to get two or more volleys into his ship to increase the chances of a tractor hit. If you can knock down the facing shield, you just might be able to take out his tractor beams with hit-and-run raids (Note: assign guards to tractors when attempting the Anchor), allowing you to launch your wild weasel immediately. This will turn his entire attack into a fiasco as a full spread of torpedoes goes for the wrong target.

If the approaching seeking weapons can be handled by your phasers or other defenses, by all means handle them.

Note in the High Energy Turn section that the HET maneuver can be used to bring your weapons to bear on an anchoring ship you cannot otherwise avoid. Your opponent may think he has you at a disadvantage, only to face the fury of your overloads.

Determine from the movement rates and costs which direction the two linked-ships are going to be moving. If the general direction is away from his ship (i.e., he will be pushing you), then dropping mines can be a valid option, but only for a retaliatory effect. As the mines can't explode until you move away, they won't do much to stop him from firing, and any damage to his ship will probably be on the opposite shield.

In a fleet battle, you could have a nearby friendly ship tractor you and conduct a tractor auction with the enemy ship. The Klingons have the additional option of putting the anchoring ship (or the anchored ship, if it's one of theirs) in stasis.

One alternative is a counter-tractor, where instead of using negative tractor energy you grab the enemy ship, possibly at 2 or 3 hexes range. This keeps him from launching his own WW and may reduce the effect of his fire. This is, however, generally ineffective.

The final reactive option is maneuver. Remember that even when held in a tractor beam, you control your own facing with normal turns, tactical maneuvers, and high energy turns. If you had advanced warning that you would be anchored, you should have made a point of fulfilling your turn mode before his tractors grabbed you. This (at least) will prevent him from using the Mizia Concept by allowing you to turn after his initial volley, taking any follow-up shots on a solid shield.

CONCLUSION

The Gorn Anchor is a relatively simple maneuver that beginning players can execute. It is the basic seeking weapon tactic on which more advanced tactics are based. ✪

ERRATIC MANEUVERS

by Ray Olesen

The main, indeed the only, reason for using erratic maneuvers is to minimize your enemy's chance of causing damage to your ship. Let's look at the facts and restrictions you face when using erratic maneuvers (EM).

EM works by giving your ship four "naturally–produced" points of ECM. Without any other EW adjustments involved, this will cause a +2 modifier against your opponent's chance of doing direct-fire damage and give you a 33% chance that any seeking weapon that hits will do only 50% damage. Note that it has a greater effect on direct-fire weapons than on seeking weapons. (See the chart in the EW article.) To achieve this you must operate under a number of restrictions. These include:

1. Your own weapons fire is equally affected by the EM penalties unless you have a computer-controlled ship,

2. You can't launch or guide seeking weapons, any type of shuttle, PFs, or probes.

3. You can't do any of the following: use ESGs, scout functions, SWAC functions, MRS-EW, web generators, stasis field generators, maulers, transporters, tractor beams, or labs; lay or reinforce web; dock or undock; separate the ship into two sections (if ship is capable of this); attach/detach pods; or sweep/detect/lay mines.

4. You also have these additional disadvantageous effects: greater chance of HET breakdown, increased turn mode by one, increased chance of collision with small moons, greater chance of damage in an asteroid field, automatic triggering of mines, voided wild weasels, and reduced effectiveness of anti-drones.

As you can see, you give up much to use EM; be sure it is worth all the restrictions. It has no effect on sideslip modes, monsters, explosions, ESG damage, acceleration, and deceleration limits. EM can be fairly useful to fragile units (frigates, PFs, fighters) but is of little use for cruisers.

WHEN TO USE ERRATIC MANEUVERS

Because of the above restrictions (and others in the rulebook), the time to use EM is when you do not need to fire and your enemy does. This will usually be during an approach or escape maneuver. Fighters traditionally use EM to close to point-blank range when forced to make a ship assault.

Erratic maneuvering is less effective against an enemy armed with seeking weapons. During an approach the power would be better spent on ECM to allow your own weapons to fire on the approaching drones and torpedoes. During an escape the power would be better spent on increased speed.

There is another restriction that is important. You can only start and stop EM once per turn. Thus, as you come in on your attack run, you can't drop EM, attack, and immediately resume EM, unless you do this over a turn break (drop EM on Impulse #31, fire and announce EM on Impulse #32, begin EM on Impulse #1).

EM is widely considered useful against the ISC as it could allow your ships to penetrate the gunline and even get inside the no-fire zone of the PPD, but this is a fallacy. An EM ship is very vulnerable to seeking weapons, something ISC echelons have in quantity.

If your chances of achieving hits are high enough, and you are not launching (or have no) seeking weapons, you might even fire while under EM. This will surprise your opponent and keep you under EM. Another good thing about using EM is when you have to stay put and fight a defensive battle you can use EM even at speed zero! Note that bases and FRDs need not apply; they can't use EM.

One counter to EM is to fire large numbers of seeking weapons (primarily drones). A ship moving under EM is virtually defenseless against such an attack as his weapons have severe penalties, and he can't launch his own drones or WW or use tractor beams.

Remember that EM takes effect (or is cancelled) on the impulse after it is announced. Fighters in particular must take note of this and carefully plan when to make the announcement.

THE ENERGY COST OF ERRATIC MANEUVERS

Energy cost is also a consideration. Any ship with a movement cost of 2/3 or more can get the same benefit for equal or less cost and no restrictions by allocating four points to ECM. However, this assumes you are using the ECM rules, are not already at maximum ECM, and that your opponent doesn't counter with ECCM.

There is an exception to EM costs. Computer-operated ships (never historically available) only pay three movement points for EM, and their weapons are not penalized for firing under EM (due to the free ECCM they receive). Elite crews can make considerable use of EM as they gain five points of ECM but only have to shoot through three points, which are cancelled by the automatic 3 points of ECCM that they receive.

Most ships pay six movement points from either warp or impulse power for EM. This means that if your movement cost is less than 1.00 you will want to use warp power to minimize your total power cost. However, if your movement cost is greater than one (essentially DNs), you will want to use impulse power (instead of warp power) for the same reason.

While most ships pay six movement points, computer-controlled ships spend only the cost of three movement points, nimble ships pay only three movement points, PFs pay only 3/5 of an energy point, and shuttles give up only one hex of movement for EM. Also note that EM can be adopted with reserve warp or reserve impulse power.

Erratic maneuvering is a useful tool in some circumstances if properly employed, but be sure to consider all its restrictions. ✪

HIGH ENERGY TURNS

by Frank Crull and Stephen V Cole

The high energy turn (HET) provides one of the best surprise elements in SFB. They can either surprise you by failing or surprise your opponent by working.

As defined in section (C6.0), an HET is a procedure whereby any unit at any point in its movement (other than impulse #1) can suddenly change its facing. These are sometimes known as "snap turns" or "point turns" for that reason. The ability to withstand a HET is a reflection of your ship size, indicating the degree of stress it can take when it makes a difficult maneuver, the snap turn.

Seeking weapons can perform HETs by expending one of their movement points. This is often the only way that they can keep their targets in their FA arcs.

Fighters can make HETs without cost. This is particularly valuable for these small attrition units. They can use their HET to break a tractor and avoid being dragged to death. They can also use an HET to break off an attack run after weapons release.

THE POWER QUESTION

Because of the value of a quick change in direction, virtually all ships should be prepared to make an HET at all times, but particularly when approaching an enemy force. This presents a problem, and the name of the problem is ENERGY. To allocate an HET means setting aside warp power equal to five hexes of movement, effectively slowing down your ship by that amount. As this power cannot be saved to the next turn if unused, and as it probably won't be used, it is effectively wasted in most cases. Ships cannot afford to waste approximately 14% of their power.

For this reason, most captains rely on reserve warp power to provide their HETs. There are two problems here. First, the ship may not have enough batteries to provide the cost of an HET. Second, reserve power is a bank account with a lot of signature cards. It can (and will) be used for a wide variety of purposes, including tactical maneuvers after emergency deceleration, absorbing shield damage, arming weapons, electronic warfare, transporters, etc.

The standard solution to this problem (used by almost all ships) is to allocate some of the power for an HET and rely on batteries for the balance. While unused allocated power is still wasted, over the course of the scenario, less total power will be wasted. If possible, you should allocate enough power so that some of the battery power can be used while leaving enough to make up the cost of an HET. A captain must realize that, when using reserve warp power for any purpose other than an HET, he is giving up the ability to make an HET. Also note that damage to the batteries (or energy balance due to damage) can rob you of the ability to make an HET when you need it most.

BREAKDOWN: THE DEADLY TRAP

For ships, the HET procedure is complicated by the requirement to roll for a breakdown, and a breakdown is tantamount to being crippled. It gets even worse if the ship tumbles, especially if the HET was intended to avoid impact with an obstacle. In a single-ship duel, it will generally cost you the game. In a fleet action, a ship which breaks down is quickly singled out for destruction.

Because of this, careful studies of the situation and breakdown rating should be taken before making such a maneuver. Take sober note of the fact that you are betting the battle on one die roll. If the odds are 5–to–1 in favor of your success, this will be cold comfort when you roll the deadly six.

Ships with a breakdown rating of 5–6 can make their first HET with no chance of a breakdown by using the once–per–scenario -2 bonus. Nimble ships (except PFs) and Orion warships have two bonuses, partially compensating for their fragile nature. Any other ships are at risk. The risk is only worth taking when a decision not to make an HET will result in more damage to your ship than the breakdown will cause. (Remember, however, that if you make an HET to avoid an enemy attack and fail, your ship will take the damage from the breakdown AND from the enemy attack.)

High-value units with low breakdown ratings, such as the B10, are probably better off to (and better able to) take the approaching damage and limp away crippled. For such a unit, a breakdown is tantamount to a death sentence. Small units can make HETs for relatively little power, which is just as well since they don't have all that much power to start with.

WHEN TO USE A HIGH ENERGY TURN

There are only three situations when a high energy turn can be considered as tactically sound:

(1) retreating from a suddenly created problem, like an R torpedo coming at your ship,
(2) a need for a new shield facing in a fight, or
(3) a desire to pull a surprise attack.

We will examine each of these briefly.

SUDDEN PROBLEMS

This can be a wave of drones or plasma torpedoes, a web wall solidifying, or an Andromedan displacing in front of you. The object of the HET is to buy time.

For example a Klingon D7 is closing on a Kzinti CM, which has launched a pair of shuttles. Suddenly, before the Klingon gets close enough to fire his overloads, there are 12 drones (released by scatter-packs) tracking him. The Klingon may not be going fast enough to fly around the drones and is unable to use other defenses, so the best thing to do is to escape. If the D7 can turn fast enough to avoid getting hit by the drones, it should do so instead of using an HET; however, a turn will still take the ship several hexes toward the drones, so an HET may be required. Of course, failure to make the breakdown roll (or worse, tumbling) will mean that the drones hit you anyway.

When you execute a HET here, you are trying to buy time. You want to get to the next energy allocation so you can either WW or accelerate away from the drones. You execute your HET, and you buy your time. The Kzinti CM opponent will only be able to repeat that maneuver of a massed scatter-pack attack one more time. Counting the CM's drones indicates that only 20 drones (or rather spaces) are left (before the refit), and the Klingon is now prepared to be more cautious in the future, should an approach run be tried again. This category can also apply when playing with tactical intelligence. You might find out too late that your opponent is not a D6J, but instead a D6M.

SHIELD FACING

This usually occurs when a ship has been damaged and needs to turn a heavier shield toward incoming fire. This could include defense against the "Gorn Anchor."

For example, a Gorn BC has tractored a Romulan Battle Hawk. The Romulan cannot survive a continued pounding through his open shield, and his turn mode will not allow him to change shield facings for several impulses (and, as he is moving, he cannot use tactical maneuvers). At this point, an HET is the only available option to turn another shield toward the enemy. Because the Battle Hawk has equal shields all around, it should probably try to keep its remaining weapons pointed at the Gorn. On the other hand, if the Romulan thinks he has the power to break the tractor, he might want to face directly away from the Gorn so that he can escape quickly. This choice will depend on whether the ship making the HET is doing so to get out of the battle or to continue it. These same principles will work even without the tractor. If a fleet is approaching an enemy force and one ship is targeted by massive fire, that ship may well make an HET and maneuver away to avoid total destruction.

As is noted in the section on the Mizia Concept, an HET can be used by a ship which is targeted for this treatment to avoid taking subsequent volleys through the down shield.

SURPRISE ATTACK

Generally, you have been trying to get your opponent trapped into following you, usually slow enough not to catch you and too fast to launch a WW. (Sometimes you don't have to plan it; it just happens.) A ship performing an HET and doubling back toward such an opponent possesses the element of surprise and will be able to open fire before the enemy can react. That will assure a great deal of damage. This is especially effective if done immediately after the opponent makes a turn.

For example, an ISC light cruiser is running from a Romulan KDR. From this position, the CL's primary weapons cannot fire, and for whatever reason the rear-firing F-torps have not discouraged pursuit. The Romulan ship continues to close. When all of its forward weapons are ready, the ISC CL performs an HET and the forward plasma-S torps are brought to bear, as well as most of the phasers. Since the Romulan was in pursuit, he now finds himself moving rapidly toward a target that is not so defenseless as he thought.

Still another variant of the surprise attack is to prepare overloaded weapons and allow yourself to get caught. At ORIGINS 1984 in Dallas, a Hydran player executed this to perfection in a Lord Marshal. A Gorn BC captain had thought to execute the Gorn Anchor and demolish the Hydran. The Hydran arranged to be caught from the side, where the Gorn knew the Hydran weapons could not fire. The Gorn tractored the Hydran, who did an HET to bring his primary weapons to bear. The Gorn was gutted, and the Hydran advanced to the next round. Had the Hydran ship failed the breakdown roll, it would have been the Gorn who advanced, but the Hydran captain had wisely held his first HET (the one with the bonus) until this point.

In a 1986 tournament in Montana, a Gorn tournament cruiser was running from a Kzinti TC while reloading torpedoes. The Kzinti fired near the end of the turn. On the next turn, the Gorn's torpedoes were ready, but facing away from the enemy. The Gorn ship dropped to speed zero, made a successful (2nd) HET die roll, and hit the Kzinti ship before its weapons were recycled. A failure of that die roll would have left the Gorn ship dead in space, weapons unable to fire, and facing an overloaded Kzinti.

WHEN TO SPEND YOUR BONUS

The greatest question about an HET is when to use the first HET, the one with the -2 bonus which most ships get once per scenario. This bonus can make the most common breakdown ratings into a no-risk situation and all but the worst ratings into an even bet. But it means not making ANY HETs until you have to make the one that will count.

The traditional solution to this question is to wait until you have to use an HET to avoid great damage. This will insure that your desperation HET is successful and will make you generally less predictable as you could use the bonus at any point.

The more aggressive use of the HET is to arrange a situation in which the sudden and unexpected use of an HET will create the opportunity for a devastating attack. This includes most of the Surprise Attack category above. To be successfully employed, the aggressive use of an HET bonus must be planned as far in advance as possible, preferably before starting the scenario.

Using your HET bonus offensively means that it won't be available to cover an escape later. Consistent use of such a tactic means that eventually you will suffer a breakdown. On the other hand, holding your HET bonus for emergencies means that in most cases it will never be used.

Of course, some ships have two bonuses, allowing them to use one offensively while retaining the other for an escape maneuver. These (mostly nimble) ships could even use one HET to feign disengagement, followed by the second to reverse into firing position. This is an overly risky maneuver and costs too much power, however. Some ships have breakdown ratings of 6, making a non-bonused HET a fairly safe, but not sure, bet.

Then there are those ships with ratings of 4-6 or worse, which can never make a safe HET, even with a bonus. For these ships, an HET is a desperate (offensive or defensive) maneuver.

CONCLUSION

An HET can be used offensively or defensively. But your best move is to avoid putting your ship into situations where an HET is your only alternative. To win with an HET, it must be successful, and to be successful you must use your bonus only when failure to do so would produce even more damage or when doing so puts you into a position to destroy the enemy. ✪

FLEET FORMATIONS AND TACTICS

by Bill Heim and Stephen V Cole

Most starship combat involves single-ship duels. Fleet actions occur only in wartime or crisis conditions, but are the most important and dangerous battles. Casualties in fleet actions can be very high due to the concentration of weapons allowing ships to be destroyed in a single turn, or even in a single impulse. In a single-ship action, a crippled ship can often escape while the enemy is reloading weapons. In a fleet action, it won't survive that long.

Probably the single most profound change in fleet tactics caused by the Captain's Edition is the lower explosion strengths, which are now 10-33% of those seen in the old edition. This allows fleets to operate much closer together while taking less damage from explosions.

The selection of optional rules made by a given local group can have a major effect. Groups which do not use mines have a tendency to use much tighter fleet formations.

WHAT IS A FLEET?

A fleet or squadron is not a collection of single ships, but an organism in and of itself. Whatever deficiencies a single ship has, another ship will cover them. Whatever strengths a single ship has, these will be multiplied by the number of ships in the fleet.

Consider, for example, weapon firing rates. A photon torpedo is twice as effective as a disruptor, but fires only half as often. Thus, a fleet of Federation ships can keep up a continuous photon barrage by firing half of the ships each turn, covering the weakness of the two-turn reloading process. Alternatively, the Federation fleet could fire all of the photons on a single turn, creating a massive firestorm.

Disruptors have a high hit probability, but do relatively little damage. However, a fleet of disruptor-armed ships has a massive every-turn punch.

Fleets provide massive capabilities that create an entirely different realm of operations from single ships. A fleet has massive drone identification capabilities (labs, scouts, aegis ships, etc.) and can generate enough offensive boarding parties to actually capture an enemy ship.

In a single ship duel, the ship must somehow find the power for every function that could possibly be needed or must forego some options. In a fleet, one ship can be assigned to conduct boarding party attacks, another can be assigned to tractor an enemy ship and keep it from escaping, while still another can be assigned to destroy approaching drones.

SHIPS IN A FLEET

To win, a fleet must be more than the sum of its parts. Particularly in multi-player fleets, combat tends to degenerate into "every man for himself" situations. A fleet with a unified plan will always beat an equal fleet of individual ships. Because fleet actions are so complicated, the simplest plans are usually the best.

Any discussion of fleet tactics must begin with a discussion of where each class fits within the fleet structure.

Frigates, with their short-ranged weapons, are primarily designed to protect the fleet from fighters, PFs, and seeking weapons.

Destroyers, with more heavy weapons, support the frigates in their defensive mission, but must be prepared to use their heavy weapons to supplement the firepower of the cruisers. This will allow a shield to be penetrated or for a Mizia-type attack on a selected unit. Often, destroyers fire the follow-up volley.

Cruisers are the primary combat units as they have good heavy weapons and strong shields. They can usually take a volley on a shield and (even if the shield is penetrated) keep on fighting. Light cruisers are less effective than heavy cruisers and should be placed where they won't take the first punch. War cruisers have the weapon of a heavy cruisers, but lack their durability. They can survive one solid punch, rather than two.

Dreadnoughts have the heaviest punch and the best defenses. This would tend to place them in the "forefront of the hottest battle" where no other ship could survive and where their firepower is of the most use. This also exposes these valuable and hard-to-replace units to destruction. Thus, it is often better to let a cruiser "take the heat" and allow the dreadnought, in the second or third position, to deliver the killing blow.

Carriers, PF Tenders, and space control ships are powerful units, but their primary firepower is in their strike groups. While many carriers can stand their ground against cruisers and dreadnoughts, they should not be risked until their fighter groups are no longer operational, unless they can score a decisive blow.

Scouts provide valuable EW support, but are very vulnerable. They should stay well behind the line of contact. As they will tend to attract an occasional raid, it may be necessary to put a destroyer or war cruiser with them as an escort. The exact location will depend on the threat. Look over the scout rules and observe what scouts can do (e.g., attracting, identifying, and breaking lock-ons of seeking weapons) and what ranges they can do it. A scout which cannot reach the seeking weapons approaching your fleet isn't able to perform that mission. Smaller scouts need to be farther from the enemy. Larger scouts, generally more capable at offensive EW, must be closer to the front line so that they can reach the enemy ships.

THE FIREPOWER ADVANTAGE

Victory in a fleet action requires killing more enemy ships, and killing them faster, than your own ships are destroyed.

A firepower advantage can be gained in two ways: concentrating your firepower or destroying enemy firepower through attrition.

Concentration is a dangerous but necessary element. The closer your ships are to each other (and nothing could be closer than putting all of the ships in one hex), the more likely that a target will be within their range and firing arcs at the same time, the more likely that the same shield of that target can be hit, and the less likely that an enemy force can hit one of your ships with overloads without being, themselves, hit by the overloads of your entire fleet. A concentrated fleet is also less vulnerable to seeking weapons. The negative side, however, is that a concentrated fleet is more vulnerable to mines and ship explosions (although the later is less important in the Captain's rules). Spreading out ships into adjacent hexes (or every other hex) may seem to provide an effective compromise, but due to the short range of some weapons, may dilute firepower to the point of impotence.

The enemy can be prevented from concentrating his firepower by crippling key units. These will be unable to maintain fleet speed and will be forced to turn away to bring new shields to bear.

Winning an attrition battle requires the destruction of enemy weapons. This means concentrated firepower to break a shield, followed by two or three Mizia volleys to strip the target of weapons. Then you can move on to another target. Having each of your ships fire on one enemy ship works fine with wet-navy battleships, but is ineffective with starships. Battleships *have to* fire that way because the shell splashes must be observed to calculate range, and a ship under fire returns fire less effectively. You don't have those problems with starships.

Crippled ships can become a "ticking time bomb" waiting for the enemy to destroy them, causing an explosion in the middle of your fleet. The reduced explosions in the Captain's rulebook, no longer devastating, still cause damage you do not need to take on your shields. These cripples should be maneuvered out of action, or at least out of the fleet's hex.

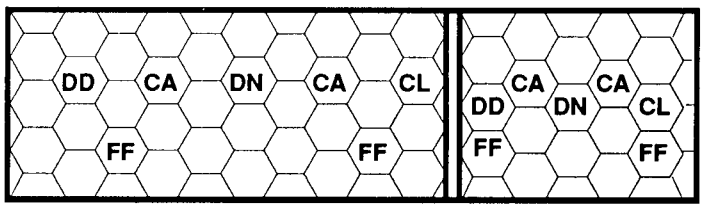
A minor consideration is morale. Some players become upset, despondent, or reckless when their favorite ship is hit by the concentrated fire of five cruisers. If you can identify a target as a sentimental favorite, use this to your advantage.

FLEET FORMATIONS

The objective of a fleet formation is to provide balanced offense and defense. The formation you choose must be selected to allow the best use of your weapons and the best protection against attack.

The most basic (and worst) formation is the "Armed Mob," in which each ship maneuvers at its own speed and within its own turn mode, more or less willy-nilly around the other ships. This type of formation is characterized by ships out of range to cover each other with weapons, ships facing different shield arcs of the key enemy target, and ships out of effective range at the key firing impulse.

The figure below shows a typical Federation formation, the battle line. (In all cases the ships are facing the top of the page.) This provides them with a good field of fire for their photon torpedoes, protects the vulnerable rear quarters, and (being spread out) compensates for the wallowing turn modes. A scout and/or small carrier may be placed about 4 hexes to the rear of the DN.



This formation can be used with both narrow and expanded spacing, as shown in the two portions of the diagram. The narrow spacing is slightly more vulnerable to explosions and mines, but the concentration of firepower is important. With wide spacing, an enemy ship could be at point-blank range on the DD without being within overload range of the CL's photons. Indeed, many players will concentrate the ships into only two or three hexes.

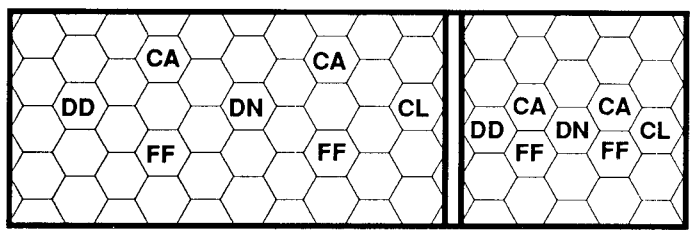
Note particularly that the frigates are placed behind the battle line. From this position, they can destroy approaching drones, but they are far enough away from the enemy to avoid being targeted for destruction. Any enemy ship moving within overload range of the frigates will have already been hit by the fleet's overloads. Any exploding frigate will not damage shields (of the battle line ships) which are facing the enemy. This also clears the fire lanes as your own drones (moving toward the enemy) don't have to pass by your own frigates. (A common tactic is to destroy an enemy ship that is near many enemy drones, destroying the drones with the explosion.) Not all frigates are the same, however. If your frigates cannot effectively kill drones at range-2 (using ADDs and phaser-1s), you may have to put the frigates into the same hexes as the cruisers of the battle line. Frigates with explosion strengths of 9 (i.e., a single-hex explosion) can be kept much closer to the ships they are supporting.

Some players prefer to also place their dreadnoughts in the second rank, preserving them from the enemy's initial salvo, and allowing them to move forward and deliver their killing blows on a selected ship. Note that this was done in the more compact formation; the DN could have been one hex further forward.

There are also those players who prefer to send in the frigates and destroyers first, with the cruisers following in a second wave. This tends to produce a lot of exploding frigates which damage the front shields of the following cruisers. If the cruisers stay far enough back to avoid explosions, they can't support the frigates. (In the Captain's Edition, with smaller explosions, the cruisers can be 1-2 hexes behind, which still costs them some firepower, but not as much as before.) It takes a powerful long-range weapon (i.e., the PPD) to make the "gunline" concept work.

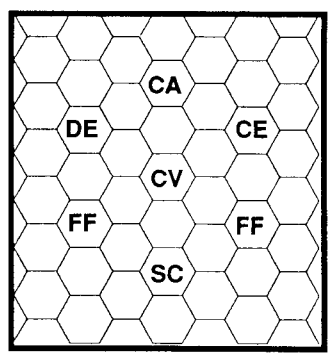
Upon contact with the enemy, the formation will tend to "close ranks" into the "tight" formation in order to concentrate its firepower; it may later degenerate into an "armed mob." If the enemy were to attack the "open" formation obliquely, they would be able to hit the CL with overloads while half of the ships are still beyond overload range. If an enemy tries to flank you, sideslip the ships on that flank to keep them out of overload range until your other ships (using reserve power to increase speed) can enter it. You must concentrate your firepower in space and time.

The formation below is the double-diamond. Such a formation protects the flanks and allows the dreadnought to enter the fight only after one or two other ships have exchanged fire with the enemy. Again, the frigates are kept out of the way, and the scout and/or carrier is placed to the rear.



As with all formations, this will tend to close ranks on contact with the enemy, and many players will simply start out with the ships closed up to adjacent hexes.

The Wagon Wheel formation, at right, is designed to protect a valuable unit, such as a carrier or FRD. Remember that you can't block direct fire against such a target, but this formation will stop drone and fighter attacks and will make sure that any unit moving to overload range from the central unit will have already been hit by overloads from the surrounding ships. This formation is very restrictive in that all ships turn at the turn mode of the most sluggish unit.



When protecting a carrier, you should remember that what you are really protecting is the fighters. These craft will return to the carrier with damage and without weapons or chaff, making them very vulnerable. They will depart from the carrier unable to fire their weapons immediately, again making them vulnerable.

The maneuver of ships within a fleet formation is an artform of its own. Ships need not maintain a rigid lockstep, but must float back and forth within the moving group to the location where they can best accomplish their mission. Ships approaching the enemy over a distance can spread out (with sideslips and speed changes), then concentrate again when they reach the firing point.

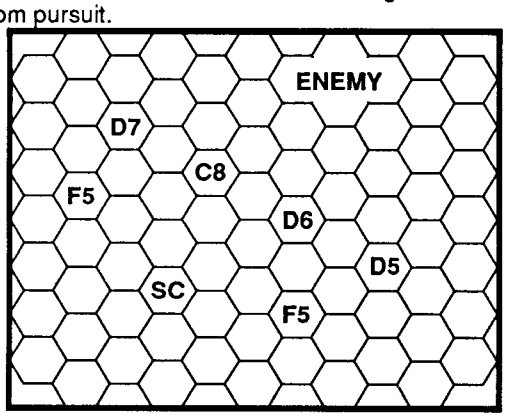
STAR FLEET GOLD STAR

Awarded for extraordinary command achievement and/or valor above and beyond the requirements of duty, in a combat situation.

FOREIGN FLEET TACTICS

Each race tends to adopt fleet formations that suit its ships and weapons. A prime example is the ISC, which bases its formation on the PPD. (They are discussed in the Foreign Tactics section.)

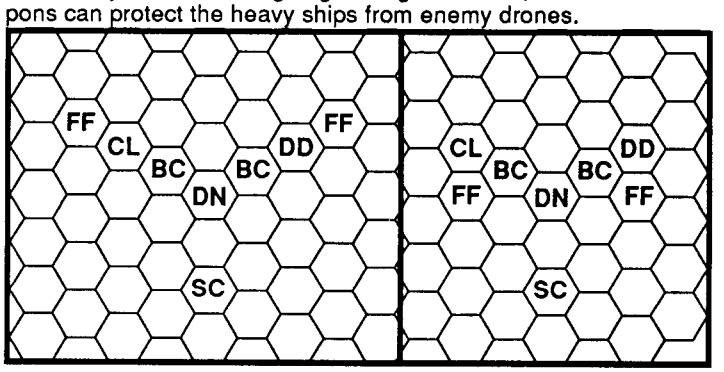
The Klingons often utilize the "Wing" formation to take advantage of their firing arcs. The 60° hex rows are the primary Klingon firing arc because most weapons will bear in those directions. The figure below shows a typical formation. The Klingons sometimes position one wing behind another or have two wings combine into a "Flying Wedge" formation. Drone ships will be deployed on the flanks (in the D5 position) to avoid firing through the formation. The entire formation can, at the appropriate option point, turn toward or away from the enemy. If turning away, the frigates will often move forward before turning to screen the formation from pursuit.



With late-war ships (particularly those with ADDs), the ships are often placed in adjacent hexes so that the ADDs of one unit can cover every ship in the wing. This allows more concentrated firepower, although at a distance of only one hex ships will take damage from neighboring explosions. A distance of two hexes still permits overlapping ADD coverage, but eliminates this risk. Many Klingons close the wing together, putting ships in adjacent hexes (or in the same hex).

It might appear that the C8, with its poor turn mode, would restrict the maneuverability of the entire formation. This is only partly true. The formation will have long since satisfied its turn mode upon making contact, and the squadron will have converted to the "armed mob" formation before it needs to make a second turn.

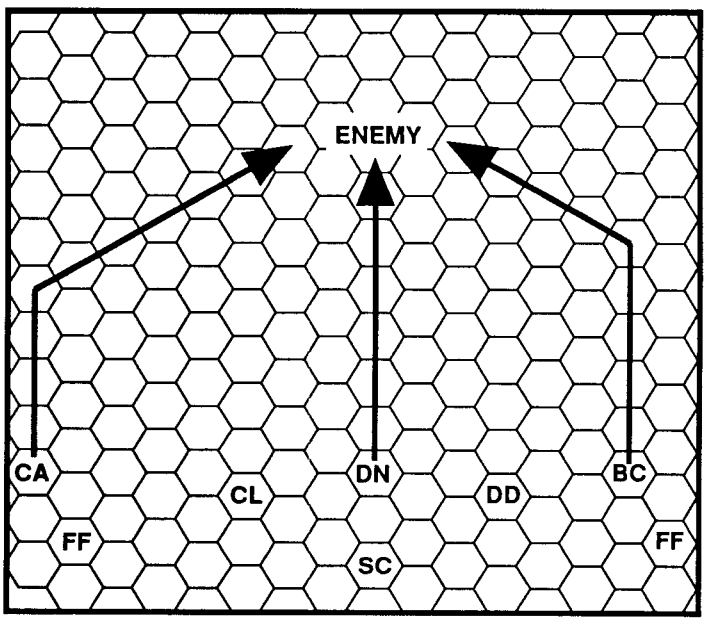
Kzinti ships often use a formation known as the "inverted V" and shown in the illustration below. This formation provides initial protection to the heavy units, allowing them to engage at the most opportune moment. The flanking ships can launch drones at the enemy fleet without going through the fleet, and their weapons can protect the heavy ships from enemy drones.



The major problem with this formation is that it tends to be unwieldy. The solution is to keep the core of heavy ships intact and let the flanking frigates keep station as best they can. Avoid routing the drones from the larger ships through the hexes of the frigates. Note that the illustration shows both "open" and "condensed" variants of this formation.

Races armed with high-speed seeking weapons often utilize the formation below, which is known to Romulans as "The Talons of the Eagle." (Gorns and Kzintis refer to it as the "Claw" formation.) This allows them to surround an enemy and fire plasma torpedoes or drones from several directions. This prevents the enemy from outrunning the weapons and forces him to accept damage or place himself under wild weasel restrictions. Using wild weasels could be fatal as the ships are following the seeking weapons for a battle pass with direct-fire weapons (phasers or disruptors).

While it is generally dangerous to split your formation (to avoid allowing the enemy to concentrate on part of it), the waves of seeking weapons tend to be an adequate deterrent to attacking one of the talons (or claws) head on.



Romulans, because of their cloaks, tend to use more open formations to avoid having several cloaked ships in the same small area, where they are easier to find. (If one ship is caught and destroyed, the explosion exposes others within its radius.)

Lyran ships operating in tight clusters (so that the ESG of one ship will protect several, especially when facing hellbores) are forced to maintain the same speed and perform identical maneuvers in order to avoid hitting their own ESGs. Damaged ships cannot turn away, and ships slowed by damage cause major problems. Spreading the ships out will prevent ESG interactions but will dilute squadron firepower. This is one of the reasons why the Lyrans were semi-dominated by the Klingons: their ships are individually superior but collectively inferior.

Hydran tactics are dominated by their fighters and are covered in the Hydran section.

Tholians will form pinwheels and webs when outnumbered. As they usually fight on the defensive, they usually have terrain of their own making to work with.

The WYNs tend to use the "armed mob" formation as every ship tries to get close enough to hit the enemy before the effects of the radiation zone wear off.

Andromedan fleet tactics are based on the use of their satellite ships and are covered in that section.

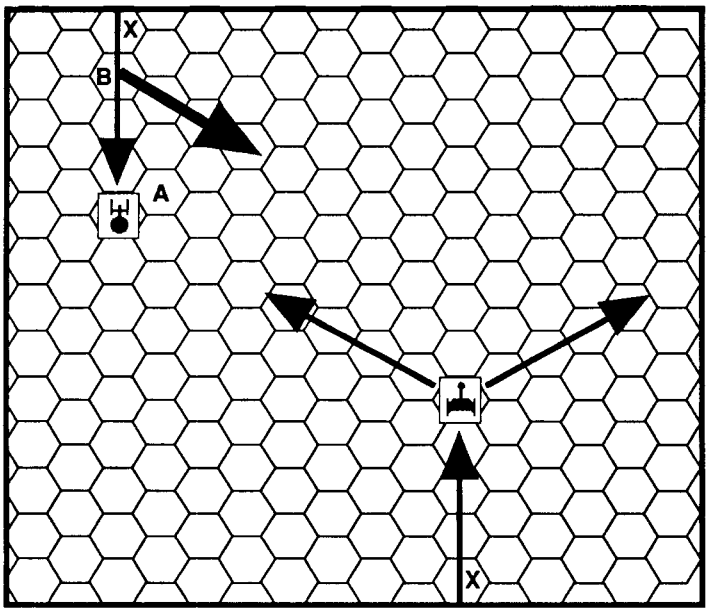
For any race, a successful fleet action requires a well-balanced group of ships, a simple and coordinated plan of action, and well-orchestrated cooperation between the individual ships and commanders. ✪

THE OBLIQUE ATTACK

by Stephen V Cole

One of the most basic maneuvers in a single ship duel is the Oblique Attack. This means that, rather than approaching the enemy directly, you move toward a point approximately 8 hexes (i.e., overload range) to one side of the enemy. Note the illustration, which indicates the basic maneuver. The illustration shows a Federation CA in the upper left and a Klingon D7 in the lower right, but the Oblique Attack applies to most ships and races.

The ships move forward to the hexes in which the counters are shown. At this point, which is known as the Oblique Option Point, the ships are 8 hexes apart and are exactly along a hex row. Both have satisfied their turn modes and are able to turn immediately. (As one player may be trying to avoid the position, this optimum arrangement may not be precisely achieved, but we'll discuss the variations shortly.)



From this position, each ship has several alternatives. It could turn toward the enemy, moving toward a point-blank encounter (battle pass or overrun), or it could turn away from the enemy, evading overload range. If both ships turn away, the engagement will probably be broken off. If both turn toward each other, a head-on encounter will result within very few impulses. If one ship turns to engage and the other turns away, the scenario will devolve into a pursuit in which the trailing ship tries to get within overload range while keeping the enemy from turning around to fire. If one ship continues to move straight ahead, it is effectively allowing the other ship to move toward whatever (planet, base, convoy, or nothing) is behind it.

In most historical cases during peacetime, the ships would exchange fire at the Oblique Option Point, after which the ship that received the most damage would turn away and disengage. In this way, no ships were destroyed, but the political objective (e.g., controlling a system) would be achieved.

The Oblique Option Point is important for three other reasons:

1) It is the last hex (assuming neither ship turns) in which the heavy weapons (usually limited to FA arcs) can fire on the enemy. Those ships which have heavy weapons able to fire into the L or R arcs clearly have a tactical advantage. Even so, those ships will often have phasers or other weapons which cannot fire into those arcs.

2) Any fire conducted at this point would strike the #6 (or #2) shield, rather than the important #1 shield. In fact, assuming equal speed and no turns, the ships were unable to bring weapons to bear on the enemy ship's #1 shield after reaching the two hexes marked with an "X" in the illustration.

3) Flank weapons (those with L+LR/R+RR or RX arcs) can fire on the enemy from this hex, but could not fire before. The combination of the last moment when FA weapons can fire and the first moment when RX weapons can fire makes this position very important.

For some ships, the Oblique Option Point is even more critical. A Klingon D7 actually outguns a Federation CA in this position as the D7 can bring seven of its phaser–2s to bear against only four of the Federation ship's superior phaser–1s. See the section on Firing Arcs for more details on this aspect.

The Oblique Attack concept is noted in many of the other tactics sections, where its application to various situations is explained. There are a few additional basic concepts which deserve note here.

The Oblique Attack severely penalizes those ships with heavy weapons divided between the RF and LF arcs. These include Hydran cruisers, non-refitted Kzintis, and Gorns (with their LP/RP arcs). Those ships should try to avoid the problem by narrowing the offset with sideslips or preemptive turns.

Speed can be a critical factor. If one ship (both being at the option point) is scheduled to move before the other, that ship will have to commit itself to one of the options before the other ship does. Knowing this, that ship will be forced into making a fire decision on the impulse when the option point is reached. Ships with forward-centerline firepower can take advantage of this by sideslipping so that the range (when a straight hex row exists between ships) is nine and the forward-centerline ship is the next to move (and the other ship does not move on that impulse). It turns toward the enemy and moves into 8-hex range, delivering its salvo. The turning ship is now committed. If the other ship holds its fire, it (the other ship) can turn in and be guaranteed a point-blank firing opportunity (unless the ship that fired first does an HET). If you wish to turn in, it is probably better to move past the option point outside of range 8 (say range 9), then turn in. This move is not quite as committed.

The Oblique Attack allows you to make attrition attacks, avoiding decisive range as long as possible. Ships with effective range 9-10 weapons (e.g., plasma bolts) can fire outside of overload range, then turn away. While such a battle could last a dozen turns or more, eventually the enemy shields will be worn down and penetrated. The traditional solution to an enemy using this tactic is to use your own long-range fire or to have something (fighters, seeking weapons, etc.) meet him at the option point. Using ECM and EM can make attacks from that range ineffective.

Usually, neither ship will want to execute a turn when approaching the Oblique Option Point as the inability to turn at that point would eliminate the options. If it is possible to set up an Oblique Attack on a ship which has just turned (and therefore cannot turn again until it fulfills its turn mode), a significant advantage can be created.

Because neither ship is willing to turn until it has to, sideslips become critically important. If the Federation ship had sideslipped into the hex marked "A" on the illustration, the range of 8 hexes would be the same, but the Klingon rear phasers would be unable to fire, and the Klingon ship would still be in overload range after a turn.

It is not necessarily axiomatic that the ships will "just happen" to be on reciprocal and parallel courses exactly 8 hex rows apart. Sideslips can put you into this position or keep the enemy from reaching such a position.

If the ships reach the Oblique Option Point while they are outside of overload range, one (or both) of them will have to commit themselves (by turning toward the enemy) in an attempt to get into overload range. If the offset between the approaching

ships is less than 8 hexes, it is unlikely that they can avoid overload range. Thus, a ship with superior weapons which wants to force an overload exchange would sideslip toward the enemy during the approach (narrowing the offset distance), while a ship wanting to enter the 8-hex range only briefly (clipping the corner) would want to make corresponding sideslips to put the range at 8 hexes and keep it there.

The 8-hex range is critical because it allows overloaded weapons to fire. While the Oblique concept can be used to create an option point at a range of 4 hexes, turning away would still leave your ship inside of overload range. Increasing the range from 8 to 9 hexes prevents a ship with overloaded weapons from firing at all.

Another alternative is the preemptive turn before reaching the Oblique Option Point. In the illustration, note the hex marked "B" and the shaded line. Assume that the Federation ship had turned in hex "B" and followed the indicated course. This places him at the same 8-hex range, but without the 8–hex lateral offset.

The Federation captain is, by using a preemptive turn, forcing the situation (and denying the Klingon the in-and-out attrition battle he seeks). He is within overload range, and the Klingon ship cannot effectively avoid it. If the Klingon ship turns away at a range of 8, he will be exposing flank shields, and the Federation ship will turn toward him and close to a range of 5 before the Klingon ship can turn. Again, if the Klingon captain does not want to be within overload range, he will have to turn away shortly after the Federation ship turns toward him (or use an HET), giving up any chance of firing his own FA-arc weapons. The Federation captain may, of course, be trying to force the Klingon ship to turn away. Preemptive turns are used primarily by ships with large one-turn damage potentials (photons, hellbores) and forward-centerline firepower.

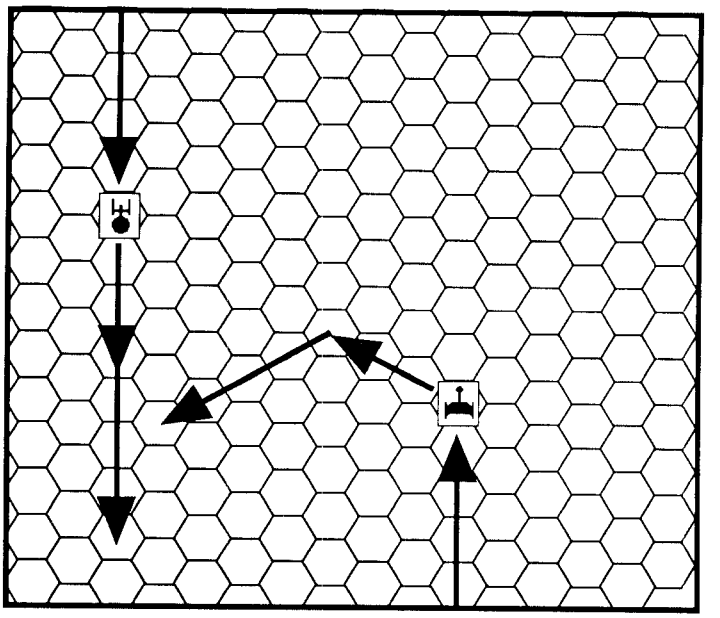
The Federation captain probably turned far enough before the anticipated Oblique Option Point to arrive at that point with his turn mode fulfilled, but this really isn't critical. The Federation ship cannot turn away without exposing flank shields within overload range, so it is committed to the attack. If the Klingon ship turns away, the Federation ship won't have to turn; he's already in prime pursuit position.

The effect of a preemptive turn can be achieved by sideslipping into this position (while still facing in direction D, toward the bottom of the diagram). A competent Klingon would not allow that to happen unless his maneuvering was restricted by terrain or unless he wanted to trade overload shots. He might be willing to do so against an inferior unit or against a ship which had already fired some of its photons.

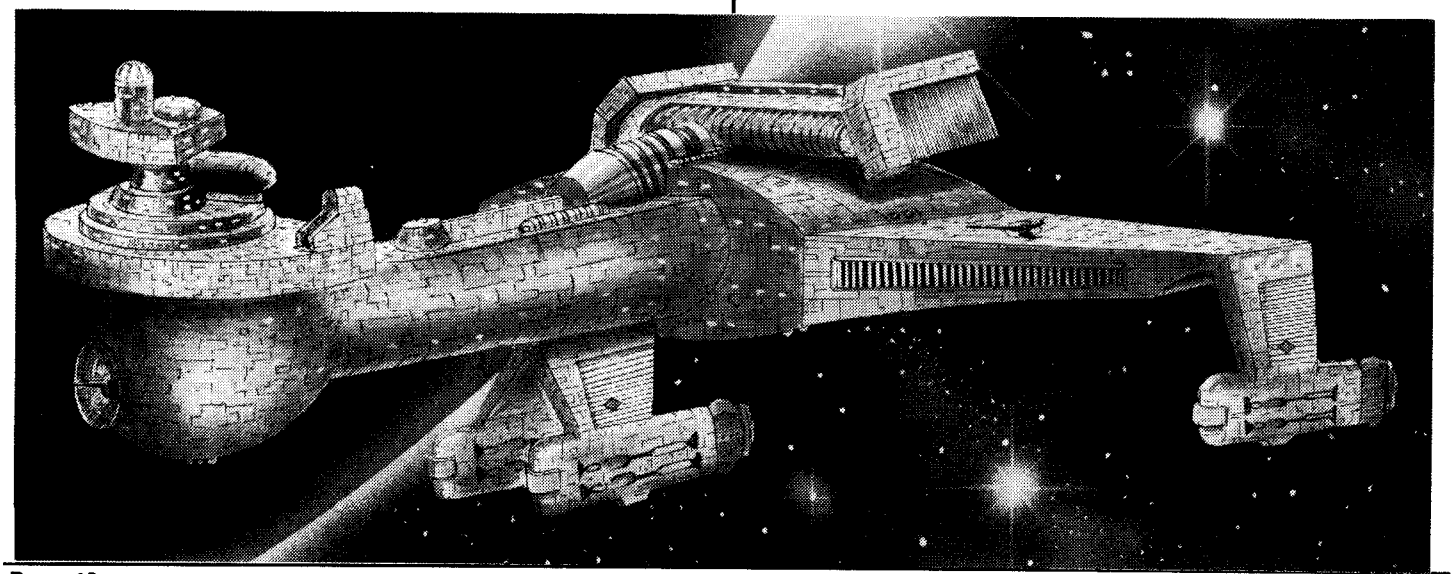
THE KLINGON HOOK

A final consideration of Oblique Approach tactics is shown in the illustration below. This is what happens if one ship does not turn (the speed of the two ships being approximately equal). The other ship simply makes two turns, positioning his ship facing the rear shields of the enemy with overloaded weapons. (A third left turn would have avoided entering hexes where the Federation ship might have placed mines, while achieving an identical firing position.)

This is known as the "Klingon Hook" because the superior turn modes of the Klingon ships make it easier for them to execute.



It is, of course, unusual for a ship to fly blindly ahead without turning, primarily because players are aware that they will be "hooked" if they don't do something. Even so, it does happen rarely, possibly because the ship is trying to reach a specific point, or because its maneuvering is restricted (sub-minimum crew, critical hits, or tumbling). If the enemy ship does not turn at the Oblique Option Point, you can see what will happen. Unless, of course, the Federation is gambling on using his HET to bring overloaded torpedoes to bear on a slightly too gullible Klingon. ✪



THE KAUFMAN RETROGRADE

by Kenneth Kaufman

The Kaufman Retrograde Maneuver is primarily a survival tactic used by an outnumbered fleet. The operating premise is that a fleet (particularly a Federation fleet) is strongest when moving backwards at moderate speed. The enemy is presumably pursuing your fleet, so the weapons of both fleets are facing each other. This creates a static situation where the battle continues at more or less the same range until the enemy is defeated. The tactic is so effective that a force as much as twice your own strength can still be defeated; indeed, the retrograde may be your only option in such a case.

The Kaufman Retrograde can only be employed when the fleets are operating in free space; that is, where there is no non-moving (base, planet) or slow moving (convoy, FRD) unit which must be defended. As the cooperation of the enemy is also required (to the extent that he must follow you), the Retrograde can only be employed when the enemy is primarily interested in destroying your fleet, as opposed to simply encouraging you to leave the area.

ADVANTAGES OF THE RETROGRADE

The retrograde provides several key advantages to the fleet which is using it.

- You are able to control the range. This allows you to keep the enemy at whatever range your weapons have an advantage over him. Any enemy effort to close the range will require more power on movement than you do, which means that either your shields or your weapons will be more effective than the pursuer's.
- You avoid becoming decisively engaged. You need not get inside overload range, let alone tractor range. The battle can last for as long as your enemy wants to let you pound on him.
- Seeking weapons are very ineffective against you as they have a long uphill climb. Assuming a speed of about 20 and a range of about 15, plasma torpedoes are worthless against you and only high-speed drones are effective. Even against high-speed drones, the combined speeds will tend to keep the drones in the primary 2-3 hex kill range for several impulses.
- Your own seeking weapons are tremendously more effective. Clunky old slow (speed-8) drones will suddenly be speed-28 drones for no extra cost. (They must be employed in converging waves, or the enemy will simply sideslip around them and leave them behind.) Plasma torpedoes fired at a range of 15 will strike their targets after traveling only 9 hexes.
- You can leave mines behind you,
- Fighters are ineffective as they are useless beyond close range and without their packs cannot close the range. Only late-war advanced fighters can catch a retrograding formation, and these can be dealt with by weapons fire. On the other hand, your own fighters are all but useless except as launch platforms for seeking weapons. This particularly makes a Hydran fusion fleet unable to use the retrograde as it would be unable to recover its slow Stinger fighters, which are themselves useless at all but the closest ranges.

DISADVANTAGES OF THE RETROGRADE

For all practical purposes, the retrograde has no disadvantages. Anything that would work against the fleet using it would also, by definition, make it impossible to use the retrograde at all. For example, the retrograde gives up territory, but can only be employed where there is empty territory available to surrender.

About the only real problem in using the maneuver is that a badly crippled ship will be unable to keep formation and cannot disengage because it is moving in reverse. (A moderately crippled ship can simply cease fire and maintain its speed with the remaining power. It thereby accomplishes its mission, which is to survive until the enemy gives up and goes away.) A very crippled ship will, of course, steadily fall behind and be crushed by the pursuing enemy (after a last salvo in the middle of his formation). But then, in a typical close-action fleet battle, crippled ships are usually destroyed anyway. Conversely, crippled enemy ships can disengage, and you can't stop them from doing so.

RETROGRADE TACTICS

There are many tactics which should be considered by a fleet using (or fighting against) a retrograde maneuver.

- Don't move straight backwards. Keep your #2 shield facing the enemy for a while, and sideslip away from the enemy or move at an angle. After the #2 shield is damaged, turn and bring the #1 shield to bear while moving directly to the rear (sideslipping only to maintain your formation). After the #1 shield is damaged, you can turn again to bring the #6 shield into action. Unless the enemy spreads his ships across a wide front and fires across the formation, he won't be able to hit your damaged shields. If he does this, he'll be firing at a longer range and his fire will be less effective. Of course, you should have damage control working on those down shields while you continue to retreat. The enemy will be able to gain on you while you are moving at an angle, but only if he is moving at very nearly your own speed. If this happens, drop the sideslips and move in a straight line.
- Standard fleet tactics will work in a retrograde situation. Since your weapons won't be as sorely needed for defense against seeking weapons, you will have superiority. Target high-value enemy units with massive fire. These include: crippled ships, ships which will explode near other enemy units, carriers re-arming fighters, scouts, ships with down shields, etc.
- At a decisive point, when the enemy units are severely weakened, reduce speed drastically (or stop for part of a turn and reverse direction) and spend all of your energy on overloads and reinforced shields. The enemy will coast into overload range before he realizes what you are doing. You can then defeat him decisively and turn a retreat into a victory.
- The retrograde can be very effective against the ISC because it will keep their gunline in the range of your ships while keeping your ships out of the PPD's deadly 10-hex range bracket.
- By using minor mid-turn speed changes, and paying close attention to when a speed change will give you several moving (or non-moving) impulses in a row, you can shift your ships forward and backward within your formation. With reserve power, this can even move a crippled ship further back.

DEFEATING THE RETROGRADE

There are several means to defeat a retrograde, but all of them require a dramatically superior force. As such a force imbalance is the primary reason why the enemy will adopt a retrograde, this is not an unusual circumstance.

- The most basic counter-tactic is attrition. Your ships follow the retrograding formation, spread out on a wide front. Your seeking weapons are used primarily against his seeking weapons. (Slow drones won't even work for that purpose.) You target selected units for destruction by massed fires.
- The second counter-tactic is to charge the enemy, spending whatever energy it takes to go fast enough to catch him. Use EM during the approach. Once you have reached close range, you use your superior numbers to attack his ships.

• The third counter-tactic is to send some ships to outflank the formation. These ships must move at high speed, but must stay out of the effective range of the retrograding fleet's weapons. This will require a massive superiority as you must outflank the retrograding formation on both sides at once to prevent him from simply sideslipping away, and the flanking forces must be strong because either may have to fight the enemy fleet on its own.

• The best way to defeat a retrograde is to use attrition and outflanking at the same time, charging into close range only at the decisive moment. You must begin this operation immediately so you will not suffer from his attacks any longer than necessary.

• Kaufman's original thesis suggested that cloaked ships (able to close the range while secure from fire, but only if the retrograde units are moving at a speed they can catch), Andromedans (able to disrupt the formation by displacing ships), Neo-Tholians (able to block fire or disrupt the formation with cast web), and massive PF attacks (able to overwhelm its defenses with small and fast targets) might be able to defeat the formation. ✪

EMERGENCY DECELERATION

by Frank Crull and Stephen V Cole

Emergency deceleration is one of the most used and least understood devices for the unexpected. It allows you to reassess and adjust to the situation. On the other hand, emergency deceleration leaves you at zero speed in the presence of your enemies. It gives them the initiative, the ability to control the battle, and the ability to force you to play their game. Unless you have reserve warp (or impulse) power available, you won't even be able to make tactical maneuvers. When the crisis has passed, you start acceleration from zero and probably face another crisis as the enemy ship closes to point-blank range.

THE USES OF EMERGENCY DECELERATION

As the primary purpose of emergency deceleration is to stop your ship, the uses of the maneuver revolve around reasons why you might suddenly want to do so.

The most common reason for using emergency deceleration is to launch a wild weasel. This maneuver reinforces the shields facing the enemy and slows the ship (more than) sufficiently to allow weasel launch. Having at least two weasels ready (in case the first is destroyed by phaser fire) is advisable.

While there are many other reasons to use emergency deceleration, which we shall review directly, it should be pointed out that there is one thing that emergency deceleration cannot do for you, and that is to save power. You cannot use the maneuver to save power to overload your photons. You cannot plot emergency deceleration. You must allocate energy for a full turn of legal movement. Once emergency deceleration is declared, the power goes into the shields; *it can't go anywhere else.* All of this is, of course, covered in the rules, but many players continue to assume that they can use this power as reserve warp power, or that they can plot an impulse for emergency deceleration and don't have to pay the movement cost beyond that point. Having covered that, let us consider other possible uses for the maneuver.

Emergency deceleration can effectively lower your turn mode by substituting tactical maneuvers. Assuming the availability of reserve power (the only way you can use tacs after decel), you can prevent an enemy from getting around you and hitting a down shield.

If an enemy is approaching more rapidly than expected, and you do not want to meet him at the calculated interception point, emergency deceleration can delay the encounter.

Suddenly-appearing terrain (such as a cast web, or a special scenario rule, or if your ship was displaced) can threaten your ship with a disastrous collision. Emergency deceleration may be your only escape.

ISC ships sometimes use emergency deceleration to slow the rate of closure with the target, allowing them to get the remaining PPD pulses fired before the target enters the myopic zone. This is usually done only if there are several pulses remaining as the loss of speed is a severe penalty. Their targets (and any target of a Mizia Attack) sometimes use emergency deceleration to get more power into the forward shields.

Emergency deceleration can be used as a prelude to reversing direction at low cost (but requiring more time). It is usually faster to just wait for the turn break and plot eight impulses of zero speed.

THE PENALTY FOR EMERGENCY DECELERATION

As noted at the start, emergency deceleration leaves you sitting at speed zero for 16 impulses. This gives your enemy the initiative. He can now dictate the range of the battle and can even disengage without being pursued if he wishes. He can take time to reload weapons. Once your last weasel is burned and the explosion period ends, you are a sitting duck for the Gorn Anchor.

After you conduct emergency deceleration, you must carefully plan how you will get back into the battle. As you are no longer moving fast enough to dodge plasma torpedoes or fast drones, you could become a target as you accelerate. A wild weasel (a second one if you used emergency deceleration to launch the first one) can be useful. Accelerate to speed 10 if possible, or at least to speed 6. (Speed 6-10 allows you to reach disengagement speed in two more turns.)

Emergency deceleration is an escape device, but it's a frying pan-to-fire situation. The tactical penalties may be worse than using some other escape maneuver (or taking the hit). ✪

TACTICAL MANEUVERS

by Ray Olesen

Tactical maneuvers allow a starship to stay in the same hex and turn to meet threats without any chance of a breakdown. You might use these when you are forced to, or simply want to, remain at a speed of zero for a time. There are three types of tactical maneuvers.

Note that, because of the dual-meaning of the term "turn," this article uses the term "game-turn" to refer to a 32-impulse time period, while "turn" refers to a change of direction.

TACTICAL WARP MANEUVERS

Warp tactical maneuvers allow you to turn without leaving the hex you currently occupy up to four times during a game-turn. Each turn has the same movement cost as one hex of warp powered movement. They can be used in combination with a sublight TAC, though not on the same impulse, allowing an additional 60° change of facing.

You can use reserve warp power for warp tactical maneuvers. This allows additional TACs (if you had not allocated for the maximum of four warp TACs that are possible) to be used during the game-turn. Reserve warp power is the only means to allow you to use warp TACs after stopping by emergency deceleration, and you must wait four impulses after stopping to use them. Reserve warp power can also allow you to make warp TACs four impulses after stopping by mid-turn speed changes (if you have not already allocated for such TACs).

If you are using tactical warp maneuvers for a full game-turn, your first turn can be made as soon as the second impulse of the game-turn. This can be useful in bringing weapons to bear on a weak or down shield before the enemy can turn a fresh shield toward you.

Any ship with a movement cost of less than one will also note that, short of the zero energy turn, these are the least expensive tactical maneuvers.

Warp TACs can be lost if not used promptly. It is impossible to accumulate them, and once you earn the second one, the unused first one is lost. Don't let this force you to turn when you don't need to, but be aware of when these decision points are approaching. Because TACs are accumulated on the speed-4 column, a player who wants to have two or more available in the second half of the turn must either allocate more TACs (losing the first ones), use reserve power, or combine warp and sublight.

SUBLIGHT TACTICAL MANEUVERS

Sublight tactical maneuvers cost one unit of impulse power regardless of the movement cost of the ship, giving small ships a penalty and dreadnoughts a bonus. This is the least expensive TAC for dreadnoughts and is more expensive than warp TACs for ships with a movement cost of less than one.

A sublight TAC allows you to make one 60° turn anytime after impulse #1. These TACs can be allocated, or you can use reserve impulse power for sublight TACs. Thus, you can use a sublight TAC two impulses after emergency deceleration (half the wait for a warp TAC), or you could stop with a previously-plotted mid-turn speed change and, on the second impulse, use your one allowed sublight maneuver per game-turn to make a 60° facing change.

Sublight TACs and warp TACs can be combined during a turn (but not during an impulse). This allows you to turn 120° in two impulses and may be an effective (and far less risky) substitute for an HET. If you anticipate using emergency deceleration, you should allocate one point of reserve impulse power (the rest is the more usual reserve warp power) so that you can use both sublight and warp TACs after the decel.

Note that you can combine two warp TACs (up to 8 impulses apart) with a sublight TAC to turn the ship 180°, providing the full effect of an HET at no risk of breakdown.

ZERO-ENERGY TURNS

Zero-energy turns allow you to make one change of facing by the standard 60° on impulse #32 as long as you have done no other movement during the game-turn. (NOTE: You cannot combine this type of TAC with either of the other types during a single game-turn.) The main advantage to this type of tactical maneuver is that it costs no energy to use, and this is perhaps the only advantage. Indeed, its only use is by badly damaged ships or as part of an elaborate subterfuge.

GENERAL CONSIDERATIONS

There are some general restrictions and items to be aware of when using tactical maneuvers: you will take no asteroid damage, you can't set off a mine, and any energy spent counts for movement under cloak and toward wild weasel voiding limits. You would have to combine all four warp TACs and the single sublight TAC to void a weasel this way.

Care must be taken when using TACs as the reduction of your speed to zero severely limits your ability to regain the initiative. Your next game-turn's movement will be rather predictable as your acceleration and turn mode will restrict the area you can be expected to occupy.

USING TACTICAL MANEUVERS

In combat there are some definite situations where tactical maneuvers are useful.

1. When fighting behind some fixed terrain, such as web, a minefield, near a friendly base (to stay under the protection of its weapons), or other natural defensive barrier. This allows you to turn to bring your weapons to bear and to keep the desired shield facing your opponent's forces while minimizing energy cost. Note that even slow speed maneuvers will require you to move across your enemy's field of fire or to periodically turn away from the barrier and expose your rear shields. A TACing Tholian Pinwheel inside a web is known as the "Star Castle" tactic.

2. When attacking a fixed installation, such as a starbase. This allows you to come in with a side shield taking damage (i.e., an Oblique Approach). You stop at a point that provides the optimum trade-off between the effectiveness of your weapons and those of the base. Then you sit there, using the energy you are not spending on movement to reinforce shields. As each shield is damaged beyond acceptable limits, you use TACs to turn a fresh shield toward the base. Eventually one of your rear shields will be brought around to cover as you depart to repair your ship and, if necessary, return to repeat the process.

3. As a defensive measure when attacked by ships that are better armed than yours and which you can't outrun. This is a totally defensive posture that gives the initiative to your opponent, but may be the only way to stay alive in some situations. Situations where you have volume to take hits but lack firepower and maneuverability are the best situation for this tactic.

4. When you have an opportunity (or have arranged one) where an immediate turn on the next impulse will allow a decisive shot through a downed or weak shield. This will normally happen at the start of a game-turn, when you have calculated that your earliest opportunity to do a normal movement turn will be too late to hit the down shield. If the enemy anticipates your maneuver, he will also plot a tactical maneuver and will turn his shield away from you before you can fire. To avoid this, plot a speed change as soon as possible to give you some maneuvering capability. This technique can also be used if you find yourself facing an obstacle (web, planet, etc.) at the end of a turn without enough time to avoid hitting it. By stopping, TACing, and then using a mid-turn speed change, you can avoid an impact and avoid using an HET.

5. When you have stopped in mid-game-turn via emergency deceleration or mid-turn speed changes. This could be for a number of reasons, possibly to launch a wild weasel or because you have discovered a minefield. Alternatively, you may have stopped because of a previously unexpected barrier, such as a cast web or some special scenario rules.

6. When you are held in an enemy tractor beam and TACs are the most effective means of countering tractor rotations.

FINAL CONSIDERATIONS

Tactical maneuvers are, rarely, a valuable tool. More likely, they are simply a way of making your time at speed zero less unbearable. Stopping gives far too much initiative to the enemy, but at least TACs will allow you to change facing, bringing weapons to bear and turning weak shields away. ✪

STAR FLEET BRONZE STAR

Awarded for distinguished command accomplishments and/or valor in combat.

THE TACTICS OF TERRAIN

by Frank Crull

Terrain can be used to offset a disadvantage in ships, to block your opponent's weapons, or to emphasize a weapon under your control. How you use terrain can make a difference as failure to properly understand it could cost you the battle.

Terrain comes in two forms: natural and artificial.

ARTIFICIAL TERRAIN

In *STAR FLEET BATTLES* artificial terrain includes minefields, webs, and (in later years) cast web. These are different enough to require their own sections of this manual.

NATURAL TERRAIN

Natural terrain comes in many forms. The problem with natural terrain is that, unlike artificial terrain, the players have little or no control over it. Because of the scale of *STAR FLEET BATTLES*, you will seldom have any choice about terrain. It will either be specified by the scenario or created by one of the random tables. For example, if you could pick your terrain and had to fight an Andromedan, you would logically select a heat zone, where he cannot clear his panels and must eventually be destroyed. But the game system rarely gives you such a choice. At some point in the future, there may be a campaign system available in which it is possible to choose the terrain, but for now we'll have to concentrate on what to do if you find yourself in a heat zone, rather than why it is a good idea to find one.

One partial exception to this concept is a planet/moon or small area of asteroids. The map is usually large enough to allow you to fight somewhere else, giving you the chance to actually select and use terrain.

PLANETS AND MOONS

The first type of terrain is a planet or small moon. These are obstacles in many ways.

First, if you are the defender, it is an anchor on your position. You cannot retrograde or move around. You must defend your planet from the attacker.

Second, both sides must be careful, if they are using self-guiding seeking weapons, not to allow their enemy to slip around to the back side of the planet and cause the seeking weapons to accept the planet as a target.

If the planet is inhabited, the defender uses the planet as a shield only at the expense of the people he is supposed to be defending. Moreover, his own weapons can be diverted by enemy maneuvers into doing the attacker's work for him.

If the planet is uninhabited, it can be used as a shield or to distract self-guiding seeking weapons without losing population or victory points.

In a desperate situation where help is on the way, you could even land on the planet (if your ship is capable) to gain ECM (ground clutter) and, perhaps, survive until reinforcements arrive.

Bases on planets have one major problem — they are blind on one side. These bases cannot be hit from that side, but they cannot provide their firepower support in that direction either. This allows an enemy to use the divide-and-conquer technique. Fighting on one side of the planet effectively leaves the bases on the opposite side out of combat, but unable to escape. This also encourages a defender to divide his forces, sending the ships to one side while leaving a starbase on the other. If several bases are on the planet, an attacker should destroy enough of them to create a "haven" where his forces are safe from ground fire. Later, when the defending ships are destroyed, the bases will be easily picked off by the massive fleets that expose themselves over the horizon simultaneously just long enough to fire.

The most important part of a planet is its atmosphere. Entering the atmosphere protects you from a host of evil effects, including radiation, explosions outside your hex, SFGs, ESGs, etc. It also provides an ECM benefit. An out-numbered force could use an atmosphere to hide, sending weapons and fighters out to engage the enemy. The ships could even "porpoise," rising above the atmosphere to fire and then diving back into it to gain its protection. The cost, however, is that you are limited to a speed of 1 hex per turn, and it degrades your own weapons fire.

Note particularly that there is a world of difference between major gas-giant planets and smaller Earth-type planets. The large planets become a genuine obstacle (too large to sideslip around) and can block huge arcs of fire. It is possible to hide behind a planet or to chase your enemy around it. Many of them have rings (essentially weak asteroid belts).

ASTEROIDS

Asteroids are the most common terrain feature. Players in the game have used asteroids more than any other terrain feature. Asteroids have numerous features, few of them particularly beneficial. Asteroids can damage any unit moving through them. Firing direct-fire weapons through asteroids results in electronic warfare modifiers. If you wish to operate at high speed, your phasers must be utilized against the rocks instead of your enemy. Any asteroid damage is on your crucial #1 shield (unless moving in reverse). They can stop a ship that is trying to build speed for disengagement.

However, there are times you will want to use asteroids. If you are dealing with an opponent with medium or fast drones or plasma torps, it's to your advantage to keep a lot of rocks between you and him since his weapons will be damaged passing through them. You also want to fight in asteroids if you are a smaller force and want to make the enemy come to you. If you have seeded the asteroids with mines, this can be very effective.

Some races have no problems with asteroids. Andromedans can jump over them or, if they need power, run right through them. Tholians can use asteroids for cast web that will last or to lay normal web. Lyrans are at a particular disadvantage in asteroids as their ESGs will constantly take damage and their defensive or offensive functions will be seriously degraded.

Some ships do well when fighting in asteroids. Nimble ships are able to navigate the spaces between asteroids and get the benefits of the electronic warfare.

If you fight in an asteroid belt, you must allocate ECCM to counteract at least the natural EW of the asteroids. Accept the fact you must close to fight with the enemy. Long-range bombardment will generally not work. If possible, fight in a "gap" between the asteroids. A tractor beam can sometimes facilitate this. And if you don't want to fight, you should be able to flee while your enemy is passing through the asteroids.

The new "large asteroids" (P3.4) in the Captain's Edition deserve careful attention as they can hold bases and you can even dock to them.

BLACK HOLES

A black hole at first seems like a localized terrain feature, which, like planets, can be used or ignored. But black holes can affect ships and other units over a wide area, particularly if the gravity wave option is employed. They block fire that passes within two hexes and provide electronic warfare penalties when firing through hexes near them.

An outnumbered force could try to remain on the opposite side of a black hole from the enemy as he risks destruction to approach directly and has penalties when trying to fire past the hypermass.

The two key warnings about black holes are to keep your speed up and keep away from them. A ship passing within 5 hexes of a black hole must have a speed of at least 13 to avoid being pulled in and destroyed.

The only good thing about black holes is that they tidy up the battlefield after you are finished. Crippled ships need not be finished off as the black hole will do that for you, and minefields will quickly disappear. Beware of ships with high explosion strengths falling into the hole as this causes a pulsar burst. For a terrifying scenario, use Energy Balance Due to Damage near a black hole.

Take note that the term "black hole" is distinctly American. Most other cultures prefer the term "hypermass" because the American term is usually considered offensive.

VARIABLE PULSARS

The area around a variable pulsar can have its advantages. It causes damage to your opponent and his units without any effort on your part. Hellbores, plasmatic pulsars, and enveloping plasma torpedoes can be used with good effect in such cases because the enemy will already have one weak shield.

Like a black hole, a variable pulsar creates a huge circular obstacle, but only at pre-ordained intervals. An outnumbered force can remain on the opposite side of the pulsar, relatively safe from direct attack. It also blocks attempts to disengage.

The damage caused by the pulsar will usually be enough to destroy drones and most fighters. It will also cripple PFs. Calculate the pulsar interval carefully to determine if a drone can survive long enough to reach its target. If not, don't launch it. (If the enemy launched it, don't fire at it.) Also note that pulsar damage cannot be negated by electronic warfare.

One tactic is to drop a web anchor (or use your largest ship) and lay web directly away from the pulsar for three or four hexes. Then your fleet concentrates in the last web hex, where the pulsar effects (after penetrating a hundred points or so of web) will be nil. As your anchor could collapse, you may have to put a sacrificial ship in the second hex.

Since a pulsar damages ships more severely the closer they are, you should try to get the enemy to be closer than you are. Of course, unless your enemy is a green cadet, he isn't going to let that happen. This creates its own tactical advantages when you give the enemy the options of moving his own ships closer to the pulsar or allowing your ships to do something else. For example, the enemy is pursuing you. Checking the timing of the next burst, you move through the pulsar zone confident that you can get out of it before the next emission. The enemy, following a few hexes behind you, must either break off pursuit or accept that he will still be in the burst zone when it happens.

NEBULAE

A nebula is the true equalizer between smaller and bigger ships. All shields are the same, and weapons can quickly punch through and do internal damage. Of course, smaller ships have fewer internals, and larger ships can better use ECCM to offset the ECM produced by the nebula. Andromedan ships have an advantage in a nebula in that their panels are stronger than shields, even though they absorb some energy.

Electronic warfare is the key question since a nebula creates 9 points of ECM on its own. You can increase your ECM to 15, or reduce the enemy's ECM to 3, but you can't do both. This becomes a desperate guessing game. Even though the ECM points are equal, the ECM shifts may not be. Even X-ships will still be facing a +1 shift in a nebula, although their overloaded phasers will be deadly even against the shift.

Many systems do not function in a nebula, e.g., tractors, transporters, webs, cloaks, ESGs, SFGs, DDs, scout functions, mines, ATG and type-VI drones.

Shuttles cannot operate in a nebula. This means no wild weasels to distract seeking weapons, but it also means that scatter-packs and suicide shuttles cannot be used. Fighters cannot be used at all, making nebulae a deathground for Hydrans and very uncomfortable for carrier groups.

Bases do well in nebula. A base with a couple of power boost pods can rip ships to pieces due to its phaser-4s.

PFs can be deadly in a nebula since they are virtually operating at full strength while ships are not.

The randomizing effect of nebulae will make fleet formation maneuvers a nightmare.

WYN RADIATION ZONE

The WYNs survived in the galaxy because of this radiation zone. It creates a period of several turns at the start of a scenario during which the larger and more powerful attacking ships will have severe penalties applied.

The attacker has many problems, and some possibilities, in surviving those penalty turns. The only good news is that his ships are automatically at Weapon Status III. If a mine field exists between the attackers and the WYN, the attackers should stay back, play EW defense, and wait out the turns. When their ships are fully operative, they can defeat the WYNs easily. Attacking PFs should operate with packs since that is the only way they will be able to function. An attacker should launch his fighters as soon as possible. Their sensor rating is affected by the zone, and they have a time penalty. Transporter bombs can be used to keep WYN units away.

All fleets need a scout for EW support, but if you take one along when entering the cluster, it will be blinded for 10 turns, and the battle will be decided before it can be used. The WYNs, with their pathetic auxiliary scouts, will actually have EW superiority. Attackers must rely on ECM drones for defense.

The WYN fleet must attack immediately and without holding anything back. (See the WYN tactics article.) As many ships as possible must be crippled since a crippled Klingon cruiser is about equal to a full-strength WYN auxiliary. Staying back wastes the only advantage they have. Go for large ships to get the benefits of their explosions. You must realize that your home planets are only a few turns away; there is nowhere to retreat. You must destroy his ships, win every battle, or be destroyed. His are real warships, and most of yours are only freighters. And freighters just don't take a lot of damage.

Getting out of the Cluster (under the new Captain's Rules) is neither easy nor certain. Keep careful track of your ships, and know the precise moment that you must abandon the attack. The WYN player should know just how much damage will leave a ship "zone crippled" and unable to escape.

The best thing about the WYN zone is the neon sign that says "No Andros Allowed."

GRAVITY WAVE

The only good thing about a gravity wave from the player's viewpoint is that you can see it coming. Some races can use this terrain to their advantage. Andromedans can displace over the wave to avoid damage or hit it to gain power. A wave sets up a weak shield for hellbores, enveloping plasmas, or the PPD and can change facing. You can use the gravity wave to get rid of chasing objects. A gravity wave of moderate strength is very effective against plasma torps, and even a weak gravity wave is

effective against drones and shuttles. Unfortunately, to get this benefit you have to dive through the gravity wave yourself.

HEAT ZONE

The heat zone tends to avoid decisive battles. Once shields are down, ships start taking damage from the zone and quickly disengage, rather than fighting to the death.

The Andromedans are at a particular disadvantage here because they cannot clear their panels and slowly absorb energy. This doesn't keep them from fighting, but it does put them under a severe time limit.

SUNSPOTS

Sunspot activity is a great hindrance on fleet battles. You cannot communicate or coordinate your ships. This will disrupt carrier groups, flotillas of PFs, and fighter groups. People don't know how the other planned his energy allocation. Scouts are neutralized since no EW can be loaned. Drone and plasma races are at an advantage due to the nature of the weapon, but overkill of a target becomes more likely since players are not communicating. Players are faced with the difficult choice of spending power on weapons or EW.

If you can maneuver yourself and a scout into the shadow zone, you can receive ECCM and gain a firepower advantage.

Solar flares add the effects of a radiation zone.

DUST CLOUDS

Dust clouds are mostly a nuisance. The minimal amount of damage they cause isn't likely to be decisive, except in the case of a ship with a down front shield that is trying to disengage. There is a limited EW benefit, but it is easily countered. A ship using EM will take a much more damage.

The only major problem is for cloaked ships, which are easily tracked in a dust cloud.

Comets (a new terrain type to be introduced in a future module) are treated as an asteroid and a long-thin dust cloud. This forms a semi-transparent curtain across the map, providing EW benefits and exposing any approaching cloaked ships.

RADIATION ZONES

Combat operations are largely unchanged in radiation zones, but smaller ships (with their correspondingly smaller crews) are in trouble once their shields are penetrated. If not destroyed first, they'll be crewless in 3-5 turns. Every effort must be made to maintain at least a box in each of your shields; general reinforcement will not protect the crew.

It is important to own the ship with the last survivors, perhaps by keeping one ship away from the action for this reason. When the battle is over, this last ship can move in and capture or destroy the crewless enemy vessels.

Radiation reduces the maximum range for all combat operations to 25 hexes. This eliminates the generally ineffective long-range sniping, but makes disengagement by distance far easier.

Andromedans are, again, under strict time limits as they absorb power faster than they can dissipate it. They must enter with empty batteries and use every power-wasting trick in the book to have any chance of survival or victory.

STAR FLEET SILVER STAR

Awarded for extraordinary command accomplishments and/or courage, in a combat situation, the absence of which would not merit criticism.

COMBINED TERRAIN

Terrain can be a combination of natural and artificial types.

Artificial terrain combined with natural usually takes the form of asteroids, rings, and/or dust clouds combined with mines. Explosive mines would be used since captor mines would have reduced efficiency in an asteroid belt. Placement of mines can be done in two manners: inside of groups of asteroids or in the gaps between asteroids. Either one will force your opponent to move slowly due to the risks involved. He probably won't have a minesweeper around, so his ships will be at a great risk.

Mines and heat (or radiation) zones are a good combination. When the mines bring down the shield, the heat zone causes additional damage (or casualties).

At planets, mines surrounding a star that has high sunspot activity is a deadly combination. The enemy has another factor to contend with, while the defending player can manipulate his ship(s) through the field without worry while the planetary bases fires on the opponents.

Cast web and asteroids are a very powerful combination. The Tholian player gets web for a long time and insures no one leaves. Only an Andromedan player can successfully fight a Tholian in a webbed asteroid belt.

Combinations of natural terrain are common. Some obscure types of natural terrain (white dwarves, solar flares, neutron stars) are buried within the rules for other terrain types.

White dwarves combine the effects of a heat zone and a weak black hole. You can get closer to them but, as with a black hole, beware getting too close. Remember that, while you can get closer to it, the effects of a black hole on direct-fire and seeking weapons are unchanged, so you still will not be able to fire direct-fire weapons if your line of fire passes within two hexes of it.

Neutron stars affect a much smaller zone (though its effect will still cover most of a single map) than most other terrain features. You are in no immediate danger provided you use the normal procedures for a radiation zone, but try not to be next to the star itself on impulse #16 of a given turn. If you lose a shield, you can leave the immediate area until it is repaired.

Novas (and super novas) are the ultimate combination, having the effects of a radiation zone, a heat zone, nebula, and a pulsar, while ejecting asteroid clusters every impulse. This multiplies the problems mentioned, and players should heed tactics for all areas. Speed is critical to avoid the fast-moving asteroids. Crew units are a big worry, so shields must be repaired as fast as possible. Andromedans are at a particular disadvantage since they cannot use either DisDevs or transporters, and they absorb large amounts of energy every turn.

Super novas combine the effect of a radiation zone and heat zone. This just doubles the problems mentioned, and players should heed fighting tactics for both areas. This means crew units are the big worry, and you must keep at least minimal shields in operation at all times. Andromedans are at a particular disadvantage since they are suffering from radiation and heat.

Ion storms combine the effect of sunspots and radiation zones (and sometimes gravity waves). Again, there are a lot of disadvantages and few advantages to be found in such an area. Andromedans have problems, but PFs are very effective.

Other exotic combinations are asteroids and a radiation zone. Players simply need to avoid asteroids, which damage the shields, because of the crew casualties.

Again, players need to keep in mind the basic tactics of fighting with a terrain feature. Make the terrain part of your plan, not an obstacle to your plan. ✪

●● **RANK INSIGNIA OF A SENIOR LIEUTENANT**

FEDERATION TACTICS

by Ray Olesen

The Federation is one of the largest political units in the Star Fleet Universe, both militarily and economically.The Federation is the most idealistic of the races, diligently pursuing peaceful solutions to galactic problems. (The ISC, renowned for their dedication to peace, displayed their passivism by conquering the galaxy, something the Federation would never presume to attempt.) The only aggression the Federation can normally be accused of is economic as it is easily the most economically aggressive race. While the Federation does not seek hostilities, as one Federation captain put it, "We don't start wars, *but we sure can finish them!*"

The Federation has borders with the Gorns, Romulans, Tholians, Klingons, and Kzintis. Historically the main opponents have been the Romulans and Klingons. The Gorns are friends and allies against the Romulans. The Kzinti were enemies in the past, but are now treaty allies against Klingon aggression. The Tholians just want to be left alone, which is fine as far as the Federation is concerned (for the most part anyway).

The Federation has the single most well-known hull design in the form of the *Constitution* Class Heavy Cruiser. This class of ship will serve as the basis for our tactics discussion.

Let's look at a standard unrefitted CA. The first thing that affects our tactics is the two types of weapons carried: the ph-1 and the photon torpedo (later refits add two phaser-3s, two more phaser-1s, and a type-G drone rack).

The ph-1 is the largest ship-mounted phaser available and is able to maintain effectiveness at great range. This type of phaser is generally used as the main phaser battery of most potential opponents (including refitted Klingons). See the phaser section for more data. For now, suffice it to say that Star Fleet provides its captains with the best equipment available.

PHOTONS: THE WONDER WEAPON

The photon torpedo is easily the most powerful and versatile weapon on any starship. It has:

- A proximity function for greater hit chance at long ranges, albeit at the cost of reduced warhead strength.
- Its overload function can be tailored to the amount of force required or to the available energy. This could allow you to use two points of power to create four nine-point overloaded torpedoes that can (unlike normally loaded torpedoes) be fired at range-1 or -0. It also allows you to accumulate overload energy over several turns.
- It can be held, even while overloaded.
- Alone among direct-fire weapons it does not lose strength over long ranges. This factor alone makes the Federation supreme in attacking bases or using the Kaufman Retrograde.
- It can be fired at range-0 or range-1 with considerable success while under passive fire control. This allows the Federation ship under weasel restrictions to still deliver its "alpha strike" at the cost of voiding the weasel.

However, the photon has some disadvantages:

- It takes two turns to arm.
- It requires warp energy. (Considering how much of a starship's power is warp, and how many non-weapon functions require power, this is rarely the problem so many people believe it is. But let them keep thinking that.) One basic tactic here is to use a mid-turn speed change that can give you a burst of speed (to get into overload range) while allocating enough power to overload the tubes.
- The chance of hitting the target reduces greatly as range increases. (Without a favorable EW situation or using proximity fuses, you cannot hit a ship using erratic maneuvers beyond eight hexes. But then, considering the reloading time, you probably shouldn't be firing at him at those ranges anyway.)
- Regularly armed torpedoes can't be fired at a range of less than two hexes, and overloads do feedback damage even at range-1.

VERSATILITY: THE KEY TO SUCCESS

But a starship is not made of its weapons alone (excepting, of course, the Klingons). Federation vessels are designed to carry out many missions. This versatility has its advantages in combat.

First, a Federation ship can take more punishment through good all-around shielding, the large amount of space devoted to crew quarters and comfort (hull), and the large lab areas. The large lab facility is a real plus as most Federation opponents use seeking weapons. Federation ships can identify drones (and plasma torpedo targets) more readily than the ships of any other race. In addition, the labs can fix many more systems through emergency damage repair then any other comparable ship class.

Also due to their scientific and exploration functions, more shuttles are carried than most opponents. This allows for multiple wild weasels to be kept ready to help counter seeking weapons. Don't depend overly on WWs; they surrender the initiative. Against an average player, you will survive to fight the next turn on even terms. Against an ace, launching a WW generally happens about two turns before you are destroyed. The shuttles can also be used to provide point defense using their phaser-3s, but this works best if you can afford to go slow; otherwise they are left behind. You can drag the shuttles with your tractor beams. With six control spaces, there is little worry of losing control, something captains of older Romulan ships (and smaller Hydran units) have to worry about.

Now let's look at the ship's heart — the power systems. The CA has 30 warp and 4 impulse, with 4 batteries for back-up (and 2 APRs or AWRs in refits). This must be compared to likely opponents for meaning. The Klingon D7 has 39 units of power and 3 batteries, the Romulan KR has 37 units of power and 4 batteries, the Kzinti CS has 33 units with 5 batteries, and the Gorn CA has 38 units with 4 batteries. This makes the Fed CA look about average or less. But the drone-armed Kzinti needs less power, and the others have more power-hungry and/or more low-quality weapons to arm. (The AWRs added in later refits more than cover the discrepancy.) Thus, the differences are not as significant as they may appear. The one battery advantage over the D7 can be of great importance when it comes to putting reserve power to use. It can be the difference between victory and death (e.g., in a tractor auction).

However, there are some weaknesses to be aware of. First, most opposing ships, especially Klingon battlecruisers, have a better turn mode. This means careful use of side-slips to preserve your turning ability for when it is truly needed. Also (prior to refits), your rear arc coverage is poor. While you can fire all four side phasers straight down behind your ship (thus no seeking weapon can hit without coming into arc at least once, except in freak circumstances where you are moving backwards at high speed), there are blind spots to your rear where *nothing* can be brought to bear. You allow an enemy into this area at your own peril. Most Federation ships have better rear arc coverage, with the pre-refit CA and DN classes being notable (and quickly corrected) exceptions.

Most opponents (notably including the Klingons) have more transporters and boarding parties than you. This means you are more likely to suffer from a hit-and-run raid or to be boarded effectively. This translates into careful allocation of boarding parties to three functions:

1. Defense against boarding parties trying to capture you.
2. Guards protecting key systems from hit-and-run raids.
3. You can still use hit-and-run raids against your opponent,

but use these judiciously since he may have many guards out and your boarding parties are a less abundant commodity.

BATTLE DRILL

The classic battle is that between a Federation CA and a Klingon D7. We will assume medium-speed drones and no refits. (The effect of refits will be commented on in parenthesis.) Assuming a typical duel scenario, the ships will be using an Oblique Approach from opposite ends of the disputed area.

The first thing to consider is your weapons status. If it is WS–0 or WS-I, the first choice is effectively made. Your photons will not be ready until the next turn, and at WS-0 neither will your phasers, while he can fire disruptors at you. This means you want to move slowly (speed 4 to 6) where you have the power to arm your weapons, he cannot close to effective range, you can reinforce your shields against the long-range disruptor fire, and yet by moving you can accelerate to an effective battle speed on the next turn. Unless you have plenty of room, you'd be better off to move at speed 12 and forgo some of the other demands on your power. TAC maneuvers could be done instead, but the ability to accelerate to the higher speed on the second turn is usually the more worthwhile way to go.

At WS–II or –III you are much better off with energy. You will want to overload at least two of your photon torpedoes. If you suspect your opponent is planning to charge in aggressively, you might want to plan to meet him on his run in (if you can intercept at a good place to apply your firepower) as much of his energy will be devoted to movement rather than overloaded weapons and shield reinforcement. You may have an EW advantage.

As you can have a special mission shuttle ready at these levels, your best choice is (most of the time) a wild weasel. If the WS level didn't allow one, then by all means prepare one! This is because he will most likely choose or prepare a scatter-pack for use against you. At higher WS levels, you'll want both a WW and a scatter-pack (loaded with the available type–VI drones to avoid blocking control channels).

The Klingon's scatter-pack will be the key to his initial attack. He will likely launch this at long range with a long release setting to keep you from destroying it. Your best shot at its long-range destruction is probably two prox photons narrow salvoed (this way it's either destroyed or missed, with no risk of partial damage triggering early release). While this is risky and trades about a third of your firepower, it totally disrupts his attack (if it works). If you can destroy his scatter-pack, then you have also destroyed most of his reloads. As he only has one other shuttle, he will either have to unload a rack or send it partially loaded if he wants to try again. (The Y175 refit eliminates this shortage.) If you miss, he'll probably charge as a third of your firepower is gone. It's an interesting gambit you can try sometime (against someone who hasn't read this book!). Don't try it twice, or he'll start sending an empty scatter-pack out first.

Another good way to be rid of a Klingon scatter-pack is to use the carrier shuttle's slow speed against it. When it is launched, move away from it to exceed the 35-hex tracking limit, at which point it goes inert. This is best done using retrograde movement since this keeps your weapons pointed at the enemy ship. His only real choice is to go back, grab it with a tractor, haul it into the bay, and recycle it. While he's doing that, you have the initiative and can doubtless think of something worthwhile to do.

(NOTE: With the addition of two 360° ph-3s and the type-G drone rack of the "+" refit, the effectiveness of the Klingon scatter-pack attack is reduced as you have substantial point defenses. Buying a multi-warhead drone can also be useful. The refit also allows you to use your own scatter-pack.)

Your primary objective is to hit him with an "Alpha Strike" of phasers and photon overloads. All of your maneuvering is based on arranging this situation. Any ship that takes four fully overloaded photons plus phasers will be badly hurt. You may also be damaged, but few cruisers can produce the peak output of a Fed cruiser.

Let's assume that the Klingon has successfully launched the scatter-pack and the drones are released. He will most likely either try to lead them in to try to force you to fire on his ship and have nothing against the drones or follow the drones in the hope that you will waste your phasers on the drones or that he will catch you under a weasel, defenseless against his direct-fire weapons.

If he leads the drones, at speed 20 he will have little power for reinforcement or tractor beams. If possible, have all of your photons overloaded. If he fires and turns away at max-overload range, he should expose a flank shield so it may be well worth shooting. If he makes an overrun, be sure to declare emergency decel (if necessary, you do not need to move very fast) so you will be at speed zero in time to launch your wild weasel, save your reserve power in case he tries to tractor you, and blast him at point-blank range. (A crafty Klingon might leave the disruptors unloaded to save power for tractor beams, intending to anchor you. It is critical not to let yourself be anchored.)

Be sure and have a mine waiting behind you in case he is dumb enough to keep going straight after his overrun. He may well do so if he's trying to use his 6-o-clock phaser hose. If he follows the drones in, the drones will be going faster than him, so you might retrograde to allow the drones to get ahead of him. You may want to hit him with the Alpha Strike at this point or hold it for a closer approach later. Then either roll a T-bomb out the hatch or emer decel and pop the weasel. The drones should hit the weasel and still give you time to get fire control active before he can reach point-blank range (or avoid overload range). Plus, if he fires while you are under the weasel, you get its ECM benefit, the Klingons ph-2 can't take much shifting, and it at least reduces the disruptor effectiveness. Another bolder approach, along the same theme, is to charge his ship while his drones are still behind him, give him your full broadside, then either decelerate to 4 or less (very careful plotting) or emer decel and get the weasel out.

In any event be prepared for a tractor auction. If you can get a strong shield turned toward him, and keep at least four phasers in arc, you can survive the Sicilian Knife Fight Phase that will follow. This could also be a good time to surprise him with a suicide shuttle. You can afford to be generous. Give him two of them if you like.

It's not hard to win with a Federation ship, but you must keep in mind your limitations. In the above examples, it is assumed your opponent is nearly crippled by your broadside. If not, and you avoid the drones, it will become a straight duel with direct-fire weapons.

FURTHER CONSIDERATIONS

- You will have fewer transporters and boarding parties than most of your opponents. If possible, you will want to avoid downing an opponent's shield during the same impulse he downs one of yours. This is an invitation to his marines. Be prepared to turn immediately after the exchange of fire, bringing a new shield to bear.
- You have as few rear hull boxes as the Klingons have forward hull. This means your (die roll 8) APR (if refitted), shuttles, right warp (5), and batteries will go soon after. If you expect to be hit massively, you should use at least two batteries (if none are empty) for absorbing damage to avoid losing their power before you use it. If you expect to be hard hit, it is good to launch a shuttle or two. These can be manned as "fighters" or launched as dummy (or real) suicide shuttles. At best, you don't lose the shuttle to internal damage. At worst, you divert enemy fire away from your ship.
- The Federation cruiser and the Star Fleet are the basis of the entire game. Try to live up to this standard.

THE SHIPS OF THE FEDERATION STAR FLEET

by Mike West

The Federation has designed its ships well, but they are not the perfectly designed ships that Federation historians make them out to be. Generally speaking, the Federation designed some fairly average ships (based on the all-or-nothing photon torpedo) and then upgraded them as the threat increased.

Dreadnought: The most mediocre ship of the dreadnought class, should more properly be considered a BCH. Later refits and the DNG variant do much to address this problem, but the Federation will be facing dreadnought inferiority during the early years of a campaign. The DN is one of the fastest Federation ships, but only because it lacks 1/3 of proper DN armament. The DNG is also fast, but has the firepower of a true DN.

Battlecruiser: As happened with the DN, the Feds were first out of the gate with a BCH and found that they were saddled with a mediocre design. The *Bismarck* is the better ship, until it fires the plasma torps and lacks the power to reload them. The *New Jersey* has its own problems (shock), but is the best "cruiser killer" in the game.

Heavy Cruiser: Suffers from two problems. The game was based on the CA, and as game design advanced so did ship designs, leaving this original "perfect cruiser" in the dust. Refits did much to bring it into line with the cruisers of other races, but it was never the best of its class. The other problem was created by the Federation, which provided the all-or-nothing photon. The cruiser is designed to absorb the enemy's first blow, then destroy him completely with a salvo of overloaded torpedoes and phasers easily exceeding a hundred points. The problem is that photons tend to miss at even modest ranges, but then the CA was designed to survive everything a D7 could produce and still fire.

Command Cruiser: The ship that made the reputation for the CA but didn't get the credit. A bit more power is just enough to make the ship flyable. The 360° phasers provide adequate all-around defense and become offensive weapons when the refit provides more phasers.

New Light Cruiser: The best war cruiser in the game, except for the 4–6 breakdown rating, which blocks it from using HETs offensively. The AWR refit improved the speed.

Old Light Cruiser: A curiosity, but a workable ship. Depends more on phasers and less on photons than other Federation ships. Armor (and a refit) compensate for the relatively weak shields.

Destroyer: The oddball of the lot. The firepower of a cruiser, but lacks enough power to walk and chew gum at the same time. While any enemy will avoid a ship with four overloaded photons, the lack of maneuverability and speed makes this easy to do. This ship should be sent straight in, with other ships maneuvering around it. To fly it in a more traditional role, simply ignore one or two of the torpedoes to gain speed. The DDG solves the power problem by replacing two torpedoes with zero-power drone racks, but this makes the ship very vulnerable to penetrating damage. The DDL replaces two photons with plasma torpedoes, but this only complicates the power problems. The DE is the best of the lot, but appears only in CV groups. With only two shuttles, all DDs are unable to use the WW defense effectively. The low breakdown ratings make HETs a desperate gamble *never* used voluntarily.

Frigate: One of the best frigates in the game, with a good balance of firepower and (for a Fed) excellent maneuverability. Like all small ships, it cannot absorb damage and keep going.

Galactic Survey Cruiser: The true workhorse, able to function as a carrier, scout, troop transport, and/or cruiser.

Battle Tug: Cheaper than a DN, but a terrible breakdown rating and severely restricted maneuvering.

SCS: This is probably the most incredible carrier in the entire game. Unlike most SCSs, it carries a FULL complement of 24 fighters in addition to the normal complement of heavy fighters (or PFs). It has the full armament of a CVA and the added defense of four 360° ph-Gs.

CVA: Because of the inferior phaser arrangement (compared to the SCS), it has less of an offensive punch and its defense is divided between the sides. It only has the photons of a cruiser, instead of a dreadnought, but many CVAs have this problem. It has the added advantage of SWACs. The CVA's operating speed is the same: 20.

CVS: This ship is basically a CC with 12 fighters. Its only real problem is that it has the power of an unrefitted CA, so power can get a little tight at times, and its operating speed is 22. This ship becomes a lot deadlier when it starts to carry around F–15s because the enemy has to start dealing with the fighters and the carrier can do other things.

NVS: This ship is one of the few NCL variants to keep some of its original photons. Because of this, it is a very useful part of a fleet. If it is a part of a war cruiser fleet, it can easily operate without an escort and just stay with the fleet while its fighters go and do their thing. This has an operating speed of 30.

NVL: This is less useful than the NVS. It needs an escort since it cannot enter direct combat, and it is useless with other ships because of its lack of firepower. Since the NVL has no photons, its operating speed is 30, perhaps the only good point.

FFV: This ship is generally ignored because of its lack of capability. Most other races' frigate-carriers retained heavy weapons whereas this ship has little offensive punch. Still it has some use as a convoy escort and backup carrier. As this ship has no photons, it has an operating speed of 30.

PV: This ship is a kit-bash. It has a complete 12-fighter squadron and even keeps its original photon. Any convoy that has one of these as escort is probably a lot happier. But the puny engines can manage to push it only to speed 13.

CVT: This carries 24 fighters and has impressive defensive capabilities. Unfortunately, it has no offensive power, and it is restricted to a maximum speed of 21 because the CVA pod is double weight. (Thus its operating speed is also 20.)

TVL: This is a normal tug with a CVL pod. This has no speed restrictions (an operating speed of 30) and respectable defenses. Again, it has no offensive capabilities to speak of.

LTV: This is a LTT with a CVL pod. It has a max speed of 25 and an operating speed of 24. Its one advantage over the TVL is its 16 cargo which can carry a lot of drones and take a lot of damage. An LTT with a CVA pod (LVA) can function as a "standoff" carrier to provide reloads and other support.

FEDERATION FIGHTERS

F–14: The best fighter in the game. Even without the type-III drones, it is better than all of the other races' top fighters.

F–15: Similar to the F–14, but it trades in the type-III capabilities so that it can double its standard load. Both fighters' viciousness is tremendously amplified by their ph-G.

F–18: This is the true work-horse fighter for the Federation. While it is inferior to other races' top of the line models, this is just barely (two points slower until the refits, two points less damage, and only one chaff pod). It is still an effective fighter.

F–16: This is exclusively a dogfight fighter, but with the advent of the C refit, and its inherent ph-G, the F–16C commands much respect (or at least fear).

A–10: Used by the CVA to try to deliver a large punch. They are also very useful on bases for defense.

A–20: This incredibly powerful fighter is only found on the SCS and a very few starbases. Its most powerful feature is its photon torpedoes.

F–111: Hailed as "the Federation PF," it is a superb and versatile heavy fighter but not *that* good. The internal weapons bay is a unique feature, creating the effect of a "modular" fighter in some regards. ✪

KLINGON TACTICS

by Graeme Bayless

The Klingon Empire is a large and powerful nation bordering on the Federation, the Tholian Holdfast, the Kzinti Hegemony, the Lyran Star Empire, and the Hydran Kingdom. They were the largest power in the Coalition during the General War and probably have the most well-known hull design short of the *Constitution* class cruiser. This is a discussion of the Klingon ships, their weapons, and, above all, their tactics with those ships and weapons against their historical opponents.

STRENGTHS AND WEAKNESSES

When you look closely at the Klingon ships, their strengths seem to stand out well. The wide variety of weapons, the large amounts of power, the excellent weapons firing arcs, and the good turn modes are the most obvious advantages. Unfortunately, for every strength, there must be a weakness to compensate. On Klingon vessels, the disadvantages range from having weak flank shields (fixed in the B-refits) to having less ability to absorb internal damage than many Klingon opponents. The concept of tactics is simply to apply your strengths against your opponent's weaknesses better than your opponent applies his strengths against your weaknesses. Thus, you must learn not only the strengths of your ship, but also the weaknesses as well, before you can become a successful commander.

Indeed, the greatest single advantage that the Klingon ships have over most of their opponents is versatility. Most Klingon ships have both long and short-range direct-fire weapons (disruptors and phasers, respectively) and seeking weapons (drones). This is good, but the Klingons don't stop there. Many ships also mount other weapons as well, such as high-damage but short-range weapons (mauler cannon), drone defenses (ADDs), or even special weapons that freeze opponents in space and time (stasis field generators). It is the use of this versatility that is the first key to victory.

Another powerful feature of the Klingon ships is their obvious combat-oriented design. The Klingon ships are built purely for combat! Even the Klingon tugs are armed as well as cruisers BEFORE the addition of battle pods. This leads to ships that generally outgun their primary opponents, and this is truly the case. However, the most notable combat advantage that the Klingon ships have over their opponents is their excellent firing arcs. The Klingon ships have the most incredible firing arcs of any ship in the game. A quick statistical analysis shows that the typical Klingon cruiser has the ability to bring over 70% of their weapons to bear anywhere within the forward firing arc while the Kzinti can only bring 56% to bear and the Hydran can only bring 66%. Although the Fed can usually bring 80% to bear in the forward arc, the Fed also has inadequate rear defenses. An even better comparison is the ability to bring massed firepower to bear in certain firing zones, such as straight down certain hex rows. There are far more of these special hex rows (3) on the Klingons than on any opponents (2 at best, often 1).

As mentioned above, Klingon ships also have large amounts of power. This allows higher speeds (which Klingons are renowned for), better shielding (reinforcement), and more power for special functions (tractor duels, transporters, etc.). Upon quick examination, the Klingon D7 has 39 power as compared to 37 for the Hydran Ranger, 36 for the Fed CA, and 36 for the Kzinti BC (all with refits). Those few points of power can be the difference between victory and defeat.

The last major strength of the Klingon ships is their good turn modes. Using our standard comparison, the Klingon D7 can be going as fast as speed 15 and still maintain a turn mode of 3. All three of our classic opponents can only go speed 14 or less at turn mode 3. This advantage manifests itself in the ability of the Klingon ships to choose the time and place of engagement by keeping either a better speed and a similar turn mode, a similar speed and a superior turn mode, or a combination of both. Obviously, the ability to choose when engagement takes place is a powerful advantage.

Of course, no ship can have strengths without weaknesses, and the Klingon ships are no exception. In general, the most universal problem with the Klingon ships is their lack of internal durability. This shows up as a lower amount of hull boxes and fewer labs. Both of these are chronic Klingon problems. To once again use our comparison, the D7 has 11 hull boxes (total) and 4 labs. The Fed, on the other hand, has 16 hull and 8 labs while the Hydran has 21 hull and 4 labs and the Kzinti has 17 hull and 6 labs. This is about the normal ratio throughout the fleets. Although hull and labs are not exactly critical for firepower and defenses, when shields get breached and internal damage begins to flood in, the Klingons tend to get the short end of the stick first.

Not quite as critical as the internal weakness of Klingon ships is the weakness of flank shielding on early Klingon designs (before the B-refits). The D7 is a prime example. The rear (#4) shield, at 13 boxes, is less than half that of the front (#1) shield, at 30 boxes. This means that early Klingon ships can, if outmaneuvered and attacked from the sides or rear, be quickly crushed. Fortunately, the Klingon ships are more maneuverable than their opponents and can usually keep stronger shields between themselves and their opponents. Even more fortunately, the high-speed drones did not (historically) appear before the B-refits, and slow drones are easier to deal with.

The final weakness of the pre-refit ships is the slow drone-firing rate. One solution is to empty one rack and use it to arm a scatter-pack. The empty rack can then absorb the first hit (without causing the chain reaction that pre-B ships are vulnerable to), while the loaded rack maintains the original rate of fire (for half as long). Another solution is to launch a drone from rack #1 at the end of odd-numbered turns and rack #2 at the start of even-numbered turns. This at least concentrates the drones into salvoes.

GENERAL TACTICS

As previously mentioned, the key to tactics is applying your strengths against your opponents' weaknesses. The only way to do this successfully is to study each possible opponent very carefully. Battles are not won by just driving your ship into point-blank range and trying to roll dice better than your opponent does. If you do this, your opponent will probably blast you to atoms. Instead, you must learn your opponent's ship well enough to be able to accurately compare your strengths and failings to his. Do this better than your opponent, and victory is on its way.

A long time ago, in Earth's ancient past, a general tried to sum up his method for winning battles by saying, *"Git there fustest wi' the mostest!"** This is perhaps the best advice ever given an up-and-coming starship commander. Although it seems terribly simple and unspecific (and it is), it is important to understand. When entering a battle, decide where the engagement is to take place, and then get there first. If you can do so, and with more concentrated firepower than your opponent, you should do well.

Klingons have a special version of the FA-weapon arcs, allowing them to concentrate 90% of their firepower along the 60° offset hex rows. This makes the Oblique Approach the primary Klingon tactic. Also note that, with disruptors, you cannot penetrate an opposing shield with one salvo, so you need to arrange for several salvoes on successive turns to hit the same shield.

* Confederate General Nathan Bedford Forrest actually said "Get there first with the most men" but southern newspaper editors thought the more "homespun" approach would sound better.

Never use your UIMs for long-range fire. Save them for overloads and use them at a range of eight hexes; be prepared to turn away if the thing burns out.

Always, no matter what else happens, assign guards to the security stations. If your ship has a stasis field generator, guard that too. Other guards should be given standard assignments, to the heavy weapons, phasers, etc.

We will now examine tactics against specific historical foes: Federation, the Kzinti, and the Hydrans. Combat with the Lyrans can use the tactics recommended to the Kzintis. Combat with the Tholians is discussed in the Tholian section.

FIGHTING THE FEDERATION

The Federation ships, when examined closely, show some of the same advantages that the Klingon ships have. The Feds have good versatility in their weapons, especially on a fleet scale or with later ships. What this means is that throughout their fleet, many different weapons can be found. However, most ships only have a few. This means that in any given battle, the Klingon probably still has superiority in the versatility of his weapons.

Another Federation strength is their tough ship design. Most Fed ships are extremely durable in regards to internal hits. They have more hull and lab hits to absorb than their Klingon counterparts and are tougher ships in general. However, they didn't get to have their cake and eat it too. The Fed ships have fewer weapons than the Klingon ships do, balancing the tougher design (until those blasted refits added phasers and drones).

The last major Fed advantage centers around their weaponry. The photon torpedo has two major advantages over the disruptor bolt: It does a fixed amount of damage regardless of range (and is the same range on all classes, unlike our disruptors), making it a potent long-range weapon, and it delivers, in one shot, the amount of damage that the disruptor does in two turns, making it harder to reinforce shields enough to withstand the shock and harder to distribute the damage across several shields. This "all at once" power of the photon is, of course, also its greatest disadvantage. The photon must be charged for two turns before firing while the disruptor can be fired every turn. As before, this balances the two quite well, giving overall advantage to neither side.

On the disadvantage side for the Feds, beside the ones mentioned above, there is one giant weakness and several minor ones. The giant problem with the Fed ships is their poor firing arcs. The Fed CA, the mainstay of the Fed fleet, is equipped with some of the worst firing arcs of any cruiser in the game. Its rear defense (before refits) is based on a narrow single-hex row shot that allows drones to fly up the blind spots. The minor disadvantages range from the poor turn modes of the Fed ships, to the requirement that photon charging energy be warp power. (Many people think that this is a serious disadvantage, and this is simply not so. The Fed CA+ has only 36 power, of which 30 is warp. In any circumstance where the ship will be charging photons, the four non-warp power can ALWAYS be used for other things, like shields and life support.)

The key problem here is the shortage of shuttlecraft as most Klingon ships have only one or two. Prepare the first as a scatter-pack (SP). The second, if available, could be armed as a wild weasel (if he has drones) or as a suicide shuttle. The SP should be launched at long range and used to provide a burst of drones that will be combined with a direct attack. If you can force him to use a wild weasel, you can close and get in a good short-range attack.

You can use the Oblique Attack to conduct an attrition battle at range 9–15 for several turns before launching the SP and making your direct attack. You cannot penetrate his shields at long range, but you can dent them. A few turns of this will leave them weak enough that you can penetrate them at range. This is known as the "Klingon Sabre Dance." If he is using shield reinforcement, you can use narrow salvoes to overcome this and leave a few permanent dents.

If the Federation ship overloads his photons, you have an advantage. Stay out of overload range and play an attrition battle. Eventually he'll have to dump the torpedoes and start reloading them as standard types. (If he doesn't, you outgun him, and he'll get tired of that.) That's when you can close for a high-speed battle pass supported by your drones.

If he tries to trade long-range shots with you, let him. Once his torpedo tubes are empty, charge him for close combat.

To summarize, you must utilize your drones effectively as phaser absorbers; you must keep your speed up so as to give you the initiative; and you must make the first battle pass on a Fed end up such that you are in prime disruptor range on the turn after you exchanged disruptor for photon fire, so that you can dish out the disruptor's full potential when the photons are still charging.

One last tactic that works well against the Fed (but poorly against other opponents) is the hit-and-run raid against weapon systems. When you've blasted your way in, use a full salvo of 5 hit-and-run raids against him in order to pull his few remaining teeth quickly. Hit the phasers first as they are usually not guarded while the photons usually are. Also, without phasers, the Fed is drone meat. (Photons can't hit drones very well.)

FIGHTING THE KZINTIS

This brings us to our next opponent, the Kzinti. A number of the advantages that the Klingon ships have are nullified by the Kzinti designs, but a few are emphasized enough to make up for the loss. One obvious Klingon advantage lost is in power. Although most Klingon ships appear to have more power than their Kzinti counterparts, this is not so. The Kzintis have more available power after charging all weapons, shields, life support, and scanners. This is, of course, because drones, the main armament of the Kzinti ships, do not require power to launch.

The Kzinti ships have other strengths as well, the most notable of which being superior close range firepower. Most of the Kzinti vessels have an extraordinary number of phaser–3s. These puny phasers are virtually useless beyond range-2, but they are quite effective in close and, in quantity, can be DEADLY.

Another minor advantage of the Kzinti ships is their large number of boarding parties. Because of this, it is difficult for a Klingon to capture a Kzinti or even to guard successfully against hit-and-run raids and capture attempts from those Kzinti ships.

They also have large batteries (plenty of reserve power).

As before, nothing is free. The Kzinti ships have their weaknesses just as they have their strengths. The most obvious one is their long-range direct firepower. Most early Kzinti ships lack the disruptor and heavy phaser firepower that is necessary to win a long range duel. Later ship refits solved this problem, but even then the Kzintis obviously were willing to sacrifice firepower for drone power.

The firing arcs on the Kzinti designs are also a problem, especially in the earlier ships. The forward heavy weapons on the cruiser hulls are the worst case. On the CS, the only way all of the heavy phasers and disruptors could be fired on a single opponent at the same time was to have the opponent on the forward centerline. This is, of course, an unlikely event and could allow the opponent to split the CS's fire over two shields, a poor situation at best. Like the lack of weaponry, this problem was solved in later refits, but until they appeared, the Kzinti ships suffered.

Lack of firepower and firing arcs aside, the Kzinti ships have one last major deficiency in their poor forward shielding. From the CS to the mighty SSCS, most of the Kzinti ships have proportionally less forward shielding than their opponents. This has obvious effects. There are exceptions (the CM being a classic), but those with weak shields outnumber them.

FIGHTING THE HYDRANS

This then brings us to our last opponent, the Hydran. There are several difficulties in comparing the Klingons and the Hydrans, most of which sprout from the fact that Hydrans are almost never without their fighters. Equal BPV battles will usually be against smaller ships. If you can destroy the fighters without becoming decisively engaged, you easily outgun any Hydran fusion ship.

The Hydrans are nothing like any of our earlier opponents. They are unique in their design, in that no other ships are so specialized. Specifically, the Hydrans are, with the exception of their hellbore-armed ships, virtually useless beyond three hexes. On the other hand, they are the most fearsome ships in the galaxy at two hexes or less. This, obviously, is their primary strength — pure firepower at short range.

Another big advantage is their relatively tough design. On all of their cruiser designs (and almost everything else), there is no differentiation between forward and aft hull. This, when combined with the fact that the Hydran cruisers have 21 total hull boxes, makes for a TOUGH ship to hurt without using a tremendous amount of firepower. Once a shield is down, however, you can use the Mizia concept to strip a Hydran of his weapons.

The last notable strength of the Hydrans is their relatively thick forward shielding. With it, the Hydrans can often survive long enough to close with, and kill, their opponent. A great situation for the Hydrans but not a good one for the Klingons.

As seen in the Hydran tactics section, their standard tactic is to leave the fusions unloaded (allowing incredible speeds) and get in close; then they load them over a turn break.

As always, the Hydrans have some problems to counteract their strengths. In this case it is one GIANT problem and two major ones that balance the Hydrans.

The big one is the counterpart to the tremendous short-range firepower — a virtually total lack of long-range firepower. A quick example is the Klingon D7 vs. the Hydran CA(R). At a range of 8 hexes, using all of the firepower on the two ships (at overload capacity when possible), regardless of firing arc (we'll assume the ships manage to make use of the different weapons at different times), the Klingon ship will do an average of 26.5 points of damage per turn while the Hydran will only inflict 14.7 points of damage/turn. However, at a range of 1, the Klingon will be able to inflict 70.8 points/turn while the Hydran can expect to dish out 73 points/turn. While the difference appears minimal, you must keep in mind that the Hydran fusion beams, like the Federation's photon torpedo, have high "shock power." In a single turn, the Klingon will still only inflict an average of 70.8 points while the Hydran, on the turns with the fusion fire, will dish out over 91.7 points, on the AVERAGE!

The other weaknesses the Hydrans need to worry about are their poor firing arcs on their heavy weapons and the fact that both the fusion beam and the hellbore cannon are two-turn arming weapons without the ability to hold overloaded charges. The firing arcs can't be helped but can be less painful for the Hydran if their opponents allow the Hydran to stay lined up for a massed shot. The arming cycle can also be a problem, especially because of the inability of the weapons to be held. Overloading a hellbore costs a tremendous amount of power (6 points on the second turn), and having to do that twice because your opponent moved out of range can be a killer.

Since a Hydran fusion ship must get to point-blank range before his weapons become dangerous, he must be the aggressor, much like the Kzinti. The burden of the attack is on him, and you should plan accordingly. Although speed is important, power is also vital and moving slowly will allow you an excess of it. You'll move slowly at first, building up power in anything that can hold it and watching to see how he deploys his fighters. You want to use the Oblique Approach to take advantage of his forward-centerline firepower restrictions.

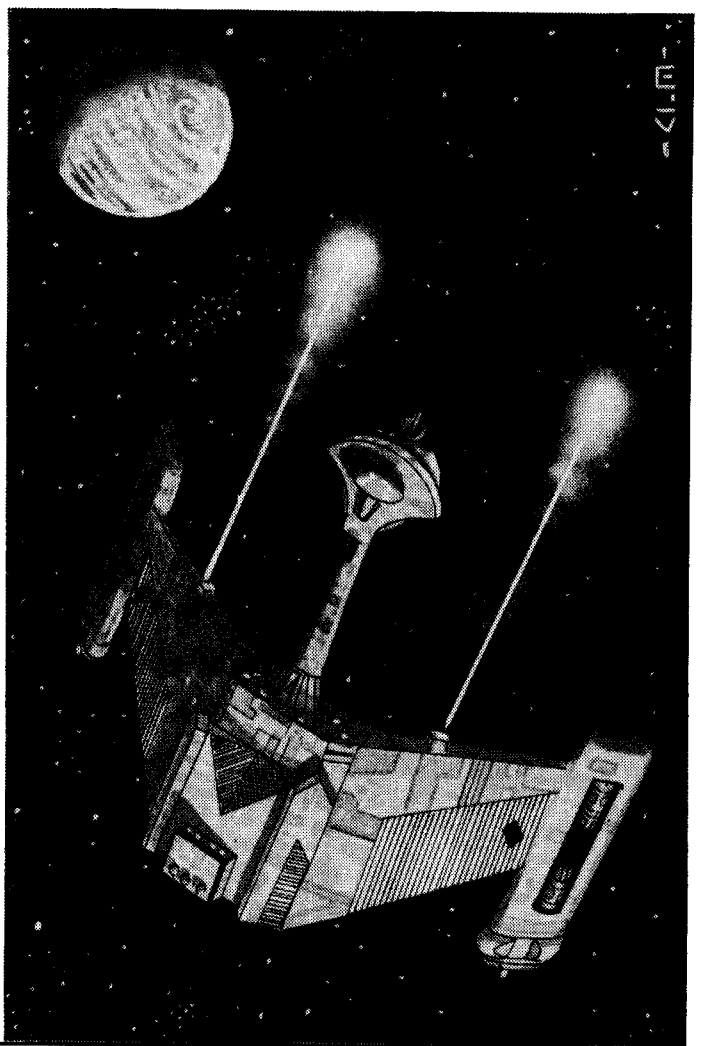
Several major tactics must now be discussed regarding the Hydrans and how to beat them. The first major rule to remember is to KILL their fighters as soon as it is affordable. In this case, affordable is defined as not putting your ship in jeopardy in regards to HIS ship. The next important act is to remember the hit-and-run raid. Much of the Hydran's firepower is centered around his fusion beams and his gatling phasers. Kill them and you kill the Hydran. The last point to consider is how to avoid letting the Hydran get close. Use your superior maneuverability.

In summation, the main tactic against the Hydrans is to fire first and hope you can do enough internal damage to yield weapon hits before they can be fired effectively. Also, the fighters MUST be killed before they can get to point-blank range. Otherwise, they can die gloriously in YOUR explosion!

Hellbore ships are a problem. They are effective at range-15, and the hellbore is a separate volley (Mizia Attacks!). Once you have a down shield, you are going to take hellbore damage no matter which way you turn. Sabre dance at long range, firing at 15 hexes. Use EW and EM to avoid giving him a clean shot. You can fire twice as often; use that to your advantage.

CONCLUSION

The Klingons field excellent ships. They have some of the best weapon/BPV ratios of any ships in the game and are unusually well balanced. They are well suited to fight, and beat, their historical opponents. They give their commanders many options and almost make his job easy — almost. However, always remember that the best ship is useless without a skilled captain. That is you.



WARSHIPS OF THE DEEP SPACE FLEET

B10 Battleship: The "Great Dragon" of the Star Fleet Universe. A huge ship able to do the dreadnought job with a vengeance. It is, in many ways, simply a dreadnought that is 33% larger and can tactically be treated as such.

C8 & C9 Dreadnoughts: The Klingon dreadnoughts are indeed some of the strongest in the game. Their strong weapons assortments, excessive power reserves, and tremendous internal durability are all assets that make them powerful ships. Their worst "Achilles' Heel" is in their weak rear shielding, which is fixed in wartime refits. As far as tactics are concerned, the Klingon dreadnought should NEVER be caught alone, as happens in "The Lone Grey Wolf" campaign. This ship, as is true of all dreadnoughts, is designed as a heavy FLEET ship, a command vessel. The C8/C9 has defenses, yes, but requires smaller vessels as escorts, just as the smaller ships need the dreadnought's firepower and command capabilities. Always keep them together.

C7 Heavy Battlecruiser: This ship is a powerhouse. It is extremely well matched vs. the Fed BC, the Kzinti BCH, or the Hydran Overlord. Its greatest advantage is its pure versatility. It has the direct firepower of any of its opponents (if you consider the 2xUIM on the C7 to equal out the short-range superiority of the Kzinti or the Hydran) and more available power than any of its adversaries. In addition, it has the seeking weapons power of the Fed or the Kzinti (considering the 12-shot ADD because of its ability to KILL drones or fighters) and the unbelievable disruptor firing arcs of the D5 (FH+L/R !!! as opposed to FA+L/R on the Kzinti and FA on the photons and Hydran heavy weapons). These factors would seem to point to the Kzinti vessel as being the only ship fully matched to fight the C7. However, the C7 has another surprise in store, just for the Kzinti — a better turn mode. The C7 can out turn the Kzinti by a significant margin, giving the C7 yet another advantage. Tactics with the C7 are simple — fly it like a cruiser and use your advantages to their fullest.

D7 & D6 Battlecruisers: The best features of the Klingon battlecruisers are, in order of magnitude, their versatility (witness the plethora of SUCCESSFUL variants that were based on the D6/7 hull), their excellent firing arcs, their superb turn mode, and their "combat-oriented" design. They are not perfect, however, as their weak flank shields, lack of reserve power, and poor internal durability prove. Overall, the D6/7 hull must be considered a resounding success. Winning in them is not easy, but the D6/7 is a match for any other comparable cruiser in the game.

D5 War Cruiser: The D5 is a match for the Federation NCL, the Hydran TR, the Kzinti CM, and the Tholian CW. Against the Fed, the D5 has approximately equal firepower and FAR superior firing arcs, especially the 210° (I) disruptor arcs. The TR has only two hellbores to the Klingon's four disruptors (firing arcs matter here too), only slightly more phaser firepower, and NO fighters! (The later Tartar is a tougher opponent, but costs slightly more.) The Kzinti has its drones neutralized by the two 12-shot ADDs on the D5 and the CM is short a disruptor; it does, however, have power to burn. The Tholian, of all of the competitors, has a good chance of victory. However, without adequate drone defenses, it too would have a good fight on its hands. As for tactics, the D5 uses the same tactics as the D6/7, with more gusto. In the D5's case, as is true of all "expendable" ships (remember that these are mass production wartime only vessels and, therefore, are MUCH more expendable than normal cruisers), its job is to get in there and kill enemy ships. End of story.

E5 Escort: This ship is effectively a slightly modified F5. It has been optimized into an escort role and should be used for this purpose exclusively. This is *not* a destroyer.

F5 Frigate: This "frigate" is actually a destroyer in frigate's clothing. With 20 power and a 1/2 movement cost (as opposed to the normal 1/3 for frigates), it is truly a small destroyer and should be treated as one. However, because most people think of it as a frigate, it is excellent for delivering powerful punches to unsuspecting opponents. Of course, the Federation is unlikely to get caught by this as their frigates are similarly equipped. Use this ship for skirting enemy forces and charging into the flanks, where the smaller firepower can punch through smaller shields.

F6 Frignaught: As the name suggests, this ship is an F5 frigate with a gland condition. It is actually more similar to the D5 war cruiser and carries very similar armament. The D5 is far better balanced and appears to be a better bargain until you see the F6's incredible turn mode of "A" and its size class (of 4). These advantages seem small, but make this ship a useful frigate leader, or just a great all around warship. Besides, the names of these ships (*Bakurian, Valkurian, Valorian,* etc.) just *sound* like true warriors. The shock rule puts a time limit on its battles.

E4 Escort: This ship is the real "frigate" of the DSF. It has only 15 power and a 1/3 move cost. This makes it the equivalent of the Kzinti FF, the Lyran FF, and the Hydran Hunter, so the E4 is in mediocre company from the start. As far as capabilities are concerned, this ship retains almost the full firepower of the F5 as well as much of the F5's forward shielding. This makes this ship an excellent "suicide" attacker. The vessel has virtually no rear shields and not enough internal hits to be able to absorb hard blows. So use this ship for the same style of attack as the F5, but don't expect it to return. It WILL give its worth in damage if you can reach an opponent's flank.

E3 Escort: A definite enigma in the Deep Space Fleet, the E3 is very similarly armed to the E4 and has only 2 less power. This makes us wonder why the E4 was built over the E3. This becomes obvious when examining the differences between the ships. The E3's phasers are ph-3s instead of ph-2s, and the drone rack is an ADD rack. This makes the E3 much more of an "escort" than the E4, and this is indeed the E3's primary historical mission. (A mission, it must be noted, at which it and the E4 ultimately failed.) Tactics with this ship are therefore simple: stay with your command vessel and act as escorts for it; protect it and it will protect you. Use the nimble status to your advantage.

AEGIS ESCORTS: The aegis versions of the E4 and E3 are excellent carrier escorts, providing phenomenal drone and fighter defenses. In late war scenarios, however, these ships will be inadequate against class-III fighters and war destroyers, which explains the advent of the F5E/AF5 and the cruiser escorts.

G2 Police Ship: The Klingon ISF (Internal Security Forces, the police) use this ship, and it is well matched against the Fed Pol, the Kzinti Pol, and the Hydran Gendarme. It is identical to the E3 except that each pair of ph-3s turns into a single ph-2 and the disruptors turn into drone racks. This allows the ship to maintain amazing speeds since it has no weapons (well, two ph-2s) that use power. Tactics here are simple — SPEED and NIMBLENESS. Maintain it, flaunt it, live it.

G1 Fast Patrol Ship: Of all of the PFs, this is one of the better balanced. It is quite capable of fighting many different types of opponents, from all opposing PF types to fighter hunting, an occupation normally reserved for "real" ships. Its main advantage rests in its ADD rack, something no other standard PF carries. This rack allows the G1 to kill fighters quite effectively at range-3, before the fighters are firing their ph-3s at full effect. (Assuming, of course, that the fighters present themselves in small groups.) As for other armament, it is very similar to the Kzinti PF and is primarily drone armed. Of course, this makes the G1 very fast (even more so than other PFs) and power heavy. Tactics here are as normal PF tactics: stay fast and don't close frontally with anything but enemy fighters and PFs. Use your speed to keep the range where you want it, and use your ADD to save yourself from enemy drones or to obliterate enemy fighters at range-3. Also, remember that a PF flotilla deployed around a flank will severely restrict your enemy's movements as, once a ship is damaged, it will have trouble keeping the PFs off of its down/weakened shield. Thus the other main usage for the G1 is hunting and killing crippled enemy capital ships. Just don't get caught in the explosion. ✪

ROMULAN TACTICS

by Ronald Spitzer

The tactics of the Romulan are those of the cloak, the nuclear space mine, and the plasma torpedo. A thorough understanding of these systems is required to fully utilize Romulan ships in combat. Before you can learn their ships and tactics, you must know their weapons.

CLOAKING TACTICS

This subject is covered extensively in its own section. Do not, however, assume that all cloaking devices are created equal. No matter how many Romulan ships you have flown, do not assume that the one you were just handed works the same way. Check its power. Some ships can recharge weapons at normal rates (i.e., in three-turns) while under cloak and still move at a respectable speed. Others must take longer to arm weapons or move at slower speeds.

Romulans can utilize cloaked movement to seed the area with mines, particularly inside the enemy formation.

A standard tactic is to underrun an enemy ship (that's what you call an overrun when you are cloaked), then do an HET and uncloak behind him where his heavy weapons can't fire. Of course, if he laid a mine back there, or if he has an HET of his own, or if he has rear-firing weapons, you are going to be blasted before you can fire. Another counter is to make a standard 60° left turn as the Romulan ship passes under you, nailing him with an LP torpedo. Some ships have LS/RS torpedoes, and you'll be taking two F–torps on the nose if you try that against them.

ROMULAN SHIPS

There are three distinct classes of Romulan ships. Old Romulan ships are sublight ships converted to use warp power. The various KR classes are Klingon ships converted to use plasma technology and the cloaking device. The Hawk series was specifically designed to use warp power, plasmas, and the cloaking device. One-on-one, Romulan ships can beat any equivalent enemy ship, although no victory is guaranteed.

The diversity of Romulan ship designs and characteristics is the most troublesome burden an imperial commander must face. In a campaign situation, where you may be required to command any of the 90–odd different units, you cannot assume that whichever one you draw in this battle can be operated with the same tactics as the previous ships.

Most Romulan ships (until the new Hawk series) have fewer internals and shuttles than their opponents' ships of the same size class and type. Romulans tend to have fewer control spaces as well. Old Romulan ships have a inferior turn mode and poor weapon arcs. Klingon-Romulan ships have inferior battery arrangements, although changes in Doomsday at least allow reserve-power arming of the heavy torpedoes. Romulan ships have fewer phaser-1s. Romulan commanders should take note of these disadvantages when planning their tactics.

This is not to say that Romulans do not have advantages; they just don't have all of their advantages on the same ships.

Old Romulans have the best all-around shields in the game. The new Hawk series has a shield advantage over both the Federation and the Gorns, and to a lesser extent over the ISC.

Old Romulan War Eagles and King Eagles have more batteries than their opponents, with the King Eagle having more one-turn firepower than any Gorn or Federation ship outside of their Dreadnoughts and BCHs. New Romulan ships have more continuous power than any equivalent ships as well as more battery power by (in some cases) as much as 150%!

New Romulan and Klingon/Romulan ships have better turn modes, ship for ship, than the ISC, Federation or Gorns.

The new Romulan ships with their FP arcs have a tremendous advantage over their Gorn opponent with LP/RP arcs. The Romulan FireHawk can cover his FA arc with 5–7 ph–1s and 3 of his 4 torpedoes. This allows the Romulan to use the Oblique Attack, which the Gorn uses only at the cost of firepower.

The cloaking device is far and away the most unique feature of all Romulan ships. When it is used properly, it can turn disaster into a chance to fight another day or can turn the tide of a close battle in the Romulan commander's favor. The cloaking device is not a miracle weapon. If not used correctly, it can be the Romulan's biggest disadvantage. Study the separate article on cloaking devices carefully, and check your ship's power!

OLD ROMULAN SHIPS (Old or Eagle Series)

Old Romulan ships generally have less power, internals, phasers, and speed than the equivalent ship of their opponent. These problems are a consequence of their conversion to warp drive. Winning tactics for these ships must minimize these weaknesses. It is fortunate these ships have inherent strengths which can be used to compensate. The primary strength of these ships is their ability to function effectively under cloak (except for the Snipe-A and to a lesser extent the Snipe-B). They have the ability to reload weapons and move at speed of 8–11 while cloaked. These ships must make effective use of the cloaking device to survive.

The old Romulan ships are known for their excellent all-around shields. With these the Romulan commander can confidently spread damage over all of his shields without having to worry about a weak flank. These ships also carry one nuclear space mine (at no cost), which can be used to block key areas or as part of an underrun attack (left in the opponent's hex, possibly detonated by a shuttle). In addition to big shields, they usually have more batteries than other ships of equal size and value.

The War Eagle has only one torp, making a one-on-one duel time consuming and tedious. However, a Romulan commander must have patience; one mistake will decide the battle. Your pseudo torp is extremely valuable; do not use it carelessly. Your best tactic is a moderate speed of 12–13, with cloak paid for in energy allocation. After launching the torpedo, return to cloak. Move at a speed of 13 with a mid-turn speed change to 12 plotted. He will have to roll for lock-on at speed 13, and if he retains lock-on, he will have to re-roll at speed 12. Your ship is not made for the Gorn Anchor, so don't try it. You don't have the power to pull it off.

The King Eagle with its three torpedoes can defeat any equivalent opponent. The most important thing to remember is that it does not have the internals of a cruiser-size ship. It only has 6 hull boxes. It should be flown like a War Eagle with 2 extra power when cloaked. Even with its 30-box shields, 5 armor, and 6 batteries for reinforcement for a total of 41, it cannot take even a single full blast from any standard cruiser.

The Falcon Mauler is a truly amazing ship. It has the ability to deliver 72 points of damage to any ship at a range of 0–1 without the enemy being able to stop it. The major weakness is its long reloading time due to the WE power curve. Before flying this ship, it is best to study the mauler section.

The Battle Hawk, point-for-point, is the best size class 4 ship the Romulans possess. Its weapons give it a powerful offensive punch. Its combined ability to move fast (rare for older ships) or cloak and its 25-box shields give it a strong defensive ability as well. This ship is still undersized compared to its opponents. Its lack of any meaningful number of free hits should make you play this ship with caution.

The Snipe-B is a peculiar ship. It is equipped with only two ph–1s and two ph–3s, but has more close-range plasma punch than either a Battle Hawk or a War Eagle. This ship also has a

marginal cloaking ability. The excellent shields help to conceal the fact that this ship will begin to lose its fighting ability after as few as 7–8 internal hits. You could consider this a suicide ship to be used to destroy or cripple a larger enemy, while destroying itself in the process. It is more than a match in initial firepower for the Fed FFG or ISC FF, but can only barely reload all of the torpedoes while cloaked. Whether using cloak tactics or not, it will be necessary to leave some torpedo tubes unloaded in order to establish any reasonable combat tempo.

The Snipe-A should never leave the protection of a battlestation or large convoy. Fire once, then run or cloak; you can't reload unless moving at speed 2 or less.

THE KLINGON SHIPS (KR or Kestrel Series)

The KR or Klingon-Romulan class ships are good all-around ships. They have poorer phaser and plasma arcs than the Hawk series, less shielding and fewer batteries, but slightly better maneuverability. Before the new Hawk series of ships and the refits for the Gorns and Feds, the KR ships were able to defeat most equivalent opponents. The conversions of these ships to plasma weapons proved to be a vast improvement over their disruptor armament.

The KR is the main Klingon ship the Romulans relied on. This ship with two type–G or type–S torps and three FX ph–1s plus four ph–2s was far superior to the original D6. Its ability to use the cloak was marginal to good.

The K7R is a superior design with plasma–Fs available for supplemental firepower and to protect the larger weapons. The ship's greater power availability enables it to better use the cloak.

The KRC is the command version of the KR class. Based on the D7C/K7R, it proved to be an excellent all-around fighting ship. The two D-racks in addition to the two type–S and two type–F plasmas added increased firepower as well as better drone and fighter defense. If you have to fly a Kestrel, this is the one to pick.

The K9R is a one-of-a-kind ship that deserved a longer production run. The type–R torpedo, good phaser arrangement, and adequate power make for a good ship.

The KRM is a D6 converted to use mauler technology. While not retaining any plasma torpedoes, this ship adequately fulfilled its role as a capable mauler vessel. It has the ability to reload its mauler cannon in one turn (if it doesn't move).

The K5R is an all-purpose frigate, armed with two plasma-F torpedoes, and is more than a match for the Gorn DD, ISC FF, and able to combat the Fed FFG. Its ability to cloak for only six points of energy and turn on a dime make the ship an effective combat unit. It is most effective when employed in conjunction with one or more pack mates to cover its weaknesses. Its major drawbacks are: the rear phasers not upgraded to phaser-1s, the short range of its plasma armament, inability to safely HET, poor (for a Romulan) reserve power, and inability to continuously launch plasmas over three turns.

The K5L operating as the command ship of a group of three K5s provides the long-range firepower with its two plasma-Gs and five phaser-1s. It has the strengths of the standard K5s, although it retains some of their weaknesses, most notably the lack of a safe HET and poor reserve power.

The K4R was another conversion of a Klingon ship. As a fleet, carrier support, or police ship, it proved itself superior to the Snipe-A. It was capable of meeting the Gorn FF, ISC FF, or a Tholian PC on equal terms.

ROMULAN IMPERIAL SIGNET

NEW ROMULAN DESIGNS (New or Hawk series)

The Hawk series of ships (KillerHawk through SeaHawk) use the best features of Klingon design with fewer of their handicaps. They were built specifically to use the oblique attack, with their FP plasma arcs and RX-FX phaser-1s. Their large battery capacity gives their commanders many options. The breakdown ratings are excellent. Speed is the trademark of the Hawk series. Due to the low cost of holding torps and their superior power curve, all of the Hawk ships can move faster in combat than their opponent.

The KillerHawk is the most powerful non-X size-3 ship in the game. Not only does it have near dreadnought firepower, but also the power to arm its weapons and move. Pay attention to the shock damage when using the R-torpedo.

The NovaHawk/SuperHawk (with either A or K modules) is truly a remarkable ship to command. All but one of the ph–1s fire on the forward centerline, with 4–5 firing in the left or right arcs. The plasma arcs are the excellent FP type. The power available (32 warp and 10 other) makes this a true commander's ship; the 8 batteries are an incredible advantage. The NH has more hull and labs than the SUP version. The SUP is a carrier with a complement of four superiority and four torpedo fighters; this cruiser can do the job of two heavy cruisers. Only a dreadnought or carrier can be considered a match for a fully outfitted SUP.

The SuperHawk-B is the best heavy carrier in the game, with a full CVA strike group on a cruiser hull.

The FireHawk is the heavy cruiser of the Hawk series. It is slightly smaller than the NovaHawk and uses similar tactics. It can execute the Oblique Attack at high speed (27-31).

The FlameHawk Mauler is the four-engine version of the SPF. This ship shines due to its multi-purpose mauler/cruiser roles. It can use its S-torps to force a target into using a WW. Once the target slows down to weasel, it becomes easy prey for the mauler weapon. On the reverse side, this ship can ignore the fact that it has a mauler weapon and concentrate on destroying opponents with the plasma-S torps alone. This allows the batteries to be used for shields, EW, or best of all The Anchor!

The SparrowHawk is a solid ship (the largest "war cruiser" in the game) able to compete in any duel. The five ph–1s have respectable arcs, and the power curve is tremendous (31 power, 5 batteries). The major difference between this ship and the FireHawk is the loss of one heavy torpedo. Most of the variants are superior to the war cruiser variants of other races.

The SkyHawk series is a well-balanced ship with a powerful (if short-range) punch, good power, and extraordinary support abilities. The excellent phaser armament is superior to most other destroyers. The modular variants are also superior. When these ships have their weapons loaded and held, they can take great advantage of the cloaking device by moving at speeds around 25. Also, the standard destroyer has an added advantage of being able to cloak with their battery power.

The SkyHawk-E loses four batteries and gains two D-racks, aegis, and fighter ready racks. Truly a good escort since it retains warship firepower.

The SkyHawk-L has more shields, power, and a type–G torpedo. It costs almost as much as an SPA, but is better.

The SeaHawk is one of the great frigates. It has the same plasma firepower, and nearly the phasers, as the SkyHawk.

The Condor is the dreadnought of the Hawk series. While any ship with an R-torp deserves respect, this ship earns it in spades due to the supporting power, shields, and other weapons. It is slightly inferior in phasers to other DNs, but can cloak. And for that special surprise, it can safely HET, something no other galactic DN can do. ✪

KZINTI TACTICS

by Tony Zbaraschuk

Kzinti ships fall into several classes: old ships, refitted ships, wartime ships, and specialty designs. While each group requires its own tactics, they have many common elements. First, we will discuss Kzinti tactics in general, and then proceed to class tactics. There will be a brief discussion of tactics for use against the Federation, Lyrans, and Klingons.

DIRECT-FIRE WEAPONS: DISRUPTORS AND PHASERS

A Kzinti should understand his weapons. To this end, you should carefully read the articles on those weapons. Here we discuss the points that apply specifically to Kzintis.

Disruptors provide Kzinti ships with good long-range firepower, although the later ships are much better at this than the earlier ships. You do not have the UIM, so your disruptors will not be quite as effective as those of your traditional foes (Lyrans and Klingons), but at least you won't have to worry about burnout. Kzinti ships can, however, Saber Dance quite well; many ships have wide disruptor arcs (FA+L/FA+R) and can fire at pursuing ships.

For defense against enemy drones (and their own drones in civil wars), Kzinti ships typically have large phaser arrays, with many phaser-3s and a few phaser-1s. Later ships cut down on the phaser-3s, replacing them with an ADD for drone defense. Still, Kzinti phaser power is most useful at close range, where the phaser-3s can be devastating when combined with the disruptors. The phaser-3s can also be used as spare capacitors for the phaser-1s if you are Saber Dancing. Their final use is as damage absorption: most Kzinti ships can take a lot of damage and still have phaser-1s left, another Kzinti plus.

Because of their mixed drone/disruptor armament, however, Kzinti ships (especially the small ones) can lose a lot of firepower quickly if they start taking damage. Be aware of this possibility.

Firing arcs are important. Many Kzinti ships can fire virtually all of their weapons at a target directly in front of them, and after the refits can often fire most of their weapons across the entire FA arc. On the pre-refit CL and CS ships, you HAVE to put the target directly in front of you to inflict significant damage, and it is a good tactic with any Kzinti ship, especially one with LS/RS phaser-3 mounts.

KZINTI DRONES

Drones are the most important Kzinti weapon: without using them properly, you have little chance to win. Know how to use them properly! Kzinti advantages (detailed below) will do little good if all your drones hit an enemy T-bomb.

Many Kzinti ships can control a number of drones equal to double their sensor rating; these ships can produce and control enormous drone waves from their racks and scatter-packs. Those that do not can use automatic terminal guidance (ATG) on their first wave of drones, letting them take over their own guidance, and then launch a second wave.

With their high drone percentages, Kzintis can have twice as many special drones as most of their opponents. Post-refit Kzintis, for instance, can carry enough swordfish drones to load an entire scatter-pack with them. ATG and multi-warhead (MW) drones, along with electronic counter-measures (ECM) drones, are your best friends; always carry some of them. Learn the drone availability rules and the advantages and disadvantages of the various special modules.

Drones are best combined with direct-fire weapons in the "Kzinti Anchor" (our variant of the "Gorn Anchor"). Grab the enemy in a tractor beam, and let fly with all of your drones, combining them with drones launched on earlier turns, whether from your racks or an SP. Then fire all your weapons through the shield the drones knock down. This will usually finish the fight.

SYSTEMS: SHUTTLES, BATTERIES, TRANSPORTERS

Most Kzinti ships have only two shuttles. If you expect the game to last a long time, you may wish to recover scatter-packs after they have released their drones so you can reload them for later use. You will not usually use suicide shuttles, although one can be the final blow in a Kzinti Anchor.

Kzinti ships are blessed with an abundance of transporters and batteries. Hit-and-run raids are a useful tactic if you close to short range. Most Kzinti ships can make a high energy turn on reserve warp power. The batteries are also very useful for tractoring enemies. Both batteries and shuttles, however, will be lost very quickly in battle due to the shortage of forward hull (although the center warp engines help protect the shuttle bay). In general, you should launch one or more of your shuttles before closing with the enemy. If he can penetrate your shields, you may want to commit some battery power so that you won't lose it.

Most Kzinti ships have an average number of tractors and labs. Guard your tractor beams: they are the key to the Kzinti Anchor. Labs are less important, although if fighting Klingons or other Kzintis, they will be important for drone identification.

POWER CURVES

Kzinti ships usually have lots of power since drones (their primary weapon) don't need any. High speed, in order to catch and anchor the enemy, is usually the best tactic. You may wish to leave disruptors unarmed in order to maintain maximum speed. You can arm them next turn after EA.

ECM drones (especially speed-32 ones) let you use power for movement that would otherwise have gone to self-protection. Your phaser arrays can be filled before closing, with the phaser-3 capacitors used to power the heavy phaser-1s on a later turn.

Each Kzinti ship, however, is unique. Study your chosen ship to determine what speed it can make at various levels of arming. The BC, for instance, can go speed 16 after arming all its weapons and paying "housekeeping" costs (shields, life support, and fire control), or speed 8 when overloading disruptors. It can achieve a speed of 24 with the disruptors normally loaded, or 16 with overloads, if it begins with the phaser capacitors already fully charged. The FF can go speed 22 with standard-loaded weapons, or speed 31 with 1.5 points of power left over. Learn the speeds your ship can make at various levels of arming (all weapons armed and overloaded, standard loads, arming disruptors only, arming phasers only) and how many weapons it can arm at various speeds; revise this data as you take damage and make repairs. For instance, the CC can arm three phaser-1s (or one disruptor and one phaser) while travelling at speed 31, or all four disruptors when going speed 26 (its highest speed with a high energy turn available from reserve warp power).

Note that battery power (which Kzintis have in plenty) can be used for brief speed increases, and that extra power in the phaser capacitors will boost the estimates up slightly. However, power allocated for tractors, transporters, and electronic warfare will drag your maximum speed down somewhat. Generally, you should not overload disruptors unless you have a very good shot (such as a D7 in a tractor beam at range-1); it slows you down too much. Speed will also drop as you take damage.

The picture is not so rosy for pre-refit Kzinti ships, with their limited warp engines. If they can go fast while arming weapons, it is because they have fewer weapons to arm.

THE OLD GUARD

The old Kzinti ships have many flaws: limited disruptor arcs, slow drones, and low maximum speed (27 or 28 for the cruisers and carriers). They were designed to fight each other and will have problems against equivalent Klingon, Lyran, or Federation ships. You can win with them, but it will take some effort.

With slow drones, the most effective tactic is to launch a scatter-pack, then tractor the enemy. The Kzinti Anchor is almost your only path to victory. Type-IV drones help make up for the slow speeds. Type-II and -V drones, combined with extended range, can solve some problems. You have only one reload, though, so you can't afford to waste any shots.

On the heavier ships, disruptor arcs make it necessary to line the enemy up on the forward hex-row to get all the weapons on target at once, but you can fire at least one disruptor anywhere in the FX arc. Your opponents may not be expecting disruptor fire while they are pursuing you.

Shields are weak (the CS, for instance, has 24 boxes in its forward shield while the Klingon D7 has 30). This means you will have to divert some of your already short power supply to shield reinforcement, or risk taking internals before your enemy will.

FF: A very limited ship, with scatter-packs almost its only chance to get out enough drones to worry an enemy. Since the ship has only one shuttle, an SP must be launched at fairly long range to survive. It does have speed, which it needs.

DF: A specialty support unit able to launch and control huge drone volleys. Unfortunately for fleet commanders, the High Command tends to keep them for launching long-range attacks.

DD: Surprisingly capable, with more excess power than almost any ship in its size class. The DD is very fast, with excellent firing arcs.

CL: Slow and small. Think of it as a destroyer, not a cruiser.

CS: Slightly better than its cohorts, but still limited. It does have a lot of short-range firepower, and it can travel quite fast (faster than the Fed CA or Klingon D7) when arming weapons, although admittedly it doesn't have as many heavy weapons to arm. It actually has more weapons than its opponents, but most are phaser-3s that probably won't fire every turn.

CA: An upgraded CS; the extra disruptors are very nice, although the arcs are still limited.

CC: The only pre-refit ship really capable of standing up to enemy CAs. Its excellent FA firepower and drone control ability make it a great dueling ship as well as a good flagship.

Carriers: Generally like the ship they were converted from. The CV has a lot of short-range firepower, but is merely the best of a bad lot. The early fighters are slow and not very capable when compared to ships. Note, however, that fighters gave these carriers a large ability to launch drones which made them some of the most dangerous ships around before refits. Due to the period they showed up, they had access (except for the DDV) to medium speed drones. The fact that carriers ALWAYS had access to faster drones made them just a little more dangerous from the moment they first appeared. Add to this their large drone storage, ostensibly to serve their fighters, and they were ships to be reckoned with.

REFITTED SHIPS

The Kzinti "C" fleet refits shifted their ships from marginal to powerful. The concurrent increase in drone speeds would have been enough to make Kzinti ships potent, but the increased disruptor arcs (giving Kzinti ships FA firepower) and warp power made them capable of engaging their enemies on more than equal terms.

The later drone rack refits made them magnificent. Even the lowly frigate could now fire six drones a turn, and the double reloads made it possible to load several scatter-packs, or conduct several turns of harassing fire before closing. The C-racks should be loaded with one-space combat drones, so you can use them at full rate for two turns, while the B-racks should carry the ECM and two-space drones. Vary this a little, though, so your opponent can't assume that drones he detects coming from your C-racks are all one-space.

FF+: With four drone racks, it can stand against any frigate in nearby space. The disruptor is mostly padding, but can help. In fleet actions, good for fire support (four type-IV drones at close range are devastating).

CL+: An oddball. Like the unrefitted Fed DD, the CL+ cannot move and arm its weapons simultaneously. It has a low maximum speed, but an incredible amount of firepower for its BPV. Consider including one in all your base assault fleets.

BC: With great disruptor arcs, lots of drones, and improved phaser power, the BC is a superb ship. It is a little low on drone control ability, but ATG helps.

Carriers: The CVL+ is one of the fastest Kzinti ships. The CVE+ shares qualities with the CL+. The CVS has justly been called the "backbone of the Kzinti fleet" and is one of the best ships in the Patriarchy.

THE LATER GENERATION

These ships are built with enhanced drone control abilities in mind. Frequently, the disruptors are limited to FA arcs, and the phaser-3s are reduced in number or replaced by phaser-1s. These ships are quite capable of Saber Dancing, but retain the powerful Kzinti drone arrays. The ADDs on many of these ships take over the drone defense missions performed by the missing phaser-3s and shield the drone racks from damage as well.

FFK: Marginally capable of close-and-kill missions, but the drone racks are still its primary armament.

DW: Flexible and powerful, the DW can stand against any of the neighboring war destroyers.

CM: The Kzinti war cruiser is short on batteries and disruptors, but has awesome drone capabilities.

BCH: The ultimate Kzinti cruiser (until the X-ships), with many drone racks and considerable long-range firepower.

DN: An enormous ship with incredible firepower and lots of drone racks, the DN is one of the most capable of its class. It can absorb a lot of damage and deliver even more.

CVA/SCS: These ships sacrifice some firepower to carry fighters and PFs, but they retain their drone racks, augmented by the enormous drone swarms from their support craft.

SUPPORT SHIPS: SCOUTS, TUGS, ESCORTS.

Kzinti scouts keep their drone racks, letting them perform as an effective part of the battle fleet. They often carry many ECM drones, which they launch to protect the other ships, who can then attack the enemy with full drone loads.

SF and SDF: The three channels are excellent for drone defense, but these ships lack the resilience for major fleet battles.

DWS: Capable, like all of the wartime construction ships.

MSC: Handy, and combat-capable, but not quite as proficient electronically as the best enemy scouts.

CD and CD+: Very rare on the battlefield, but very welcome when there. These ships are a match for the Klingon D6D, providing drone bombardment and electronic support capabilities.

Combat Tug: With a battle pod, a very capable ship. With carrier pods, not as good as the real carriers, but useful.

EFF/AFF: Quite good at killing drones and fighters, but virtually useless against enemy ships. Keep them out of direct combat at all costs.

DWE/DWA: Good escorts, with some offensive capability. The phaser batteries are well-arranged.

MEC/MAC: A powerful escort capable of direct combat.

FIGHTING THE ENEMY

Kzinti ships face three very different historical foes: the Federation, the Klingons, and the Lyrans. (The WYNs are a special case covered in the terrain section.) Each requires different tactics. Some tactics, however, are standard for use against all three races.

First, always keep a few drones in flight. If he is running away, he will have to deal with the drones before returning to chase you. If you are closing with him, he will have to use some weapons on the drones rather than your ship.

Second, use an ECM drone whenever electronic warfare is allowed. ECM drones should be on type-III frames, or else have ATG and extended range, so they can guide themselves and will last the full life of the EW module on the board. Note that ECM drones moving less than speed 32 may force you to travel at the drone's speed to take advantage of its protection. Keeping two ECM drones in flight at all times is a good idea; that way, even if one is destroyed, the other can still protect you.

Third, study both ships in a duel, and pick tactics that pit your strengths against his weaknesses. If you have better disruptor arcs, Saber Dance until his shields are worn down and you can close for the kill. If his weapons are worse at short range than yours, close and kill. If his drone defenses are inadequate, flood them with scatter-packs and multi-turn drone waves. If he drops a weasel, close with him, Anchor him, and kill him.

OLD WARS: AGAINST THE FEDERATION

Most Kzinti/Federation battles take place long before the General War, with the pre-refit ships. You suffer from several disadvantages, mitigated somewhat by the refits.

First, short-range firepower is difficult to use since you have to enter the Federation's optimum photon torpedo range before you can use your phaser-3s.

Second, long-range firepower is even worse. The Federation has more phaser-1s, and (before the refits) they will have more range-30 photons than you have range-15, -22, and -30 disruptors. You cannot use speed-8 drones to chase enemy ships, and even speed-12 drones are almost useless in the harassment role.

In fleet battles, you should try to split the Federation formation, holding some ships off with a wall of drones while you combine fire on the other ships. This is difficult to do with slow drones (the Feds will fly around them), but can be arranged with extended range and/or type–III frames.

In duels, you are at a severe disadvantage (unless in a CC). Try to out-maneuver the Fed: it may be your one advantage. Use your drones to distract his phasers. If you can deliver a solid volley while the photons are reloading, you may have a chance.

Until you close with the enemy, use EM and ECM to protect yourself. ECM drones will be difficult to use because of their slow speed (unless you are fighting a non-historical battle set after the introduction of medium or fast drones).

CAT WARS: FIGHTING THE LYRANS

Lyran ships have slightly more capable phaser arrays, disruptors (UIM-equipped in larger ships), and ESGs. Lyran ships are usually about as maneuverable as the Kzinti equivalent (except for the CLs). Your short-range firepower is limited by the difficulty of closing against the ESG. Until the refits, the Lyrans have disruptor superiority. They still have it afterwards, though less so: they acquire the UIM about the same time as your pre-War refits. Check the arcs carefully: while your refitted ships have FA+L/FA+R disruptors, Lyran trimarans have FX arcs on their central disruptors. You will have an EW advantage, between ECM drones and power that you can spend on EW and he must spend on ESGs. Saber Dancing is thus a valid tactic against the Lyrans.

Your drone tactics depend, to some extent, on how the Lyran uses his ESGs. If he sets them at radius 0 or 1 for drone defense, you can usually knock them down. On average, one drone wave (from one ship) and one ESG will cancel each other out, but armored and MW drones shift the balance in your favor. One MW drone (if you have them) should be included in each wave simply to absorb ESG damage. Remember to keep controlling the bus vehicle if it isn't self-guiding: it won't damage the Lyran (unless it is a type-IV bus with a MW module and an explosive module), but will help knock down the ESG. Sending a slug drone one hex ahead of the main wave can be effective. Do not, however, include the slug drone with the main wave since its extra damage points will not do you much good after the other drones have been destroyed. Include a type-IV drone with armor in the wave; it will have a good chance of surviving to do some damage, especially if he foolishly sets his ESGs to range-0 (where he cannot fire at the damaged drone before it hits).

Swordfish drones, which can fire from outside ESG radius, are best employed in groups (which only the Kzinti can do effectively). You might start with a swordfish volley, hopefully tricking him into setting his ESGs for radius 2 or 3, thereby giving up some of the damage potential. Your allowance of limited-warhead modules, though, is probably better spent on MW drones, unless you are short on BPV.

Despite your advantages, it will be difficult to score a drone hit if the Lyran combines phasers and ESGs for drone defense. If he does, however, you will have a firepower advantage because, while his phasers destroy your drones, yours will be knocking holes in his shields.

If the Lyran uses his ESGs offensively, wait until the last minute and then launch multi-warhead, slug, and armored drones at the ESG. While you are short on shuttles, you might use one of them to absorb a few more points of ESG damage. (Upgrade one to a GAS shuttle; it can't be used as an SP, but it will take more damage when it hits the ESG.) If you have an ADD rack, replace three or four of the ADDs with type-VI drones for anti-ESG use. (You can replace all of them if you can afford to, but there is a good chance of getting an ADD shot at a shuttle, so you may as well save a half-point where you can.)

If you plan to engage in a long sniping duel with the Lyran, rather than closing for an attempted Anchor, keep a steady stream of drones moving toward him. They will help absorb some of his phaser fire. A scatter-pack might force him to slow down to arm his ESGs. Be careful not to run out of drones before he closes in for the kill.

Above all, try and launch drones to hit while his ESG field is down. This is easiest to arrange with the smaller ships, but if a cruiser (for instance) puts up both ESGs at once, avoid it until they go down, then close before they can come back up. This is difficult to do, but if you succeed, you have a major advantage.

THE IMPERIAL ENEMY: BATTLING THE KLINGONS

Klingons have better maneuverability and, usually, better weapons arcs. They can Saber Dance better than you can (after all, they invented the tactic). They have very effective phaser arrays. Even if they have a lot of phaser-2s, they can fire at range-3 while your phaser-3s are not effective until range-2. Their phaser arcs are usually better than yours, as well.

They are less durable in battle than you, but this does not mean an easy victory. You have to hit them to make their lower durability a factor. Before the B-refits, attacking their weak rear shields is an effective tactic.

Most Klingon ships have excellent drone defenses: drones (including MW drones) of their own, ADDs, and phasers. You will have to work to hit Klingons with drones. If you can, try to trap the Klingon between two drone waves, forcing him to drop a weasel;

you can then tractor him and deal with him at your leisure. The drone waves must, however, be larger than he can blast his way through. If this isn't possible, you can use an Anchor or get into close range and launch when on a closing course, or in the same hex where the ADDs can't function.

You do not usually have to worry about Klingon drones hitting you, both because your ships have good drone defenses and because their drones will likely be tracking your drones (with fewer drone racks, that is the best use of their drones). But remember that they can use scatter-packs just as you can, and frequently will. Some of their ships even have double drone control.

The best tactic against a Klingon is the Anchor. Don't arm disruptors, but move at very high speed, with ECM and EM to supplement your ECM drone. (Remember, you cannot guide drones while on erratic maneuvers, so arrange for self-guiding drones or for another unit to control them.) Close behind a wave of drones launched on a previous turn, drop EM, then tractor him. You can either move at speeds of 20+ with all extra power in tractors or arrange to end the turn at range-1 or -2 and then tractor him on impulse #1. Effective tractor range is inside ADD range, so he will be hard-pressed to stop your drones.

KZINTI FLEET TACTICS

Standard fleet tactics apply: concentrate fire on the most vulnerable or most dangerous targets, and move your own ships so they can protect each other.

Kzinti fleets can launch huge drone waves; make sure that you can control all the drones you have (or plan to have) in flight. MRS shuttles, scouts, ships with double drone control, and ATG drones are all things to take to a fleet battle. Do not, however, try to mass too many drones together; your enemy will simply use a T-bomb or weasel, and your huge drone wave will vanish into empty space. Instead, have two or three of your ships team up to launch drones at a single enemy ship. Usually, this should be one of the ones closest to you since the drones will be able to reach the target without flying through the enemy fleet. Keep the range well under 35 hexes to avoid having him leave your drones inert in the dust.

Your massed disruptor fire can seriously damage one or more enemy ships each turn. The standard doctrine is to fire on the largest or most valuable ship that you can put out of action. There may be other considerations, such as a crippled ship you want to destroy, the enemy flagship, or a key support unit such as a scout. Ships that have lost a shield or two to drone attacks are inviting targets.

Finally, Kzinti transporters become very useful in a fleet action. If you are close enough, you may be able to capture one or more enemy ships.

CONCLUSION

Kzinti ships have a powerful and flexible selection of weapons. They can engage from long range with disruptor fire and drone harassment or at short range with powerful phaser and drone attacks. They have good chances to defeat their enemies, but must spend some time to set up conditions for their victory.

STAR FLEET COMMENDATION

Awarded for superior performance of duties, initiative, or valor in combat.

GORN TACTICS

by Frank Crull

The Gorn Confederation is a member of the Alliance and very protective of its own territory. Bordering the Federation, Romulans, and ISC, the Gorns have produced balanced ship designs that were adapted as their more aggressive neighbors produced new ships. This discussion will focus on the advantages and liabilities of Gorn ships as a whole, a rundown on comparing these ships in battle with their comparable opponents, and how Gorn ships match up against their opponents.

Gorn tactics are plasma torpedo tactics. See the plasma torpedo article in the Department of Firepower.

SOLID SHIPS

The Gorn fleet is small, but there is some compensation in the solidly-built ships. Among all Gorn ships, the primary advantages are a good power curve, a balanced weapons arrangement, a well-stocked shuttle bay, and balanced shields.

The first advantage Gorns have is power, which is adequate for most needs. This superiority of power is inherent to most Gorn ship classes when compared to other races. At worst, the Gorn ships are about equal.

The next advantage of Gorn ships is the balanced weapons arrangement. The Gorn BC comes equipped with eight ph-1s, two ph–3s, two type-S plasma torpedoes, and two type-F plasma torpedoes. This is a powerful weapons fit equal or superior to any other true cruiser.

It was not always so powerful. The upgraded type-S torpedoes and the addition of ph–3s and type–F torpedoes only became necessary when the Romulans developed warp power.

The Gorns opted for an all-around phaser arrangement, which is both a boon and curse. An enemy approaching from any direction will face about half of the ship's phaser battery, but it is impossible to bring the entire battery to bear against any target and difficult to bring six of the battlecruiser's eight phasers to bear on a single target. The LS/RS plasma torpedoes provide a unique ability to bring considerable firepower to bear in rear arcs.

The next area in which Gorns truly excel is shuttle warfare. Gorn ships usually have more shuttles than equivalent enemy ships. This means a Gorn player can plan for: extra wild weasels, suicide shuttles, or lab shuttles; transporting boarding parties into surface combat (with GAS shuttles, no less); or just using the shuttle as an extra ph–3. Gorn ships also possess the balcony and track system which allows the Gorn player to launch all or most of his shuttlecraft at one time. Only a few other ships in the game can emulate this function, and those ships are carriers (or the late-arriving ISC).

A prime ingredient for Gorn defense is the shuttle bay. If you are moving slowly, your opponent will ignore your shuttles to get you. Put all but one shuttle out as ph–3 platforms. The other shuttle is armed as a WW. Use the additional ph–3s to fire on your opponent's torpedoes.

The last advantage Gorn ship designs have is shielding and hull. Generally a player can assess his "internal shielding" by adding up his labs and hull. For once, Gorn ships lose out to Federation ships in a category. The Gorn BC has 20 hull and lab hits, and the Federation has 24 hull and lab hits. But compared to the Romulan KR with only 15 and the FH with 18, Gorn ships are at an advantage. Even better, the Gorn has balanced forward/aft hull with center hull to even out the difference. The Fed ship will quickly lose APR and shuttles due to the lack of rear hull.

Finally, it is shielding that makes the difference. Gorn ships stack up very well compared to those of other races. While the front shields are generally equal to Federation and Romulan shielding, the rear protection is generally superior and it took

refits by those two races to produce adequate rear shielding. This translates into having extra shielding when rear shields are facing an opponent, and these extra shields don't need to be powered by specific reinforcement. This is a considerable advantage when dealing with more maneuverable units (which includes just about all non-Gorn ships in the game.)

A COUPLE OF DRAWBACKS

This does not mean that Gorn ships do not have problems.

The first major problem that comes to mind for the Gorn player is turn mode. Gorn ships have been called "bathtub boats," "battle barges," or even "tugs" due to their poor turn mode. For example, when most FFs have an A turn mode, the Gorn DD has a C turn mode. The BC has a D turn mode. This generally means that most of the Gorns' opponents will turn inside of their ships and will get to move last (when moving on the same impulse at equal speeds).

The only way to match turn modes is either to warp TAC, which equalizes turn modes with all ships, or to plan high energy turns. Unfortunately, doing warp TACs surrenders the initiative to your opponent, and HETs (after the first free one) bear a certain degree of risk in the form of breakdown. Worse, many Gorn ships have 4–6 ratings and do not GET a free HET.

To warp TAC against a plasma opponent is dangerous. While you could have WW protection at speed zero, the acceleration period on the next turn will leave a slow Gorn vulnerable to an incoming plasma torpedo. The best solution is to maintain a good battle speed, allowing an adequate turn mode. For the CA/BC,17 is an excellent choice, but 24 may be better. First this allows you to outmaneuver or outrun plasma torpedoes. Second, high speed will allow you to engage your opponents and make them have to out-maneuver the most maneuverable object in the game, a plasma torpedo. Thus, a Gorn ship is going to want to fight its battle at a distance of 9–15 hexes since your weapons can do damage at that range and your direct-fire opponents are not capable of getting hits with overloads.

While the basic Gorn tactic is the infamous Gorn Anchor, Gorn ships have relatively few tractor beams for that purpose.

The other problem Gorn ships have is in the area of offensive boarding party combat. Gorn ships, long on shuttles, are short on transporters. The Gorn BC has three transporters and six shuttles, which equals the Romulan KR's four shuttles and five transporters. If boarding parties were restricted to surface combat, Gorns could dominate with their multitude of shuttles (including standard ground attack vehicles).

But boarding parties are used against ships, and shuttles are a difficult means of delivering them to the enemy. Thus, in ship-to-ship combat, the Gorn superiority in boarding party combat is diminished by the lack of ship-to-ship transporters. Fortunately, the large number of boarding parties and small number of transporters (which makes offensive boarding party combat difficult) provides you with plenty of guards and a high boarding party defense factor. You can guard the essential items and some of secondary import. You can protect the two main torpedoes, two tractors, two phasers, and the bridge, while still assigning three boarding parties to the transporters for hit-and-run raids and maintaining six to provide iron-clad protection against capture attempts.

On smaller targets, the lost power will deprive the opponent from being able to flee from the fastest seeking weapon in the game. Against a ship of similar size, depriving the enemy of his tractors will prevent him from using the "Gorn Anchor" against you, blocking the use of your shuttle superiority. Gorn ships can also gain an EW superiority due to their greater power.

GORN TACTICS

The primary weapon of the Gorn fleet is the plasma torpedo. Gorn tactics are plasma torpedo tactics. See the article on this subject in the Firepower Section.

The primary Gorn (and plasma torpedo) tactic is the Gorn Anchor, which is described in detail in the Maneuver Section. This tactic is designed to insure that the torpedoes hit. It does so by blocking wild weasel launch, preventing the enemy from moving away from the torpedo and shortening the range. The Gorn Anchor may be difficult to use against ships with massive firepower, such as the Federation (with overloaded photons) and Hydrans (with hellbores or fusions).

As a general rule, there are certain things that you will wish to do as a Gorn ship captain:

- Guard the type–G/S/R plasma launchers, and use the type–F launchers to take damage.
- Use your shuttles to the maximum potential. Have one or two as wild weasels, another one or two as suicide shuttles, and the rest available as escorts. Note that, with their dual shuttle bays, the Gorns can launch two suicide shuttles at once.
- When launching the escort shuttles, put a boarding party into one or two of them in case you get an opportunity to put one of them into an enemy shuttle bay.
- As the Gorn Anchor is your primary tactic, guard one or more of the tractors. Be sure to allocate adequate power to tractors.
- Assign guards to a couple of phasers, probably one wing phaser on each side as these have the best arcs and other phasers can protect them by taking the hits.
- Don't try to capture the enemy ship except under the most favorable circumstances, but do use boarding parties for offensive hit-and-run raids. You can afford to lose all three of them on the first turn and three more on the second turn.
- An important factor to remember is that a plasma torpedo launcher can fire up to eight impulses after the tube was damaged. On most plasma ships you can continue to close and use the Gorn Anchor or fire your torpedo at a closer range after the launcher has been destroyed (if you can keep the enemy in its arc). Don't forget to launch the PPT as you will lose it too.
- Make your LP/RP arcs work for you in the Oblique Attack, instead of against you. Approach the target; fire the on-side torpedoes as bolts. If you penetrate a shield, turn toward the target and either bolt the other torpedo or close for an Anchor attack. If you don't penetrate the shield, turn away and wait for the torpedoes to reload.

DIRECT COMPARISONS

Now let us move into a comparison in how to use Gorn ships in single combat against their opponents and in a fleet action. First, let's examine the Gorn BDD against its neighboring classes.

The Romulan SkyHawk is more maneuverable. He has two more ph–3s, while the BDD has an extra type–G torpedo. As with all Romulans, he possesses the cloaking device. Your goal will be to close with the Romulan, achieving a range of 10 hexes or less, at which time you will launch torpedoes at him. Since you have one more torpedo, you have a superiority in this type of duel, and the short-range type–F requires you to close.

Starting in the standard positions about 40 hexes apart, you will try to get your speed up to about 20, while the Romulan will emulate the same speed until he needs to recharge torpedoes (at which point he will cloak). As soon as you get to 12 hexes, you will launch a torpedo. If it makes the enemy turn, you have the advantage. You will be able to follow him, while his torpedoes will be unable to fire to the rear. If he charges at the torpedo, he will hit it or waste his phasers on it. (This would be a good turn on which to use a speed change for a last quarter burst of speed.)

Your general goal is to make the Romulan fire and/or cloak. You wish to be in range of the Romulan after he cloaks. If he doesn't cloak, he'll try to reload. You can get close and tractor him if he goes slowly or launch torpedoes if he goes faster than permissible wild weasel speed. The BDD also has a range advantage since it has a type–G torpedo.

In fighting an ISC DD, You are basically fighting yourself with a different torpedo arrangement. You will probably wish to fire torpedoes at a 10-hex range. (Your head-to-head superiority allows you to give up the initiative here.) If he gets within range while you are warp TACing, you will fire your plasmas as bolts and follow up with phasers. If he launches his torpedoes, drop a WW since you have four shuttles and can spare one for that function.

If you are fighting a Federation DD/DDL, you are in a more serious bind. (Fortunately, such non-historical duels are rare, but non-historical duels are usually trouble because the ships were not optimized to fight each other.) Due to the firepower of photons and the limited range of your weapons, the Federation ship can retrograde and never get closer than 8–15 hexes if he so chooses. You then have to make the Federation ship fight.

A slow speed with reinforced shields can handle the prox photons attack. You should accelerate and chase the Federation vessel and never give him a chance to prepare overloads. If he does overload, remember it will cost him 8 of his 19 points of power (23 if refitted) to hold them.

If the Federation vessel ever stops and warp TACs, you should launch torpedoes at 10 hexes and get him to WW or take it on the shields. He can only do the WW tactic twice because that's all the shuttles he has. Another approach will be to bolt torpedoes from the Glory Zone and wear down his shields.

When you finally charge, you should use ECM and EM to close the range since your heavy weapons do not cost anything to hold and his photons are eating power. If he misses, you can close and anchor him. If he hits, you are in a suitable position to turn away and disengage. Be careful though. Some Feds are very clever and plan speed changes to throw themselves into a better overload bracket and plan a deceleration after firing so they can launch WWs. To combat this, plan to utilize a longer range tractor or an HET.

A DUEL OF WARRIORS

The most common match up is in the war cruiser class with the Gorn HDD versus the Romulan SPA or (non-historically) the Federation NCL. The ISC CL/CS is outside of our comparable class range and is really not a suitable opponent for a Gorn HDD. The one difference available in our tactics now is the opportunity to use a type–S torpedo. The type–S torpedo has greater range, which means that you do not have to close with your opponent.

In dealing with the Romulan SPA, you should follow the tactics that you used on the BDD vs. SKA duel. You should look for an opportunity to close with your opponent. If he refuses to close (or cloak, which allows you to close), you can launch your plasma torps at 9–15 hex range and force him to retreat, drop a weasel, or cloak. (He could, of course, simply let himself get hit.) If he leaves at a high speed to avoid a torpedo, he generally does not return until late in the second turn of arming or even possibly until the third turn. This means you can slow down and reload your torpedoes. If you are dealing with an opponent who is prone to running at high speeds, tossing an enveloping–S torpedo after him will probably insure a hit and it will be better than a normal type–S.

If your opponent is the Federation NCL, the tactics are the same. However, the punch of four overloaded photons can crush your shields easily. You must try to force the Federation ship to speed up, where he can't overload. Never close inside of 4 hexes, and prepare for possible Federation speed changes. Glory Zone type–S bolt fire is an option. Try using tactics of launching your PPT–S at him and then appear to be charging another type–S (i.e., slow down). If he does not let the torpedo impact near the end of its run to determine it is a PPT, he may approach a bit too fast and allow you to launch the real torpedo at him. This is rare, but does happen.

AND NOW, THE CRUISERS

The last major opponent match up is the Gorn BC vs. the Romulan K7R or NH or the ISC Star Cruiser. The Federation CC/CA can be handled if you understand the opponent correctly. Simply continue to use the tactics learned with the smaller ship classes, and you will prevail against the Federation CA.

Against the ISC or Romulans, different tactics are called for. You can attempt to close with your opponents since you now possess the power to survive any damage. You also have the opportunity to utilize two enveloping–S torpedoes on your opponent for long-range fire. Both of you are trying for the 8–15 firing range. You must pick the time. Remember, the Romulan can turn inside of you due to his superior turn mode. Coming up from the rear of the Romulan K7R can expose you to the FX, wing, and tail phasers. Thus, you might want to fight a long-range battle until you can get into proper firing position. If the Romulan gets greedy, let him. Line up on the hex grain, and let your LS/RS type–Fs fly backward for his enjoyment. If the Romulan ever cloaks, throw everything into speed and find his location. When he surfaces, Gorn Anchor him or get close enough to start firing on him when the WW disappears.

If you are fighting the ISC CA, you are at a distinct disadvantage due to the PPD. Furthermore, your opponent possesses your plasma armament. The ISC CA has the PPD and two more F torps than the Gorn BC. It is imperative that you power ECM and EM when the PPD is firing. Make the PPD work for every pulse. If you can, get inside of the null zone of the PPD. There, you have neutralized his great weapon and can Anchor him. Try hit-and-run raids on his rear torpedoes, which probably aren't guarded. Do not make a battle pass on an ISC ship, and sail out when the PPD is ready to fire. If you do that, the PPD could strip you of weapons and that will be the end of the battle.

FLEET TACTICS

The last question to consider is how to operate Gorn ships in a fleet. Since Gorn ships turn poorly, major ships need a wingman (or two) to watch their rear. If the squadron is of three ships, an isosceles triangle formation will work. Turning will cover all the flanks, and the equal Gorn phaser arcs will allow extra contributory fire on incoming torpedoes. Never fire more than half of your phasers on one target at any one time since you will need the energy and the extra phasers at a later date. However, by firing concentrated phasers, you will be damaging your opponent.

The Kaufman Retrograde with enveloping plasma torpedoes is an excellent maneuver when it applies. If the enemy closes, you will have extra F torpedoes available for the close work.

NOTES ON SHIP CLASSES

DN: One of the most powerful DNs in space. It possesses the type–R torpedo, which automatically gains respect. It has a sluggish turn mode, but a good phaser arrangement.

BCH: The ultimate BCH. It mounts three type–S torpedoes, which is more than enough to handle any other BCH. Remember, even if your opponent can turn inside you, he can't turn inside of the plasma torps. You can execute long-range fights or go in close for a Gorn Anchor.

BC: A standard that the rest of the galaxy had to meet. It possesses sufficient firepower to deal with any opponent.

CA: Severe problems caused by the fixed torpedo arcs were

not exposed in combat with sublight Romulans, but were quickly corrected after the KR appeared.

CM: While equivalent to the BC, the different firing arcs allow this ship to use the Oblique Attack more effectively.

CS: The answer to all of those R-torp Eagles running around on the Romulan side of the border. Again, it can use the Oblique Attack.

CL: A match for any DD and unsuspecting CAs. People forget that this is a "runt" CA waiting for its back saucer. It has cruiser armament but has poor phaser arcs to the rear, and the shields are very weak. It has only one tractor, making the Anchor a risky maneuver. (Hint: Guard the tractor!) However, if flown like a CA, the "runt" can do considerable damage.

HDD: The smallest war cruiser, and matched against the Romulan SparrowHawk (which is the largest CW). Few phasers can cover the rear arc, and maneuverability is less than it could be, so watch for seeking weapons from that quarter. The refit was much needed as it improves the shields and adds some small phasers for "padding." The best thing about the HDD is that some are eventually converted into the excellent CM/CS.

BDD: This Gorn ship can utilize speed and EW, at least until it needs to recharge its torpedoes. When that happens, be sure to have some distance. However, for a knife fighter, the Gorn BDD is hard to beat.

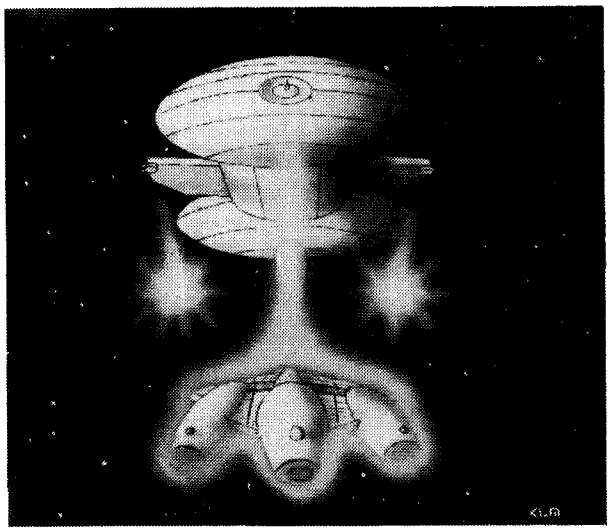
DD: Would be called a frigate in any other fleet. The weak shields are its downfall (fixed in a refit), and this ship should try to intimidate SkyHawks at a distance with its type–G torpedo. The refit adds weapons, but not enough power to use them.

POL: It can fight every three turns at ten hexes but then must retreat to reload its torpedo. However, a type–F torpedo is useful against a marauding LR, and the tendency to operate POLs in groups of three makes them almost respectable.

Escorts: Remember that your primary weapon, the plasma–D, is limited to 180°. This means only so many shots will be available to each side. Using phasers before plasma–Ds is preferable since you only have so many shots of that weapon, and once you are out of Ds, it may be time to think of leaving.

CV/HDV: A pair of good carriers since they have equivalent firepower to standard warships. Again, don't try to close with your opponent. You can toss fighters out faster than your opponents (due to the balcony), and that is your biggest advantage over other carriers.

PF: Perhaps the best PF in the game. It can hold weapons at no cost, has access to a rapid-fire escort weapon (plasma D), and still possesses a good phaser arrangement. One word of warning: never start re-arming more than two plasma torps at a time. You must stagger the final turn of arming to avoid power shortages. Load two torps on turns 3/4/5, and the other two on turns 4/5/6. That way, you will never lose your speed. ✪



THOLIAN TACTICS

by Stacy Brian Bartley

The Tholians are a race that exists at the rim of our galaxy. Their location is at the meeting place of three empires: Federation, Romulan, and Klingon. The Tholians have managed to maintain their independence because of web technology. The web is the basis of the entire Tholian combat system. Tholian tactics are web tactics. Of course, Tholian commanders must be proficient with phasers, disruptors, photons, web fists, and combat in general, but all of these are studied as they apply to combat in, around, and behind web.

EFFECTS OF WEB

Web is difficult to use in many circumstances, primarily because of the high energy cost for employing it. However, if it can be laid, it can redefine the battle in such a way that the Tholians can gain a tactical edge. It can do this in several ways.

First, web can restrict movement of enemy units. Basically for each point of strength for a web hex, it costs the ship one movement point (they treat each point of web strength as a hex crossed). Further, the time to cross the web is equal to the time the ship would take to cross that number of hexes of actual distance. This latter factor also is useful when considering seeking weapons. Seeking weapons are treated exactly like ships. There are other effects caused by fast movement through web, such as the possibility of breakdown, and fast seeking weapons can be destroyed. Also note that launched items (fighters, wild weasels, and seeking weapons) are trapped inside the same web hex as the unit which launched them.

The second way that web interacts with combat is direct-fire weapons. A web with a minimum strength of one will block the effect of all direct-fire weapons. There is an additional effect on plasmatic pulsar devices, in that passing behind an existing web breaks wavelock. However, Tholian phasers (and only *Tholian* phasers) can fire *through* their own web, albeit at reduced effect.

The third significant way that web interacts with battle is through its effect on various ship systems:

- A cloaked ship is exposed in web. Any cloaked ship entering a web hex is instantly revealed, but still takes five impulses to "fade in" for purposes of firing its own weapons.
- Stasis field generators cannot be projected across a layer of web. This illustrates a fundamental rule about non-Tholians and web: into or out of but not *through*. Many weapons can be fired into web or out of web, but there are none (except Tholian phasers) that go *through* it.
- Transporters and tractors can operate (you guessed it) into or out of, but not through, web hexes.
- While it is possible to displace a ship from the outside of web to the inside of an enclosure, a ship cannot be displaced *out* of the web if the line of fire is blocked by web.
- Web neutralizes any part of an expanding sphere generator field that comes into contact with it.
- Web dampens explosions (both ship and mine) considerably.

USING WEB IN COMBAT

The tactics of web derive from the interactions described above. If you know what web does to space combat, then you know how to take advantage of web. Like terrain features in a battle, web compounds the problems; it increases your menu of options while decreasing your opponent's. If you visualize web as being portable friendly terrain, you won't be too far wrong in your understanding of web.

Web is employed either in linear or globular form. Linear

webs are strung between two points, while globular webs are formed in a circle around a fixed object, such as a base, or around a pinwheel of three Tholian ships.

In most cases, web will be in place before the enemy arrives. Such webs are incredibly strong and usually globular. Web created during the scenario will probably be far weaker, weak enough that enemy ships can get through it in two turns.

LINEAR WEB: THE FIREBREAK

Linear web is employed in a straight line, the SFB version of field fortifications. The standard Tholian reason for utilizing the web is to provide a firebreak, behind which they are immune to enemy weapons fire. Unlike globular web, which gives the enemy the initiative but which is a much stronger defense, linear web creates a dynamic fighting position.

Linear web requires two anchor points. These can be asteroids, ships, or web anchors. If the anchors are ships or web anchors (i.e., can be destroyed), they will become the focus of the battle. Destroy the anchor and the web collapses. Ships used as anchor points may be the only targets that an approaching enemy fleet can hit. Such a fleet should concentrate its attack on one flank. Maintain high speed and fly around the Tholians; don't try to stop and slug it out with them.

The Tholian player can fire his phasers through the web and remain immune to return fire. Also, the Tholian can always move through his own web if the enemy tries to flank him. The enemy can enter the web to destroy the ships powering it (although they will be trapped until power declines), or flank the web and take out the powering ships (which divides the attack force). If it isn't at full strength, it will still prevent the enemy from going anyplace quickly. Linear web is also useful to stop seeking weapons. By clever use of speed and HETs, Tholian ships can play the duck n'snipe game for quite some time, gaining in attrition all the while.

Generally, the phaser-armed PCs should stay behind the web wall, while the disruptor-armed ships should remain at the ends to fire on any enemy units attempting a flank attack.

If forced to attack through a web, try to achieve firepower superiority while not losing the initiative. Send several ships into the web. Fighters and shuttles are also useful because they divide Tholian firepower and provide fire support for the attacking ships. Since seeking weapons can't climb out of a strong web, plasma bolts are superior to plasma torpedoes.

THE THREE-RING CIRCUS

The second variety of web formation is globular web. Globular web is the one thing that prevents the Holdfast from being overrun. It is analogous to a wagon train forming a circle to fight off a band of Indians. It changes the situation from a fluid battle to one of siege warfare, except that it is impossible to reduce the walls of a web fortress by outside weapons fire (at least, until their former subjects find them). Only time and neglect will bring down a web formation. A glance at scenario (SH6.0) reveals the famed "onion peeling" scenario with a base surrounded by a three-ring web. (This is often called the "Tholian Three-Tier Wedding Cake" or the "Tholian Three-Ring Circus.") The fundamental conflict of this scenario is: can the Klingons stay alive long enough for the web to run out of power?

A review of the web rules shows that it is quite possible for a Tholian ship to hide behind the second layer of web and fire his phasers at ships outside the enclosure of web without being vulnerable to return fire. Somehow the enemy must prevent the Tholian from providing reinforcing energy to the outer layer of web; this will cause that layer to weaken so that it will be possible for the ships to move through it and attack the next layer. The problem is that it is possible to provide reinforcing energy at any point along the web, and it is extremely difficult for the Klingons to cover all parts of the web. Even if the Klingons can cover everything, you can destroy or cripple two or three adjacent ships and run a PC out to recharge.

This gives you a chance for a trap that will yield a decisive victory. The Klingons have to keep at least one ship out of the web to tow the others out when they give up the attack. If you can get them to send every ship but one into the web (to cover the zone of the ones you crippled), and you then cripple the one outside ship, you have trapped (and will destroy) their entire fleet.

The fundamental theory behind reducing webs is the same regardless of the way you approach it, and it is very simple. Make the outer layer of web and the hexes inside it extremely dangerous for Tholian ships. One school of thought calls for a main assault with all the attacking ships going into the web at approximately the same time. The theory is that the withering direct-fire weapon fire will force the Tholian player to retreat behind the second layer of web.

Assuming that the Klingons are successful in driving the Tholians behind the second layer of web, entropy sets in and the outer layer of web begins to weaken. It will be five turns before the web will weaken enough so that the ships can get through the web to assault the next layer. In each of those five turns, the battle station can do an average of 60 points of damage, enough to score plenty of internals on any given Klingon ship, while the Tholians remain immune to return weapons fire.

The Tholian ships, hiding behind the second layer of web where they too are immune to enemy fire, can cripple one or two more ships per turn with their phaser–1s. Because of this tremendous firepower, it is easy for the Tholian player (within the four-turn grace period) to blast out a blind spot in the Klingon formation. After stationing a unit to power up the outer layer of web and making sure that the Klingons don't go anywhere, the Tholian commander can polish off the remainder at his leisure.

An alternative school of thought about web reduction is the wolf pack strategy. The Tholians have webbed themselves up nicely and are waiting for the Klingons to begin their assault. The Klingons, instead of diving into the web, fly their ships in circles around the web emplacement. The Tholian eventually will need to come out and provide reinforcing energy to keep the outer ring from collapsing.

The Klingon player has spaced his ships so that they cover all parts of the web emplacement, and they are moving at a relatively brisk rate. (If they were standing still, they wouldn't be able to take advantage of what comes next.) If a Tholian ship ventures out to the outer web to power it, the nearest Klingon ship dives in, slaps a tractor beam on the Tholian ship, and makes sure that it stays put. Other ships dive in to pound the Tholian into wreckage, after which the rest of the ships pull the Klingons out of the web.

There are a number of things that the Tholians can do to counter this tactic. First, arrange for the reinforcing ships to spend as little time as possible by the outside layer of web. He can do this by moving at a high speed and utilizing an HET after reaching a web power point. However, this isn't always practical, so he must be prepared to provide power under fire. He can do many things to enhance the ship's survival. High ECM and shield reinforcement are basics, but still more can be done. He can provide fire support from the BATS and the other ships. The web charging ship could have a suicide shuttle (or two) ready to go after a ship that attempts to do this.

The rule of thumb with web is patience. The Tholian player defending a web emplacement must be patient. If he tries to take the battle to the assaulting player rather than allowing him to come to the Tholian, he will find himself (usually) outnumbered by ships with superior firepower. If, for instance, in the above scenario the Tholian were to do nothing to hold a layer of web, but merely retreat behind the next layer of web after the assaulting force ships enter the previous layer of web (sniping at the enemy of course), then he will enjoy about 15 turns (5 per ring) of time to kill Klingons.

The Klingon player, by practicing patience (more patience than the Tholian) and utilizing the tactics described above, can gradually whittle down the Tholian forces until they fall below the critical threshold needed to perform a viable defense.

The final analysis shows that web appeals primarily to the cerebral aspects of starship combat. It is not the sort of battle where the ships close to three hexes (or less) and open fire eviscerating each other. Look at the web rules, cross-reference it to different tactics and weapons, and you will understand both how to beat it and how to use it to its best advantage, for both of these are but different sides of the same coin.

PINWHEELS

Ships surprised in open space can create a fortress by docking to each other, forming a pinwheel. This requires three eligible ships, but produces several advantages:

- Overlapping shields make it a stronger target.
- Combined damage control enhances the self-repair system.
- Plenty of power (since it doesn't move).

There are, however, disadvantages:

- It cannot move, so it surrenders the initiative to the enemy. This may be irrelevant if an overpowering enemy already has the initiative.
- It takes three turns to set up; difficult to arrange in combat.

WEB CASTERS

Web caster tactics are largely covered in the rulebook. To summarize some of the more basic points:

- If it is possible to convince the enemy to engage your Neo-Tholian fleet in an asteroid field, it is almost impossible to lose.
- Cast webs are far more dangerous if they can be anchored, but the anchor points are easily seen. No competent opponent will be caught in such a position. However, the threat of such a trap will often be enough to force him to make his assault at some other point, allowing you to concentrate your forces there. Do not be disappointed that you can't trap his ships; be happy that you forced him to attack somewhere that the odds are in your favor.
- The best use of cast web is to cause a key enemy unit to break down, but this is very difficult to arrange. Enemy units can generally use a sideslip, HET, or emergency deceleration to avoid impact. Competent opponents will almost never be caught, but they can be forced to redeploy or redirect their ships. The point is that cast web cannot cripple a competently flown ship, but it can create a tactical situation in which your other weapons can cripple a ship. It must be integrated into an overall plan.
- Web casters can be used in politically confusing battles to keep allies apart or to force them to fight each other.
- Web casters are excellent for base assaults because they allow you to block enemy fire for key periods while your assaulting ships reach attack positions, engage with phasers, or retreat after their shields give out.
- Web casters can create a temporary shield, allowing a ship to drop its shields and use transporters without exposing itself to enemy fire. They can also protect a ship with down shields.
- Cast web will allow your ships to cross minefields. Lay web through the field and then fly down it. The effect of explosions will be greatly reduced.
- Using the same tactic as minefields, you can approach enemy ships and be invulnerable to enemy fire until the enemy ships are perpendicular to the web hexes. This is known as the "Tholian Freight Train" and is particularly useful for approaching bases. Note that the web caster ship must be to one side of, rather than behind, the assault force.
- Cast webs allow you to investigate some monsters more closely. Check the rules for each monster.
- Web casters can disrupt an ISC Echelon.
- Note that the similar snare generator provides a measure of defense against seeking weapons if the web hex can be positioned properly. High energy turns and sideslips will help achieve this. You can generate a web hex, then sideslip into it. Snares work best at lower speeds.

Ships attacking a force armed with web casters can take the following steps to avoid defeat:

- Don't attack them. If possible, let *them* approach *you*.
- Always have an HET plotted; keep your turn modes satisfied.
- Heavy use of ECM can weaken the cast webs, but only if the Tholian ship is not using max ECCM.
- Avoid medium speed. If you are fast enough, you can get through cast web or around it. If you are going slow, you run no risk of breakdown.
- Use plasma bolts instead of plasma torpedoes.
- Avoid terrain that is qualified to form a web anchor.
- Approach from several directions so that one cast web doesn't block the entire fleet.
- Target the Neo-Tholian ships with long-range narrow salvoes by the entire fleet. Force those ships to disengage.
- Change speeds to confuse his predictions of your course.
- Mid-turn speed increases (even unplotted) can get you through the cast web before it solidifies.
- Have your plan prepared in advance.

WEB FIST

Web casters have a direct-fire weapons capability which enables them to damage a specific enemy ship. This capability has no overload function, but is extremely efficient since it can be used with whatever power is available. Generally, at long ranges the web fist capability should be used after loading disruptors, while at ranges less than 11 the web fist should take precedence over disruptors due to the better damage output.

In duel situations, particularly where you have only one web caster, the fist may be the optimum use of the system. However, in fleet situations where you have more than one web caster available, it is usually best to use the cast web ability to break up the enemy force and isolate individual units for destruction.

OTHER THOLIAN TACTICS

The Tholians can operate in open space even if they prefer not to. The PC is of limited use since it has no rear defense. The destroyer, cruiser, and dreadnought are adequate open space ships, and the war cruiser is superb. Of course, the Neo-Tholians are also adequate open space fighters.

Tholians are not known as a seeking weapon race, but they do have one (the suicide shuttle), and it has the unnoticed advantage of being able to move through web.

One way that the Tholians can keep a wild weasel alive is to launch it on a course that will take it behind a web. The seeking weapons will be trapped, and the shuttle can be recovered later.

Although the effects of a wild PF scout are blocked by web, there is still an advantage to be gained. By ducking behind the web, then re-emerging, it can confuse seeking weapons long enough to outrun their endurance. This is the "Tholian Yo-Yo." A scout can attract drones and seeking shuttles, then dive into a web. The seeking weapons will be stuck in the web as they try to follow it. This can be repeated indefinitely. Just move down the web, and you don't even have to wait for the first drones to expire.

A quick way to decelerate is to turn off the web-pass system and run into your own web. (Don't do this when moving too fast! And note that this won't let you use a WW.) Later, you can turn the system back on and leave the web hex.

THOLIAN SHIPS

Most Tholian ships have good all-around shields.

Dreadnought: The best cruiser in the game, but not a true dreadnought. (The DPW is a more than adequate dreadnought.) Doesn't have the blind arcs of the smaller ships.

Carriers: External fighter bays allow simultaneous launch and instantaneous recovery.

Cruiser: The C-class cruiser is a light cruiser; the CA and CC are competent ships. The C-class is particularly good behind webs, where its lack of disruptors is not a problem. The cruisers have better rear protection than the PCs.

War Cruiser: Probably the best designed Tholian ship, superior to other CWs and the basic C-class cruiser. And — it can pinwheel!

PC-hulls: The nose-mounted phasers of the PC-hulls suggest fighter tactics, but are also useful in retrograde operations and, of course, are superb behind webs.

Note that most of the PC-hulls are nimble, have an HET bonus, and can land on planets. The ability to land can swing the balance in ground combat as ships transfer their marines to one PC, which then lands at the ground combat location.

PFs: Some of the best in the game, with more internal systems than those of other races. (Tholians are superb at building small craft.) Armament is comparable to a PC, and they can pinwheel. More power than most PFs. (In fact, with packs they have more power than a PC!)

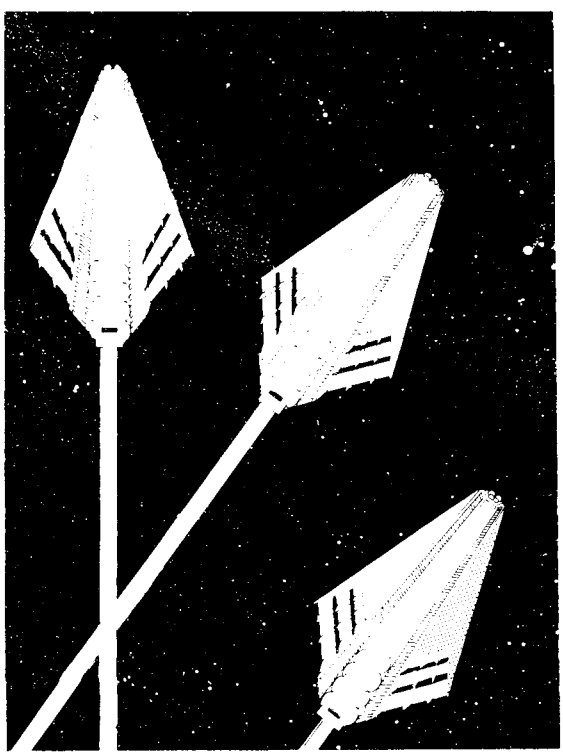
Neo-Tholian DN: A powerful DN with three web-casters, more than enough support for an entire fleet of standard Tholian ships. The separation capability is of little real use. Like all Neo-Tholian ships (being irreplaceable in a campaign), they should be used in a support role.

Neo-Tholian CA: A match for any BCH.

Neo-Tholian CL: A competent ship against any war cruiser; the web caster makes it excellent for supporting expeditionary fleets.

Q-Ships: In addition to their more traditional roles, these make good "baby monitors" with the full firepower of a PC and half of the energy of a web tender. Good for base defense.

Web Tender: After charging the web, dock it to the base to provide extra power. ✪



ORION TACTICS

by Steven J Kay

Orions are the most difficult ships to be expert in. While powerful, they are unforgiving of mistakes. They are not designed to slug it out with another warship. You can do so only if you can master the Orion skills, the skills required by the weapons that you use, and those of your enemy.

A good deal of the mystique about Orions is undeserved. Wargamers naturally tend to gravitate toward the best ships available in a given fleet. Even though only 10% of all Orion ships have cloaking devices, and the availability of weapons to use in option mounts is sorely limited (by the Doomsday cartel rules), players tend to assume that they have been given command of the most elite and successful Orion ship, armed with Hydran gatlings, Federation photons, a Romulan cloaking device, and Gorn D-torps. While 90% of Orion battles are against convoys, 90% of the battles fought by players commanding Orion ships are against other warships. Forcing you to accept the historical reality would, however, take most of the fun out of being an Orion.

There are many misconceptions about the Orions. While they can double their engines, this has a high cost that we will shortly examine. While some of them can cloak, that device is not the magic carpet that many novice captains think it is. While their option mounts allow an assortment of weapons (and most players continue to insist, at least in patrol battles, that they can have any weapon they want, even though the rulebook says otherwise), you have to know how to use every weapon in the game (i.e., you have to read this entire book) if you are going to pick the best one for the situation. While your stealth design gives you an ECM shift (unless you double engines, which is standard procedure), your paper-thin shields (marginal even when refitted) will not protect your far-too-small hull when a volley connects. Your suicide bomb can discourage the enemy from getting too close; its utility ceases when you use it. All of this illustrates that there is no free lunch. Orions have to work, get the breaks, and think tactics through, or else they will lose like anybody else.

The Orion Academy uses MEPS as a teaching concept:

- Mission (what you are trying to do)
- Equipment (the weapons in your option mounts)
- Power (the judicious use of engine doubling)
- Ship (is the mission appropriate for the ship at hand?)

DOUBLE OR NOTHING

Nothing distorts the ability of an Orion ship more than the power doubling procedure. Simply put, this gives you the power to cruise around the board at 31, firing all of your weapons, jamming the enemy's weapons with maximum ECM, and winning any tractor auction that you want to. The problem is that, for an Orion ship to win against a warship, it has little choice but to double the engines, and that incurs its own penalty.

Let's take a few examples. The standard enforcer class CA has three 10-box warp engines. Whenever you double an engine, you lose one engine box at the end of the turn. After five turns, you have to double the engines just to break even with your original undoubled power, and after 10 turns, you are sitting dead in space. The CR and Salvage classes follow the same pattern. The BR, with its 12-box engines, lasts a bit longer. While the LR loses only one box per turn whether it doubles one engine or both, it still has a half-life of 5 turns and is dead in 10. The BCH and DBR can hang on a bit longer.

Engine doubling has been called the "cocaine rule" because it feels great at first, but you can't stop, and it eventually kills you.

What does this mean in a tactical sense? It means that, if you are in a situation where you need to use engine doubling, you have to win in three or four turns and get out of the area in

five. This is ideally suited to a convoy raid; it is not so congenial in a slugging match with a fleet cruiser.

One exception to this is the so-called "Sicilian Knife Fight" in which the ships slug it out at low speed and very short range, with all of the power going into tractors, overloads, EW, and reinforcement. Unless your enemy is smaller than you, you will have to use doubling on 2-3 successive turns to win (or escape).

Don't double your engine output and then try to find things to do with all that power. Decide what you want/need to do and how much power it will take, and then double one or more engines to provide that power.

Don't double all of the engines at the same time, unless you need the power for a very worthy cause (such as delivering a death blow or getting out of the area). On ships with a center engine, never double it. Due to the construction of the Damage Allocation Chart, center engines will survive longer than any other when damage starts pouring in. Enforcer ships (CAs and BCHs) are expensive and irreplaceable. They survive because that center engine will give them enough power to disengage. Finally, use continuous damage repair to get a couple of destroyed engine boxes back into operation. Consider repairing your warp as AWR as this will at least put off the cocaine effect for a turn or two and adds a vital internal hit to protect the more valuable warp engines.

EXERCISING OPTIONS

The selection of weapons to put in your option mounts is crucial to success. There is no general all-purpose combination that will be appropriate in every case. You must use your option mounts to tailor your ship to the mission at hand.

In the old rules, you could have whatever rules you could talk your opponent into. In the new Captain's Edition, you are generally limited to "local" weapons, and the 10% "any" rule doesn't affect anything smaller than a squadron.

In a direct-combat mission (either an enforcement mission against another pirate, or picking off a particularly obnoxious naval ship), you will need heavy slugging power, such as type–S plasma torpedoes, photons, or hellbores. Nothing is worse than an Andromedan, who is as fast as you are and has power to burn. Here you must select weapons for their shock effect, such as photons or hellbores. You might try putting D–torps in the wing mounts and bolt them as fast as you can when you start loading up his panels. Just be sure to win before you run out of ammo.

Pay close attention to the enemy ship you are fighting. If the ship is short of shuttles (many Kzintis and Klingons), plasma torpedoes are a good bet. Don't pick short-range weapons against a short-range expert like a Hydran fusion ship. Make the enemy play your game; don't play his.

In a convoy raid, where you aren't trying to kick in 30–box shields, disruptors can be advantageous because they can fire on another freighter every turn and still provide enough power to get your boarding parties into their hulls. Surprisingly, most pirates will take the "big guns" for any scenario and may find themselves reloading hellbores among a pack of very annoyed freighters. If you don't have a heavy weapon ready every turn, you are going to be outgunned during the reload rounds.

If you are assigned a smuggling or priority cargo mission, you will want the best defensive armament. This includes drones (particularly the advanced types), anti-drones (12-shot types, of course), type–D torpedoes, and possibly even mines. Again, you must tailor your weapons to your opponent. If you are trying to get past a Kzinti, take type–E drone racks, with their large supply of fast-firing dogfight drones. Against Hydrans (and their ubiquitous fighters), ADDs are very effective while drones (except starfish) are just about worthless against their gatlings.

While many players will select gatling phasers if given the chance, due to their tremendous close-in firepower and utility as defensive weapons, remember that they are short-ranged. Match them with other weapons to suit the type of attack you want to make. And give special consideration to the phaser-1, the most efficient power/damage weapon in the game, although it lacks the one-turn shield-crunching punch of some of the heavier weapons. It can be particularly effective against convoys.

Pay close attention to what hits your weapons are destroyed on. If you select two "torp" weapons and two "drone" weapons, you will probably lose one (or both) of each to any substantial volley. If you select four of one kind, at least two will survive, and probably three. Stop and count how much power it will take to arm these weapons. Sure, five photons on a Battle Raider is a powerful punch, but will you have the power to arm all of them?

Remember, you do not have to put weapons in wing mounts symmetrically. Each side can be different, and in many cases this is desirable. One reason is deception; when you fire the first one, your opponent may assume the other is the same. Another reason is firing arcs; it's often too difficult to get both wing weapons into arc at the same moment. With this in mind you might consider a 360° weapon in one mount (drones, ADDs, mine rack, etc.) and a direct-fire weapon in the other. Then plan your initial battle pass appropriately.

IN, OUT, AND WAY OUT

All ships must strive to gain an advantage in the TEMPO of the action. "Tempo" is a concept of how the battle is going, who is ahead, who is gaining, etc. It was expounded to great effect by the 20th Century Chess master Aron Nimzovich. Briefly, Nimzovich held that should White gain the center of the board before Black, he (or she) holds the high ground. White has gained a tempo point. If White captures a major piece and Black cannot reciprocate, he gains another tempo point. The same principle holds true for SFB in general, but is CRUCIAL for the Orions to win. Orions must attack the enemy with devastating force, while receiving almost no damage in return. This is what engine doubling is for.

Once the Orion has prepared his weapons and begins his attack run, the engines are doubled, most available power is put to the facing shield, and the attack is made using an Oblique Approach. If the enemy fires, he gets little more than the reinforcement and the Orion can proceed to overrun and destroy him. If the enemy does not fire, the Orion unloads his weapons into a forward shield, turns out of range, reloads his weapons, repairs the damage to the engines, and returns to do the same thing again. If you can hit the same shield again, you can penetrate it easily (if you didn't the first time). This is the "in and out" attack, but you must always plan for a "way out" of the scenario. If you are damaged, or if you can't hit the same shield, it might be prudent to leave when your ability to repair engine damage runs out. He who fights and runs away lives to fight another battle. Or something like that.

THE FLYING EGGSHELL

While Orions have a stealth hull and plenty of power for EW and shield reinforcement, they have the smallest internal volume for their class in the game. One good cruiser-volley through the shields and you have had it. Orion defenses are based on avoiding damage, rather than surviving it. Consider these points:

- Use your superior mobility to avoid his firing arcs.
- Use EW to jam his weapons and deflect their wrath.
- Use power for shield reinforcement when you can't avoid being hit. Use plenty of power to make up for weak shields.
- Against a warship, select some weapons specifically because of their use against his weapons.
- Against a convoy, work around the edges; don't go charging into the middle where every freighter on the board can get a range-2 shot with its "pathetic little phaser." Each freighter has

one, and collectively a convoy outguns you. Don't ignore the escort. He'll be on your tail before you can get away.

- Reserve power is a problem because you have few batteries. While engine doubling can provide power, it must be allocated. If you know you will need the power, take it from a doubled engine rather than from a battery.
- Use your double HET bonus to avoid the worst damage.
- Use your speed to your advantage. Never go slower than 15 unless you need to cloak. And whatever you do, DON'T use a wild weasel. You will never be able to build up the speed to disengage.
- Be conservative. Play with a mindset that your ship is one class smaller than it is. Play an Orion CA against a Fed CA the way you should play a CL against it.
- Know your ship, what it can and cannot do. An LR can survive one photon hit, but a second will penetrate the shields. A heavy cruiser has plenty of tractor beams which can be used as a drone defense. The rear ph–3s can polish them off at leisure. The Salvage Cruiser class cannot effectively move while cloaked, so you shouldn't bother buying a cloaking device for it.
- Your entire defense is based on creating bad luck for your enemy and his weapons. Don't push your own luck.

HOW TO WIN AS AN ORION

Let's review the points discussed and indelibly imprint them in your mind. (And if you still can't remember, there is always the mindsifter over in the corner warm and waiting.) To win as an Orion, you must learn these things:

1. What weapons arrangement works best for the mission you are attempting. Will direct-fire weapons or seeking weapons work? Will you work the in-and-out battle, or will you close range for a Sicilian Knife Fight?
2. When will you double your engines, and how many engines will you double?
3. Carefully plan and prepare your attack run.
4. Deliver damage to the enemy without getting hit. Gain control of the initiative, and a tempo advantage, and don't lose it.
5. Avoid transporting boarding parties onto an unidentified Q–ship.

SHIPS OF THE ORION MERCHANTS ASSOCIATION

As noted above, Orion ships have certain general characteristics which must be accounted for. Further, each ship has its own special problems and advantages, which are listed here. If a refit is available, always take it!

Heavy Battlecruiser: The best cruiser in the game. The five batteries allow an HET on reserve power alone. The ECM shift is below Orion standards; reinforce it with ECM and (if necessary) the reserve. Marine capability is low due to only three transporters. Six impulse engines allow extra power when cloaked.

Heavy Cruiser: The enforcer CA, designed to fight CRs, pressed into warship duty. Awesome against early cruisers without refits; she lacks the staying power of the later ships. Pre-refit shielding is pitiful, requiring the engines to run on double output continuously to provide reinforcement. The four transporters provide workable boarding capabilities. The phaser arcs are exclusive, meaning that the rear ph–3s cannot be used to protect the forward ph–1s unless you can get the enemy on the FA/RX "Klingon Arcs." The three shuttles mean trouble against plasma races, so use speed instead of WWs. (You don't have time for WWs anyway.) Heavy weapons (i.e., option mounts) are awkward as only three of the four can be fired in an Oblique Attack.

Battle Raider: The Orion CW. Five option mounts allow imposing selections. Power curve is good (even without doubling you can still fly speed-30 with warp to spare), but don't make the mistake of taking too many power-hungry weapons. The shields are excellent as this ship is designed for combat, not convoy raids, but the BR still can't survive a penetrating salvo and remain in fighting shape. Engine doubling is more efficient thanks to the 12-box engines, but must still be watched carefully; doubling just one engine per turn should be the norm. Has the same phaser arc problem as the CA. The lab (an unusual feature on pirate ships) is very useful; don't forget it's there just because you never had to work with it before. The three control spaces make the ship vulnerable to uncontrolled status; assign guards (you have 16! boarding parties), and repair the first control space you lose.

Strike Carrier: Excellent mini-carrier, unusually well-armed for a CVW. Battery shortage is a drawback. Designed to follow the fighters into combat. Seldom works with escorts except when hired out as a mercenary. TacIntel will not reveal the ship as a carrier at long range as with other races. The fourth control space is a bonus over the BR, but the two transporters are a limitation. The two shuttles are never enough and must be used wisely. Use fighters for scatter-packs.

Raider Cruiser: Designed for convoy raids. In combat, you get one pass, so make it count. Double the engines to beef up the inadequate pre-refit shielding. Rear phasers are not an effective defense and lack the L/R firing arcs of the larger cruisers. Fly this ship as if it were a destroyer, not a light cruiser.

Salvage Cruiser: A firepower support ship with the most heavily-converted Orion hull. The four drone racks are useful but require OAKDISC (especially for CVL/PFT missions) for effective operations. Load the weapons first, then double the engines when you need the power for shields. Take low-power weapons for duels and high-power weapons for support roles. Count on tractors for drone defense.

Light Carrier: This is not a strike carrier. The eight fighters are useful on raids, but are not enough for heavy combat.

PF Tender: The best use for the salvage cruiser. Does not have to attack directly; the internal bays allow excellent repair systems, and the tractors were born to have mech-links added.

Double Raider: An excellent destroyer. A smaller version of the Battle Raider with all of the systems except for one phaser and slightly less power, but the low movement cost makes up for that. Weapons choice is complicated by the lack of a double centerline mount. Ph-1s are excellent for the wings. Five type–F plasma torps are devastating for convoy raids.

War Destroyer: The Nazgul is fast, slippery, and deadly. Nimble, but it lacks the power for extensive ECM. The ph-3s can absorb phaser hits from the DAC. The small control facilities are a vulnerability. Cannot survive a penetrating volley in operating condition, but then few Orions can. Ample power allows photons in the option mounts. Cloaking can be (barely) used offensively. Has 38 power when doubled, and only loses one box per turn.

Light Raider: Designed to attack lone freighters, but there are quite a few of those in space. Will be in trouble against four freighters. Excellent with type–F torpedoes (if you don't have to reload). It's a PF without the special rules.

Slaver: Designed for smuggling, not combat. It's the best-protected freighter in the game, able to escape at 31 with a full cargo load; something no other galactic cargo ship can match. Nimble status confers extra defenses.

Free Traitor: Another armed freighter; keep out of combat!

OK6: Suffers from the same mutually exclusive weapon arcs as the CA. Excellent firepower support ship with disruptors in the option mounts for an unmatched long-range punch, or ph–1s and F-torps for a more power-efficient arrangement. Best boarding party ship available to Orions. Limited number of tractors is a drawback. Fly it like a Klingon, not an Orion.

Buccaneer: Each PF in the flotilla can have different option mounts, so select them for the mission at hand. Consider the unusual (and deadly) selection of exclusive ph–1s in the option mounts. How did this ship get its name? Well, the Klingons paid the Orions $2 for each Kzinti that they killed and wanted some proof, so... ✪

HYDRAN TACTICS

by Mark Schultz

Take their best shot, then blow them up. This is the fundamental philosophy behind Hydran ship design, fleet tactics, and single ship tactics. The method of execution of this philosophy varies greatly as the Hydrans have two very different types of ships.

Fusion ships and their accompanying fighters are the most straightforward in normal operation and, as a result, are probably the most difficult ships to win with of any in the game. The basic and advanced tactics of these ships and fleets will be addressed first.

Hellbore ships, on the other hand, are some of the most versatile and complicated ships in the game. This versatility has made them some of the most consistently deadly ships in the game. Their ship and fleet tactics will be addressed second.

Finally, one of the most truly deadly fleets in the game is the combined arms Hydran fleet. This combines the short-range fusion firepower in front with long-range hellbore support in the second rank.

FUSION SHIP TACTICS

The fusion ships were the original Hydran ships. They were designed to absorb tremendous amounts of damage with minimal degradation of their fighting capabilities. Their point-blank direct-fire combat power is almost unmatched, but their long-range firepower is the worst in the game. The tactics of dueling with such ships are simple. Go very fast and overrun your opponent. The art in this tactic is in the timing. The fact that speed is necessary usually precludes serious arming of the fusion beams, thus a fusion ship cannot afford to engage mid-turn (unless holding fusions armed earlier). The secret to success is to maneuver in such a way that you are at point-blank range at the end of the turn and will be able to fire on the first impulse of the next turn (after EA). If you cannot quite get close enough, you can use high speed early in the turn to get into firing position, then plot a speed reduction to save power to fire the weapons.

With the option of holding fusion beams, it becomes possible to maintain high speed with a decent arming status. It is probably best to hold all but one beam as that one will often get removed by damage on the way in. If it is still there, it can be armed with reserve power. It is still best to engage at the beginning of a turn as you will usually need the overloads.

Against the faster-firing disruptors of the Hydran's traditional enemies, it is vital to avoid more than one incoming overload volley. Even if a fusion ship has sufficient tractor power to engage and tractor mid-turn, the fact that the disruptor ship can pound it once with overloads on the way in and has time to recycle his disruptors to fire again at the beginning of the following turn, when the overloaded (possibly suicide) fusions fire, will result in a crippled disruptor ship and a dead Hydran.

Effective use of the accompanying fighters in a duel situation is one of the most difficult parts of fusion ship tactics. Without warp packs, fighters simply cannot keep up with the ship. If the ship travels slow enough to stay with the fighters, most disruptor ships have enough power to overload and still keep the range open. The opponent will simply never come into range, slowly eating away the fighters and shields until the Hydran is forced to disengage. This leaves two major methods of utilizing the fighters.

First, tractor as many as you can, bringing them into combat along with the ship and releasing them when it is time for them to fire. They will serve to eat up enemy firepower and kill him if he is silly enough to let them get to 2 hexes. Of course, if your opponent cripples a tractored fighter with direct-fire on an impulse just before your ship is scheduled to move, you will death-drag your own fighter if your ship is moving faster than that fighter's uncrippled maximum speed.

The second option is to use the Hydran Anchor. (The Hydrans were using this long before the Gorns. If you don't believe it, ask the Klingons.) Allocate lots of power to tractors and none to weapons (have the phaser capacitors full before you start). If the opponent has more power to tractors (a rare case), then the fusion ship is probably dead, so hope he didn't. Close with and grab the opponent (the hard part) at any time during the turn, then launch the fighters.

Note that most disruptor ships simply cannot do enough damage to an equivalently-sized fusion ship in one volley to get to the fighter boxes. If the opposing ship kills off your fighters with its firepower (didn't shoot at your ship), your ship will kill it at the beginning of the following turn with suicide overloads. If the enemy has already fired at the fusion ship, nothing will save it as the average fusion ship's fighters are more than capable of blowing up an equivalently-sized opposing ship. In equal BPV battles, however, the large cost of the fighters generally makes the ships so expensive that the opposing ship is bigger than the fusion ship. This also means that the fusion ship's larger opponent will often be able to negate the fusion ship's tractor beam. Worse, if the opponent ship successfully anchors the fusion ship, the fighters cannot be launched.

Warp-pack equipped fighters are an entirely different subject. Generally such fighters should follow their ship into combat at a range such that the ship gets to effective fusion/gatling range at the same time as the fighters get to effective enemy fire range. This is usually 2–4 hexes behind the ship. If the enemy has significant weaponry energized to deal with the Hydran ship, at some point it will have to be moving slow enough to allow the fighters to engage and destroy it.

From the above discussions, it may appear that fusion ships have reasonable chances of success in a duel. In fact, this is true only in very limited cases requiring careful planning.

Lyrans usually have little trouble with fusion ships as their ESGs and ph–1s extract payment for closing range that the fusion ships simply cannot afford. Successful execution of fusion tactics requires that the Lyran be without his ESGs. Feints and hellbore fighters are methods of accomplishing this, but neither is anywhere near a sure thing.

Plasma races can have trouble if the fighter's gatlings can tear up the plasma, but closing range remains a problem as plasma ships rarely have to slow down. Many can simply bolt the fusion ship to death. Cloak renders fusion ships impotent, cutting their firepower at point-blank range by over 90%.

The photons and phaser–1s of a Federation ship can often cause too much damage to allow the fusion ship to successfully conclude an overrun attack.

FUSION FLEET TACTICS

Fleet actions involving only fusion ships are in some ways the same as duels and in some ways an entirely different matter. The major difference is the necessity of keeping the fighters away from exploding ships.

Fusion fleets have a very hard time with open space engagements. High-speed normal-loading disruptor ships will pick off one ship at a time, and as long as they stay out of 10 hexes, fusion fleets cannot retaliate effectively. Unlike duel situations however, the double charge 10-hex fusion fighter shot can be used in fleet situations. At 4 points of damage per fighter, fusion shot at 4–10 hexes (maximum, average is 1.83 points), large numbers of fighters can do much more than rip down a shield. With gatling phasers left, the fighters are still a potent weapon if the decision is made not to bring them onto the ships to rearm their fusion beams.

With this tactic, the fighters which are to fire their fusions

lead the ships by 5 hexes, using maximum ECM (including EM) until they get to 10 hexes. This forces the disruptor ships to get within range of the fighters if they wish to shoot effectively at the ships. Unfortunately, this is a very inefficient tactic and will only be effective when the Hydran significantly out-BPVs his opponent. If the fighters have warp packs, it is usually possible to HET them back to the ship after firing to be rearmed.

With warp-packs, however, better tactics include the use of groups of fighters to out-flank the enemy, forcing him to engage either the ships or the fighters. If the enemy chooses the ships, the drop in speed that usually follows close engagements will allow the fighters to close with and destroy much of the enemy fleet. If he chooses to engage the fighters, accept this but have the fighters use maximum ECM. Cripple as many ships as possible rather than destroying one or two. The Hydran ships will destroy any cripples not moving fast enough to escape. Above all, remember that in fusion fleets, the fighters are expendable. Trying to avoid fighter casualties will usually result in defeat.

One type of action where fusion ships and their fighters excel is in assaulting a base. Because the enemy cannot run, even Stinger–1s can make it to effective range of their target.

Engage or run off the defending ships with the fusion ships, using massed fighters to destroy the base. With Stinger–2s, half a dozen will all but destroy a battle station. The heavy weapons of the base are overkill on the fighters, so force it to use them on the fighters instead of the ships.

As always, be certain to keep the fighters out of explosion range of ships which can conceivably detonate. Carefully calculate the damage from the fighters when engaging the base so as not to blow it up, as the explosion will generally destroy any fighter in adjacent hexes. If it will be necessary to make a two-stage attack (reloading the fighter fusions between), try to destroy the weapons on one side so that you can approach with impunity the second time.

FIGHTERS: THE HYDRAN SEEKING WEAPON

The operating tactics of the fighters themselves are critical to success in both fleet and duel actions. Given the choice, always equip fusion fighters with two EW pods or make provision for loaning them electronic warfare. Putting an EW pod on an EW fighter (total of three with built-ins) and one on each fusion fighter is often a good solution. When combined with EM, the pods and inherent EW of the fighter allow it to guarantee a +2 shift on fire at it by any unassisted ship. The damage potential of disruptors drops phenomenally shooting through this sort of shift. (Note that your EWF cannot lend EW while doing EM and may become a prime target, which is the reason for burdening the standard fighters with an EW pod.)

Because fighters always move after ships, it is generally possible with proper maneuvering to close the range from 4 to 2 hexes in one impulse by combining with the movement of the target. Three hexes is a very bad range for Hydran fusion fighters to find themselves caught at. The weapons of the fighters are still out of effective range, and the opponent's ph–2s and ADDs are in optimum range. This can mean the death of all the fighters outside their firing range. The move from 4 to 2 hexes should be combined with turning off the warp packs and dropping EM. Against Klingons in particular, if these tactics can be successfully executed, the fighters are subjected to minimal fire before being in range to deliver gatling and fusion death.

Remember that ship explosions (radius 1 hex or less) can kill fighters, and don't stack everything next to a crippled ship.

If for some reason, the fighters do get caught at 3 hexes, it is probably best to fire them (if there are enough to do internals). Some damage is better than none. Consider firing all but one ph–3 shot. That way cripples and intact survivors can continue to close, adding another three points of damage per fighter at 2 hexes. Another option is to fire only the fusions since the damage increase from 3 to 2 hexes is only about 100% for the fusions as opposed to 200% for the ph-G. Finally, if only minimal casualties are expected, run the fighters all the way to 0 hexes and use Close Combat Maneuvering to pick a weak shield before firing. One fighter averages about 35 points of damage at this range. An enemy who does not fully realize this can be rudely shocked when three fighters blow up his ship.

Hellbore fighters are an entirely different matter. Always carry as many of these fighters as allowed by the rules. These fighters circumvent the main difficulty of normal fusion fighters — the lack of weapon range. Because of their longer range, these fighters should be rearmed whenever possible rather than sent into point-blank combat with the fusion fighters where their death is all but assured. Use them to gain additional volleys of internals against ships whose shields have been downed by the fusion fighters. Follow at 3–6 hexes behind the fusion fighters. If the enemy uses all of his fire on the fusion fighters, don't hesitate to send the hellbore fighters in with their gatlings even if they have already fired their hellbores. Their ph–Gs make them a potent point-blank fighter even without the hellbore. If the enemy has remaining point defenses, HET the hellbore fighters back to the carrier for rearming.

Finally, the best fighter formation is with the entire squadron in one stack. Spreading out the fighters against ships armed with ADDs allows them to be picked off one at a time as they come into range. Even without ADDs, if the fighters aren't stacked together, the opponents will use up their firepower on the lead elements at close range, then turn away from the remainder. There's nothing ESG-armed ships like better than to have their fields completely destroy a few fighters rather than slightly damaging many. There are exceptions of course. Mines, possible explosion candidates, and opposition with single downed shields or weak flank shields can make a certain amount of spreading out a good idea. If the fighters are spread between three of the opponent's shields, he will have a hard time keeping a weak shield out of arc. Even in these situations, however, it is desirable to keep all fighters at the same range from the target.

One last note on Hydran fighters. Fusion fighters, particularly the early ones without packs, become very difficult to use against T-bombs. (The best defense is to convince your opponent that T-bombs weren't invented until fast drones and booster packs appeared. It isn't true, but sometimes it works.) In equal-BPV battles, a 4-point T-bomb can kill at least one 10–point fighter, an exchange that does not work in your favor. There are certain ways to minimize the damage if somehow forced to use fusion fighters against T-bombs. First, DON'T stack the fighters — Ever. Spread them out generally one to a hex, in a formation 4–5 hexes wide (so one bomb can't get the entire front row) and as deep as you can make it. This prevents the enemy from placing bombs in the middle of the formation as a bomb cannot be placed into a hex with a fighter in it.

Be prepared to HET, perform an unplotted mid-turn speed change, or use emergency deceleration to avoid mines laid by transporter as your fighters close. Spreading out also means that any shield which is down to allow the use of transporters will be facing angry Stingers. Sending the fighters to the target in waves will keep one bomb from killing an entire squadron, and while the enemy will pick off the lead fighters, he would kill a few if there were no bombs. Leading the fighters in with the ship becomes almost the only option. (If he starts setting the bombs for shuttles only, tractor a fighter or shuttle and push it ahead of you.)

Keep the fighters facing the same shield of the opponent as the ship is. This will help make the opposing ship pay for its down shields. Note also that the enemy can use the bombs to separate the ships from their fighters, then kill each group separately. In pursuit, track the hexes the enemy has traversed to avoid any hidden mines dropped from the shuttle hatches.

HELLBORE SHIP TACTICS

The tactics of dueling with hellbore ships (cruisers in particular) are much more interesting since they are capable of engaging effectively with any race in the game. The secret to winning with any race is creating the best opportunity for fire and using it. The hellbore's main advantage is its unique definition of "best opportunity for fire." Unlike most other weapons, the shield facing of the opponent is a secondary, almost minor consideration. The primary consideration is range. The best opportunity for fire for a hellbore is usually just the closest range anticipated in the near future (next two turns). Obviously this is much too general a statement to be without exception, but it is the most useful benchmark to judge most hellbore tactics against.

One of the most straightforward of the hellbore tactics is to treat the ship like a fusion ship and simply overrun your opponent. Unfortunately, as most fusion captains know, this requires the cooperation of the opponent. The high cost of the hellbore ships also means that the ship being run over may not simply die in the face of the overwhelming firepower. It may be just too big.

Ships with only two hellbores are incapable of properly executing this tactic as the single hellbore that will remain (after the enemy volley) when point-blank range is reached is generally not enough.

On the other hand, the cruisers (Dragoon+ and Lord Bishop) are capable of inflicting astounding quantities of damage at point-blank range down their forward centerline. If the three remaining HBs are overloaded and assuming the two ph–1s and the gatlings have survived, a heavily-damaged Dragoon+ will do around 90 points of damage to the facing shield of a target at 0–1 hex, more if another shield is already down. This will severely cripple any D-class Klingon and probably force any cruiser to disengage if it can. Note that care must be taken in dealing with any SP that might show up. If the ph–Gs are used on drones, there may be insufficient firepower remaining to guarantee the success of an overrun attack.

Using overrun tactics with hellbore cruisers is a bit of a waste however. Properly played, hellbore cruisers can often force disruptor-armed cruisers to disengage with internal damage while taking nothing but varying degrees of damage on widely scattered shields. If the opponent cooperates, trade normal-load attacks for a few turns. Be sure to initially create a single weaker shield. Using a couple of hellbores as direct-fire weapons can be very helpful in assuring this. In fact, on the first firing pass at almost any range, it's probably better to use one or more hellbores direct-fire. Guaranteeing damage to a single shield with following fire is far more important than the few random shield hits due to a normal HB hitting an undamaged ship. The result of this kind of normal load exchange (over several turns) will be damage to possibly all of the hellbore ship's shields, with a single down opponent shield. Now the hellbore ship has a serious advantage. Regardless of the range that the disruptor ship picks to fight, a ship with one down shield is going to take internals. Usually it will be best at this point to not fire all the hellbores together. Alternatively, fire them one per impulse to take advantage of the Mizia Concept.

Often, however, disruptor ships will close with hellbore ships to avoid the above situation. At mid-overload ranges, the damage potential of disruptors is not significantly less than the hellbores (facing shield damage), which often are not overloaded because of the high power cost and loss of firepower if the opponent does not come to overload range. At this point the hellbore ship may find it desirable to fire all weapons at once, possibly due to a potentially worsening EW shift or range situation. Proper use of the hellbore's unique damage capability at this point requires calculation of damage due to hellbores and damage due to other weapons (generally phasers). Fire weapons ordered so as to equally divide the internal damage between the hellbores and other weapons. This will produce two separate equally-sized volleys of internals on one impulse, which can make so much trash out of most of the weapons complement of the opposing ship (again due to the A-row advantage). Realize that, if the hellbore ship fails to relieve the disruptor ship of significant firepower, it can easily lose the fight due to the disruptor and phaser fire on the hellbore rearm turn. If it is possible to continue closing the range after anticipated enemy fire, the hellbore ship will want to fire only three or four phasers and one hellbore simultaneously with the enemy, saving the remaining hellbores for the point of closest approach. This also again assists in using the Mizia Concept, and any damage to your hellbores can be scored on the discharged systems.

Keep in mind that, regardless of the opponent, a hellbore ship will always be happy with an equal exchange of damage in the early stages of the fight. The fact that the enemy will be unable to interpose a shield to avoid internals in later exchanges gives the Hydran the advantage anytime he has significant shields left.

HELLBORES vs. ESGs

ESGs throw an entirely new element into the situation. The unique interaction between the hellbore and the ESG means that in duel situations a Lyran can add significantly to the effective shield strength of his ship for a period of 32 impulses. A hellbore ship cannot afford to trade shots at overload range with a Lyran with ESGs up. The hellbores will generally only rip down the ESGs, while the disruptors are chewing big holes in the hellbore ship's shields and hull. If the Lyran can follow up on the next turn with another overloaded disruptor volley, it's all over for the hellbore ship. Thus, against Lyrans the hellbore ship should generally use speed and normal loads to produce a single down shield. If ESGs come up at any point, simply keep the range open until they go down, then turn and engage as closely and rapidly as possible. Ripping them down with the hellbores at normal load range is counter-productive as the following turn of potential fire is lost to rearming.

Single ESGs active on ships with multiple ESGs (which implies multiple hellbores on the Hydran ship due to BPV equality) should be used as hellbore magnets. If sufficient numbers of hellbores can be brought to bear, a higher average damage can be scored against the Lyran than if there were no ESG up. This is due to the auto-hit feature of hellbores fired at ships with ESGs up. The trick is to reduce the ESG to near zero strength, then fire the hellbore that (due to overloads, range, etc.) will produce the most damage points as those beyond the number required to collapse the ESG will be carried over to the ship. Understand that the damage due to the hellbores is calculated based on the range to the ESG, not the ship. If the Lyran is silly enough to put up ESGs at greater than 0 hexes, manipulate the range to put the hellbore ship within effective range of the ESG, but not the Lyran ship's disruptor. It's possible to do overload damage to the Lyran without exposing the Hydran ship to overload return fire. Note that, if the hellbore ship is fighter supported, the Lyran can be made to pay for putting up ESGs at 3 hexes to kill the fighters.

The overrun option still exists vs. ESGs; it's just a little more difficult. At point-blank range, if both ships have overloads, the Hydran can often blow right through the ESGs (combining hellbores with the ph–G fire) and significantly damage the Lyran while taking approximately the same damage. If the Hydran can maneuver to avoid taking an overloaded volley on the next turn (while the hellbores rearm), the late-turn advantage of the hellbore can win the battle. Another option is to try to take the ESGs down with shuttles and the ship. The result can be devastating, if properly executed, as the Lyran faces two or three times the hellbore damage he was expecting.

HELLBORES vs. OTHER ENEMIES

Against plasma ships, speed and normal loads are again essential. This tactic will usually force the plasma ship to bolt in order to do damage. When it does, run it down and kill it. Even if the hellbores were fired on the same turn as the plasma ship bolted, they will still be ready to fire again before the plasmas are fully charged. Be sure to maneuver so that the plasma ship cannot get an FA shot at 10 hexes without giving you a subsequent shot at 8 hexes. Bolts have a marginal advantage at this range. If they are allowed to consistently fire there, the hellbore ship will be forced to disengage. If range can be closed to 4 hexes or less at the end of a turn, stop, overload, plaster him, and then use a WW. If two WWs are armed, the plasma ship will be unable to hit the hellbore ship with torpedoes, even those fired from destroyed launchers. The ph–Gs can be used to shred incoming plasmas or as a threat to prevent the infamous "Gorn Anchor" from being properly executed. If the plasma ship insists on keeping the range open, use normal loads to create a down shield. He'll be forced to engage or disengage as further fiddling around at range will only earn him a series of internal volleys.

Photon ships are probably the most difficult to deal with for a hellbore ship. As both weapons have two-turn arming cycles, there is no difference in arming cycle to exploit. However, determining the exact arming status of the photons is an absolute necessity. Against a ship with overloads, there are two choices. The first is to normal load your hellbores and stay out of 8 hexes generally and 4 hexes certainly. This will work fine against ships which cannot make speeds in excess of 24 while holding overloads. Those that can move that fast necessitate the second alternative — overrun. Most hellbore ships can take one photon/phaser volley at 4 hexes (about 62 points of damage from a Fed CC assuming three photon hits) and still punch big holes in the opponent, but ONLY if the ability to close to point-blank range (2 hexes minimum, less than 2 hexes preferably) following the photon/phaser attack can be guaranteed.

Never allow a photon ship to get a shot at 4 hexes down one of its front flank hex rows with its turn mode fulfilled. A photon ship generally can't afford to fire at 5 hexes as the damage is simply not sufficient to seriously bother a Hydran. Keep speed on the hellbore ship equal to or greater than the photon ship. Speed 31 during the combat portion of the turn is usually a good idea. Class for class, the Hydran will usually have a better turn mode than the Fed and, hence, get to move last. When possible, try to close the range from 5 to 3 hexes on one impulse, avoiding the 4-hex range where his weapons are more effective than yours. This will allow effective fire from the hellbore ship's phaser–2s even as the photon ship's volley is ripping them off the ship. Firing one of the hellbores at this point is obviously a good idea. The best way to finish off this tactic (if the situation can be properly arranged) is to fire only the phasers when the range is less than 2, then keep the range there until the end of the turn (possibly enforced with a tractor beam). On the following turn the hellbores can be overloaded and fired on separate impulses, hopefully stripping the photon ship of weaponry. If the ph–Gs are eligible to fire again, there can easily be two down shields, meaning two volleys of 20 internals each, with another phaser volley thrown in. The remaining phasers of the photon ship will probably be incapable of downing a shield on the Hydran. Surrender or self-destruction is usually the best option for a photon ship caught in this position, so get the banana pudding out of the freezer. (Fed prisoners love it!)

HELLBORE FLEET TACTICS

Hellbore fleets are more difficult to win with than individual hellbore ships. Many of the advantages of the hellbore become less relevant in multiple-ship scenarios. A hellbore fleet fighting an equivalently-valued disruptor fleet will often have fewer heavy weapons. The facing shield damage of a hellbore is not significantly greater than that of a disruptor until the range gets very short, and if the disruptor fire during the hellbore rearm turn is included, the damage from the disruptor is greater. Thus, the Hydran fleet is facing an enemy with more weapons that do more damage. In duels and squadron actions, it is often possible to render the rearm turn fire of the disruptors irrelevant by taking the damage on a solid rear or rear flank shield. When fleet sizes start climbing, however, the disruptors will be able to do significant internals to the ship of their choice, regardless of facing, as long as the Hydrans are in range. Thus, the rearm turn cannot be so easily rendered irrelevant.

When outgunned, there is no choice but to look to other possible areas of advantage. At normal load ranges (9+ hexes), if the enemy has little or no reserve EW capability, one of the best early-game options is to cripple rather than destroy. Instead of the typical tactic of blowing up the biggest ship you can, use the hellbores to pick out one major enemy ship and strip all the weaponry off it with a series of volleys. This is especially effective against the Lyran and Klingon DNs, which would still be effective fighting vessels if the damage came in one volley. The A-row warp hits can also be very handy if they force the opposing fleet to slow down. If they slow down, the Hydran can use things like EM on the rearm turn to limit the disruptor damage. Fire all the hellbores on a given ship at once (rather than a few hellbores from several ships); that way if EW is used fewer ships will have to counter it, and your fleet scout may be able to loan to that many. As always, if the Klingon ever slows down to overload, run him over and kill him. Close quarters can be bad news against Lyrans, but Hydran ships will annihilate Klingons that allow themselves to be overrun. At point-blank range, a normal load hellbore does the same damage as an overloaded disruptor. The addition of the rather phenomenal ph–G firepower at point-blank range will easily make such an exchange come out in the Hydran's favor. Again, as with all overruns of disruptor ships, make sure they are not allowed two successive overload shots unless the second is going to be with only a small portion of their original forces.

Against Klingon drones, consider using his frigates as explosives. The only effective way to hit Hydrans with drones is with one very large wave of drones. Unfortunately for the Klingon, it's these large waves which are most susceptible to destruction by the explosion of an F5 or one of the tinderbox E4s.

The ESG that can be such a problem for the Hydrans in duel situations is much less of a problem in fleet actions. Hellbores from anywhere in the fleet can quickly drop a selected ESG if one ship wants to go to point-blank range. This is even better when combining hellbore support in a fusion fleet.

Against the Lyran, the disruptor to hellbore ratio will be a little more even. Try not to be drawn into running the Lyran over as the large number of available ESGs may very well destroy the Hydran fleet once the hellbores have fired. Sure, it'll be a glorious battle, but the most probable result is total annihilation of the Hydrans with a few crippled Lyrans limping home. Fusion ships may fight that way; hellbore ships don't. One obvious exception to this rule is, of course, if the Lyran has somehow managed to use a significant number of ESGs. The recycle time of an ESG is often longer than two turns, and as a result properly played hellbore ships could effectively overrun the Lyrans in this gap even if there were an exchange of fire at the time of the first ESG use.

The fighter firepower of a hellbore fleet is minimal. With only an average of two or less fighters per ship, the fighters must be used in a support role rather than as a major attack weapon. Against Klingons the fighters are best used as drone defense. Just as in fusion ship fleets, keep the fighters away from ships the enemy can blow up in one impulse. If an overrun tactic is used, follow the ships in with the fighters. This is different than the normal fusion tactics because there simply aren't enough

fighters to penetrate the fighter defenses of an average undamaged Klingon fleet. The fighter defenses of the Klingon fleet will be severely reduced by engagement with the ships, and if the Klingon is not very careful, he can find himself facing 20–30 fighters with no way to kill them. As mentioned before, a mere three fighters can tear up a Klingon cruiser.

Another excellent fighter mission is to chase down cripples that would otherwise escape while the hellbores are rearming. It may be necessary to strike some balance between drone defense and cleanup force.

The best option, however, is to engage the drones with the fighters outside fighter defense range and then peel off and allow the ships to engage. Once the battle is well underway or over, bring the fighters back in. You might leave one ship out of the battle to rearm selected fighters.

Against the Lyrans, the fighters can be effective in setting up either an overrun or an effective firing pass. Send in the fighters 4–5 hexes in front of the ships. If ESGs come up to deal with the fighters, use hellbores to knock them down. If the ESGs don't come up, the Lyran will be forced to use real firepower to deal with the fighters, allowing the ships to close the range while taking less damage than is usually expected. With a significant advantage in speed (assuming Lyran overloads), the Hydran will force the Lyran to use ESGs at greater than radius-0 (if they can use them at all) since faster ships can avoid slower ones.

One of the most deadly Hydran fleets is the hellbore fleet with significant warp-pack fighter support, usually from some variety of true carrier. The tactics involved are extremely simple but very deadly in effect. The ships follow 5 hexes behind the fighters at very high speed (usually 27), with all of the fighters producing maximum ECM (with erratic maneuvers, ECM pods, and loaned EW). Fighters using such tactics are extremely difficult to destroy outside effective phaser range, but if they are not destroyed, they will wipe out the opposing fleet. If the opposing fleet uses speed and normal loads, it must turn away after firing, at which point the massed firepower of the fighters can unload with the ability to land and rearm the fighters almost guaranteed by the retreat of the opposing fleet. The hellbores can then pick their targets, stripping two or three ships of weaponry with repeated salvos.

FAST PATROL SHIPS

In late-war scenarios, one of the most difficult to use elements of the Hydran arsenal becomes available. The fast patrol ships of the Hydrans produce some very difficult tactical quandaries.

The mainline design is the Harrier. This craft is extremely deadly at point-blank range, but impotent outside of two hexes. This is standard for Hydran fusion units. Unfortunately, Harriers combine the worst aspects of both fighters and ships. Like the fighters, they can be destroyed with relatively small quantities of firepower. Like ships, they explode when destroyed, but under the new rules, this is a minor blast. The result is that, in order to avoid fratricide, they must be spread out. This results in only the elements capable of engaging being destroyed, while the remainder are evaded. Thus, it is difficult to impossible to use Harriers as first-line attack craft. They can, however, be effectively utilized as second-wave weapons, fleet defense, and flanking attackers. By the time they engage, most of the enemy firepower will have been used defending against the first wave attack of fighters and ships. Their inherent speed can be well utilized to prevent escape, especially of cripples.

The Harrier does have a very close cousin in the Howler. Unlike the Harrier, however, the Howler requires no power to arm weapons (having filled the phaser capacitors on the turn before the attack) and, thus, can use EW and shield reinforcement, which makes destroying them outside their effective range much more difficult. These can easily be used as first-line attack craft as, even if they are destroyed, the tremendous quantities of firepower necessary to do so will make the enemy easy prey for the following attacks. Of course, Howlers can also be used effectively in the same role as the Harriers. They also are one of the best fast patrol ships to use against the ISC. The EW and reinforcement combined with the inherent ability of PFs to HET at will (once) means that a single PPD will generally not even do internals. The incredible plasma-shredding capabilities of these units means that gunline ships have very little chance of standing up to a flotilla regardless of the support they may get from the rear echelon ships.

The final Hydran PF design is the Hellion. Against ships, the ability to do a separate (hellbore) volley to a target (assuming hits are rolled) can be extremely effective due to the multiple warp hits which can be achieved in one impulse. A PF can be left an unmoving cripple with a very small number of internals. It is inherently a long-range combat unit and should be used to selectively pound units with down shields. The ph–Gs should not be forgotten, however, and a good use for them is as a drone shield for the ships which will later engage, allowing those ships to save their gatlings for the enemy ships.

SHIP COMMENTS

This section consists of class-by-class comments on some of the characteristics and tactics of the various major ship classes.

DN/DN+: Even with the refit, this ship class is SLOW when arming weapons. Its firepower at point-blank range is immense, however, and if the enemy does not commit the rather impressive quantities of damage necessary to remove it, it can cause great quantities of grievous harm.

CC: The Command Cruisers (and the Overlord BCH) suffer from the mixed fusion-hellbore armament, which makes them more vulnerable to damage, but more flexible in combat.

CA/CA+: The refitted versions of these ships are some of the fastest cruisers around. Take advantage of this fact. Never allow the front shield to be damaged before engaging as this class cannot effectively conduct a first-exchange volley without its front shield. Most cruisers suffer from the problem of separate firing arcs. Hellbore ships, fighting from long-range, can fire the left weapons, then turn to bring the right weapons into arc.

CM: Again, these ships are very fast. Take advantage of this. The Tartar class can effectively engage disruptor ships at almost any range, but always be alert for overrun opportunities as the ship can take a lot of damage and still rip up another war cruiser. The front shield on these is only important if a long battle is expected. Otherwise any forward shield will do.

CL/CL+: These ships lack firepower after damage. A single effective overrun attack is really the only possible method of attack, with success not really guaranteed even if overrun is accomplished. The support ships built on these hulls are adequate, but not spectacular.

DD/DD+: Very effective designs. Usable in both fleet support and duel situations. Their overrun attacks are one of the most potent in the game for their class. The DE is virtually a CVE added to a carrier group. The Warrior DDL is, obviously, the most powerful of the hull type.

FF: The Hunter is small but cheap. It is slightly less effective than a PF, something true of most small frigates. The Cuirassier class can be used as fleet support firepower. The Crusader frigate-leader is a one-volley ship as any significant shield penetration will leave it with one fusion beam and a phaser or two. In some ways, the older Saracen (with its all-fusion armament) is better able to take damage. Like most races, the Hydrans found their original frigate too small, but due to the military emergency were unable to replace it (with the enlarged "Buffalo Hunter" DW) until late in the General War.

Gendarme: A dandy little police ship with the ability to carry a couple of fighters. Look out, Pirates! ✪

ANDROMEDAN TACTICS

by Evelio Perez-Albuerne

The Andromedan invaders are the most mysterious of all the races of SFB. Few know what an Andromedan looks like, even fewer know their motivations or why they never allied with any other race. All that is known is that over a certain period the Andromedans appeared, started raiding, and then conquering. Eventually they attacked every known race in the galaxy.

The results of these actions caused the Galactic Powers (GP) to band together to prevent a total takeover of the galaxy by the Andromedans. The Andromedans suffered a decisive defeat in the destruction of their starbase.

This article will first discuss the unique Andromedan systems and then discuss general tactics. Andromedan tactics against each of the races will be briefly covered, and a final section will review individual Andromedan ships. Throughout the article, GP tactics that can be used against the Andromedans will also be discussed. Because of the two-turn arming cycle of the tractor-repulsor (TR) beams (and the displacement device), the Andromedans use a two-turn cycle, an "attack turn" followed by a "recharge turn" (sometimes more if panels need clearing or other damage needs to be repaired).

THE 1990 ANDROMEDAN REVISION

As originally presented in SFB, the Andromedans were almost invincible. Their bizarre technology was not balanced against the systems used by other ships in the game. During the Doomsday revision process, rules for Andromedans were completely revised to balance them against GP ships. Although this controversial process resulted in the reduction of the capabilities of almost all Andromedan systems, the Andromedans retain their unique flavor and are still quite viable.

Before reading this article, you should be completely familiar with the changes made in the revision to the Captain's Edition rules for the Andromedans. Although some changes will be alluded to in this article, they will not be systematically covered in order to save space. A systematic review of the changes can be found at the end of the TR beam section (E9.0) of Module C2.

THE POWER TO BE YOUR BEST

Power systems are the heart of a starship. Andromedan power systems are unique because of their large battery capacities and because their defensive system, the Power Absorber (PA) panel, is intimately linked to the power system.

PA panels have three major advantages over shields. First, the capacity of the PA panels is almost always larger than the capacity of any one shield on a comparable BPV GP ship. Second, PA panels can regenerate much more rapidly than shields. Third, power from the PA panels can be moved into the batteries. Each of these three points has important tactical consequences.

The first advantage can be illustrated by comparing the 40-point front panels of the Cobra with the roughly 20-box #1 shields of typical frigates or by comparing the 60-point front panels of the Mamba with the 30-box #1 shields of most cruisers. In each case the Andromedan ship has almost twice the capacity to absorb damage. This is somewhat offset by the lack of "free" internal hits on these ships, but still leaves them better able to absorb alpha strikes than comparable GP ships. This ability is used in the fast attack strategy described below.

The second advantage is the cornerstone of the attrition strategy described below. Using only normal end-of-turn methods of clearing the panels, a Cobra which has been hit by 40 points of damage (reducing capacity to 32, all of which is full) can free up 7 points of capacity on the first turn (10%, or 3 points, to the batteries, and 4 points, one per panel, to space) and another 7 on the recharge turn. This rate can be substantially accelerated by using some of the tactics described below.

The new degradation and leak rules temper this ability, but the Andromedan player can repair the degradation using the same procedure GP ships use to repair shields. Use power and the normal "shield repair" system to restore the capacity of your panels and burn off excess power.

One tactic to use when almost all your hull boxes have been destroyed by leaks is to use continuous damage repair (CDR) to repair them. Since each hull box only costs a single repair point, you can repair as many as your damage control rating in a single turn, albeit at the cost of using up your entire CDR allowance for the scenario. This is worth it, if you are confident that more leak points are coming, since repairing the systems the leaks would damage is also going to use up your CDR allowance but will take much longer. Some players prefer to keep the CDR for batteries (critical to your survival), and some divide CDR between hull and battery.

Emergency damage repair (EDR) is almost useless to satellite ships since they have no labs and can only make one die roll. Motherships, however, with plenty of power, labs and damage control boxes, can make effective use of EDR.

The clearance advantage is also offset by the fact that an Andromedan ship's panels are divided into only two 180° groups, preventing them from turning only 60° to bring up a fresh shield as GP ships do. For this reason, it's best to use an Oblique Approach so that one 60° turn *will* bring new panels into arc.

You can speed up the clearance of panels charged to reinforced levels by turning them away from the enemy and reducing them to standard levels. The power will flow to the other set of empty panels so that all can dissipate power at the end of the turn. You should be careful that putting energy in the previously empty panels is not going to cause a tactical problem. Remember that both sets of panels must be at the same level (standard or reinforced), but the un-degraded rear panels will still have unused capacity.

The third advantage gives the Andromedan extra power to run his ship and maintain high speeds. You automatically can move 10% of the power in the panels to the batteries at the end of the turn, but by dropping PA panels (i.e., turning one bank off) or reducing the level (of all banks equally), you can move power much more rapidly. The new rules make it more difficult to do this because of the order of priority, but there are still a few tricks available.

If the enemy foolishly fires all of its available weapons and you know that it will be at least 9 impulses until they will be ready to fire again, you can reduce/drop the panels freely. Remember that because the Raise Shields Step is not coincident with the Direct-Fire Weapons Segment, you can NOT count on the 8 impulse inter-turn delay. The GP can counter this tactic by always keeping enough unfired weapons ready to deter the Andromedan from reducing/dropping panels.

If the ship can be protected from enemy fire, it can also reduce or drop panels and transfer the excess power to the batteries. Satellite ships in the hanger and any ship behind blocking terrain can use this tactic. If you feel like gambling, a ship can maximize its ECM (self, lent and EM) and drop the panels.

The most complex tactic will only clear your panels to standard levels, but can be used any time that all of the ships that can fire at you are off a single shield arc. Assume your front panels are full and your rear panels are empty. Place the GP fleet off your #3 or #5 shield arc, and reduce the front panels to standard (the excess power flows into the rear panels). On the 8th subsequent impulse or later, turn the ship so that the GP fleet is off the #2 or #6 shield arc and drop the rear panels during the Raise Shields Step. The front panels are full, so the power will flow into

the batteries (assuming no energy module). If the GP ships fire at you during the Direct-Fire Weapons Segment, you can raise the front panels back to reinforced levels, so all you have to do is keep fire from coming through your rear arcs for the next 8 impulses.

A final benefit of PA panels is that they do not block outgoing transporter activity, allowing for easy use of transporter bombs. You should always load up on T-bombs whenever possible and consult the article on T-bombs for tactics. The Andromedans should also stock up on boarding parties, commandoes, and heavy weapons squads.

The big battery capacities of Andromedan ships give them incredible reserve power abilities. Unfortunately, power on an Andromedan ship is often a matter of feast and famine. Contrary to popular belief, most of the time Andromedans must worry about having too little power (just like GP ships) rather than too much. Standard tactics to conserve power include only raising your panels to standard levels during energy allocation (since they can be raised to reinforced levels after taking damage). [The rulebook is unclear, but you can raise the panels after taking *any* damage on the basis of rule (H7.346).] You should not begin charging TR beams during energy allocation, but should wait until Impulse #25 and perform the first turn of arming with reserve power (since TR beams cannot be held and it may become clear in the first 25 impulses of the turn that you need the power more for something else). Ph-2s can be fired as ph-3s when defending against drones.

The opposite problem occurs when you have large amounts of energy in the PA panels and need to clear space in the batteries to move that power in rapidly (using one of the above discussed tactics). EW can be used to drain up to 12 points of power a turn. You can also drain power by recharging the phaser capacitors (this can be done on the turn that phasers are fired, so space can be opened up immediately by firing any unused phasers). Other possible uses of power include tractoring a "rock" (good for only one point, but a point is a point), unplotted accelerations (reserve warp), initial arming of DisDevs (not on the turn you used them), and erratic maneuvers (reserve warp or impulse). Obviously, reserve warp is the easiest to use, but the more of it you have, the slower you will be going in the first place, so balance this carefully.

Finally, you should be completely familiar with the rules on unplotted mid-turn speed changes (C12.24) since this rule can help with both energy problems. During energy allocation, you should use existing battery power to run the various systems on the ship and then channel all unused warp power to the batteries to create a large pool of reserve warp power. Having reserve warp power allows you to use unplotted accelerations which provide two major benefits. First, they speed up the ship. This allows you to close with or escape from enemy ships that are going unexpectedly fast or to evade an unexpected seeking weapon launch. Second, they rapidly drain your batteries. This is useful if you are conserving power and have relatively full batteries, but are hit by enemy fire and need to clear space in the batteries to accept power from the PA panels.

ALL SHOOK UP

The two main advantages of the TR beam are that it always scores some damage at close range and that it does not have an overload function. At first it may seem that the lack of an overload function is a disadvantage, but careful examination of the TRH chart shows that average damage jumps from 5.5 at range-9 to 10.5 at range-8 (the TRL jumps from 2.6 to 5.16). This is comparable to the doubling that other heavy weapons experience when moving into overload range, but the TR beam does not have to worry about the 8-hex maximum-range limit or paying double energy. There is also a minor advantage in the 180° firing arcs that most TRs have.

TR beams are also good against cloaked ships since at point-blank range (0) they still have favorable damage numbers. Good damage at range-5 is also useful against photon torpedoes and disruptors since these weapons do not reach a better range bracket until range-4.

The biggest disadvantage of the TR beam is that you never have enough of them. Overall strategy (discussed below) has to take this critical fact into account. Another problem with the TR beam is the 2-turn arming cycle, which leaves the Andromedan ships vulnerable on the recharge turn.

EW gives TR beams problems as well, since, even at close range, ECM shifts can rapidly reduce damage. Fortunately, Andromedan ships usually have the power to counter all but the strongest EW. TRs also have a problem with atmospheres.

YOUR DISPLACE OR MINE?

Some controversy exists on the best use of the displacement device (DisDev). One school favors using the device to displace Andromedan ships while another school prefers to use the device to displace enemy ships.

Using the device on your own ships has the advantage of a better chance of success and exact control over the jump (except for random displacement, of course). Because displacement (in Doomsday) is announced before direct-fire weapons are committed to fire, the old tactic of firing weapons and jumping out of range is no longer possible. The device can still be used to escape after firing when, for example, you fire at a Federation CA at range-5 and don't want to give him the better shot with four photons at range-4. Similarly, you can close with a plasma-armed ship that has fired a torpedo against you until the torpedo is one hex away and then fire and displace.

The displacement device can also be used to jump over unfavorable terrain, such as webs, planets, and asteroids, leaving the enemy stuck on the other side. A very high-risk use of the device is to displace directly behind an enemy ship. Smart GP opponents will have an HET ready and blast you, but dumb ones (or those that you know have no power left) will be savaged by your fire through weak rear shields without the possibility of a heavy weapons reply.

The major problem with using the device in this manner is that failure to displace is often fatal. This is especially true in Doomsday, where failure means staying in place (84% of the time) rather than random displacement (which would probably get you out of range of the GP fleet). You must judge carefully whether the advantage gained by using the device in this way is worth the risk of destruction.

Use of the DisDev on enemy ships is usually less dangerous. The goal is to disrupt the enemy fleet's formation by displacing a ship toward you. This tactic is used when the GP are in a tight formation to prevent you from picking off stray ships. The Andromedan player should arrange his course so that it passes within 9 hexes of the enemy fleet. Just before reaching the point at which his ships must turn to avoid coming into overload range of the enemy, the motherships use their DisDevs to bring enemy ships (usually the small ones first) toward the Andromedan fleet. (The point of the 9-hex range is that you are out of overload range, but even if you only displace the target one hex toward you, you will be in effective TR range.) By reversing displacement directly away from you, the Andromedan player has a 50% chance of bringing an enemy ship toward him (since the approach will usually be somewhat oblique). Now this hapless ship will be within 8 hexes of the TR beams (at which point they cause significantly more damage as discussed above) without the Andromedan ships being exposed to overloaded weapons of the main fleet. Further, the displaced ship will only be able to fire its overloaded weapons at the larger panels of the mothership that displaced it, not at the more vulnerable satellite ships.

Andromedans also use their DisDevs to displace GP ships into damaging terrain, particularly large planets.

This tactic is somewhat chancier than self-displacement (but an Andromedan fleet with four DisDevs has a 94% chance of displacing at least one enemy ship in the right direction). It is useful only in the context of an attrition strategy (see below). The consequences of failure are less serious since no Andromedan ships are in a high-risk position.

BRINGING UP BABY

The final uniquely Andromedan systems are satellite ships (Sat Ships). They can operate in two different ways. They can either be kept aboard the mothership and flipped out only briefly to attack the enemy (the sneak attack) or be beamed out at the beginning of the scenario and operated more or less as independent ships (the fast assault).

When using the sneak attack tactic, the first thing to realize is that, since two transporters will generally be needed to handle the launch and recovery of the Sat Ship, motherships are limited in the number of Sat Ships they can operate in this mode. You could use your DisDevs to launch the Sat Ships, but usually they are better employed doing something else. There is no reason to leave the Sat Ships on the board for anything longer than the minimum 8 impulses. The Sat Ships should be launched to positions ahead of the mothership (which is usually moving at high speed) so as to be within range of the transporters at the projected recovery time. This is usually not a problem since transporter range forms an 11-hex-diameter sphere and the mothership moves a maximum of 8 hexes (speed 31) while the Sat Ship is out. The advantages of this strategy are that the Sat Ships (limited to speed 10) will have plenty of extra power to use for EW and EM. They also will be able to clear their panels rapidly by dropping/reducing panels in the hanger. The primary disadvantage of this tactic is the extreme vulnerability of the slow-moving Sat Ships to seeking weapons. You must be careful to ensure that you have enough defenses to take care of the drones or plasma torpedoes that your opponent could launch at these ships.

The fast assault tactic relies on the Sat Ships' high speeds to keep them out of trouble. Fast-moving Sat Ships are much less vulnerable to seeking weapons and can usually dictate the range at which fire will be exchanged with the GP fleet. The disadvantages of this tactic are that you will have to manage power on the Sat Ships carefully since they will be prone to run out (from zipping around at such high speeds). In addition, they cannot easily seek the shelter of the mothership because of the 16-impulse delay (one of the few things that the 1990 revision improved) between going speed 10 or less and being beamed back aboard.

Recovery of a fast assault Sat Ship is possible, however. It helps if the Sat Ship begins somewhat ahead of the mothership and then declares emergency deceleration. As the mothership passes the Sat Ship, it can use a tractor beam (all the motherships have one) to grab the Sat Ship and drag it along (although at the cost of slowing down). An alternative is to use a DisDev on the Sat Ship to move it in the direction the mothership is going. Finally, the mothership can drop the tractor somewhat before the 16-impulse delay is up, counting on recovering the Sat Ship at the edge of transporter range. If you have the leisure of setting up a more controlled recovery, one possibility is to have the mothership and the Sat Ship leave an attack pass on slightly divergent courses. When the mothership turns for the next attack pass, it can turn in the direction of the Sat Ship, which has slowed using either emergency deceleration or normal speed changes.

OVERALL STRATEGY

Andromedan overall strategy is built around the fact that their ships are stronger on defense but weaker on offense than the comparable GP ships. The primary decision is whether to employ a strategy of attrition, capitalizing on your superior ability to regenerate defenses, or an all-out attack which takes advantage of your ability to absorb a bigger alpha strike than enemy ships. If possible, you should opt for the attrition strategy since this better exploits the Andromedan strengths. However, scenario time limits or the need to defend a fixed position may force you to use the all-out assault. In addition, you should be ready to switch from attrition to all-out assault if the enemy gives you the opening, most likely by having insufficient weapons ready on their recharge turn.

ATTRITION

When using attrition, the goal is to maintain the tempo of the battle at a level that allows you to repair damage as fast as it occurs, while not allowing your opponent to do so. Your goal should be to maintain a range at which the GP fleet can only score 30 points per turn on your smallest Sat Ship. By draining PA panels and using the shield repair procedure to restore degraded panels, you should be able to return an almost intact Sat Ship on the second subsequent attack pass (four turns later). Meanwhile, you will be bringing down an enemy shield on each pass, which he cannot repair anywhere near as quickly as you can drain your panels. Eventually, you will begin to penetrate.

The mothership should usually be deployed in front of the Sat Ships so that its TRHs can get a better shot. Because the PA panels (and damage control rating) on the mothership are larger, it can afford to take more damage on a single pass. When facing opponents with direct-fire heavy weapons, you should use DisDevs offensively to bring selected target ships (usually starting with the smallest in the opposing fleet) into a more favorable range bracket.

The keys to successfully executing the attrition strategy are careful power conservation and an exact grasp of the potential damage that the enemy fleet can do to you. You can afford to plot speeds which are a little on the low side to conserve power, counting on an unplotted mid-turn speed change if the enemy moves unexpectedly fast. You should study the damage charts for both Andromedan and your opponents' weapons carefully to decide at what ranges you wish to fire and plan your maneuvering to reach exactly the desired range.

ALL-OUT ATTACK

If you must press the attack rapidly, remember that it is better to lose Sat Ships than to risk the mothership. The general fast attack would deploy the Sat Ships ahead of the mothership. Those in fast-attack mode lead the mothership into battle, and those in sneak attack mode are transported ahead of the mother also. You should count on one Sat Ship either being crippled or destroyed by the enemy fleet. If you project that the ship will be destroyed, space the Sat Ships at least 2 hexes apart to prevent explosion damage. If you expect the Sat Ship to be crippled, you should plan to pick it up with the mothership (using the above-described procedure). Using the mothership's repair systems, you may be able to restore the ship to some usefulness before the scenario is over.

With the Sat Ships in the lead, the opponent must either fire on one of them and risk an overrun by the TRH-equipped mothership or hold his fire for the mothership. In this case, the Andromedan player should be careful to turn or displace the mothership away before it reaches a range at which the enemy

can do major damage. You may not get to take the best possible shot with the mothership's weapons, but you will have managed to preserve all the Sat Ships for the next attack pass.

The best ranges to fire are either 3 or 5 since these are the high end of key TR range brackets. An additional advantage of the range-3 shot is that the ph-2s can be used offensively. If firing from range-5, it is probably best to save the power in the phaser capacitor since the damage that the ph-2s can do is small (average 1.16 points). Range-5 is, however, outside of the most effective range of GP phaser-1s.

You should almost always plot speed 31 for the impulses of the actual attack pass (defined as the time that you are within overload range of the enemy). You can plot a reduction to a lesser speed afterward but can use an unplotted mid-turn speed change to delay the slowdown if necessary.

FIGHTING THE PLASMA BOYS

Your biggest advantage in attrition attacks against the plasma-using races is that you can (if you filled the batteries with reserve warp) use an unplotted acceleration to prevent a torpedo from catching you until the end of its run. Unfortunately, the smart plasma player will usually employ enveloping-S or -R torpedoes fired at 15–20 hexes to keep you from getting too close. Sat Ships should probably be placed in fast assault mode since the low speed of the sneak attack leaves them too vulnerable to the speed-32 plasmas. It may also pay to spread your formation out somewhat to help you identify the targets of torpedoes and force the opponent to launch more to keep all your ships away. DisDevs are best used defensively since plasma ships do not have the sharp range-break that direct-fire ships do.

Because of the plasma torpedo's long arming cycle, the plasma player must be careful to keep a big enough deterrent in ready torpedoes to prevent the Andromedan from closing (PPTs can help). If he fails to do so, the Andromedan player should change to an all-out attack.

In all-out attacks, the rapidly-closing Andromedan should observe when the plasma player launches his biggest mass of plasma. If this is at a range greater than about 8, the Andromedan can use the DisDev to jump over the torpedoes. (It is probably a good idea to have an HET ready if this fails.) If the plasma ships hold their fire, the Andromedan should be able to reach range-5, fire his alpha strike, and displace away before the torpedo arrives.

As discussed above, the TR beam still works well against cloaked ships if it is fired from point-blank range. If the Romulan uncloaks as you close, you can fire on the last impulse of the fade-in and displace away without possibility of Romulan reply (if the DisDev does not fail).

Although the ISC also has the long-range direct-fire PPD, you can displace the firing ship and cause the remaining pulses in the firing to be lost. Offensive use of the DisDev can also be used to disrupt the echelon formation. Note, however, that PPD damage is a separate volley for degradation, making it profitable for him to fire out of what would normally be effective range.

FIGHTING THE PHOTON

The attrition strategy against the Federation can be summed up in a single sentence: stay out of overloaded photon range. The power drain from charging even standard torpedoes (or holding overloaded ones) will be enough to allow you a speed advantage with only a small expenditure of battery power. The Federation should fire proximity photons in narrow salvos at Sat Ships. The Andromedan Sat Ships can be used in both sneak attack and fast assault modes, and you should rotate damaged Sat Ships into the bay so that their panels can cool down. DisDevs should be used against the Federation ships to displace small ships toward you as described above.

An all-out attack against the Federation is a much tougher proposition. Because of the power of the photons, it's likely that a Sat Ship will be destroyed on the initial attack pass. The other Sat Ships should be spaced appropriately to prevent taking major damage from the blast (every other hex). Unless you have so little time that you must risk closing to range-3 (where the photons have a 1–4 hit number), you should take your shots at range-5. Especially when fighting later Federation ships, you will probably need to use your ph-2s for drone defense. It is probably still best to use the DisDev offensively to try to bring selected Federation ships closer.

FIGHTING THE WESTERN POWERS

The disruptor-armed races are a major pain in the neck because of the incredibly low threshold for leakage. Since the disruptor lacks the shock power of multi-turn weapons, you may want to consider an all-out attack as a standard strategy even when you have more time. Sat Ships can be used in both modes, and DisDevs should be employed offensively. Your goal should be to cut down on the number of disruptors firing at you as rapidly as possible, or your Sat Ships will be leaked to death. You should definitely think about using CDR (as discussed above) to buy more time.

You have relatively little to fear from Lyran ESGs, although they will keep you from closing to range-3. However, the hordes of drones that Kzinti and Klingon ships can fire will complicate your planning. Tight formations (for mutual ph-2 support) and liberal use of T-bombs are the best answer. Andromedans have few labs (Sat Ships have none) and cannot effectively identify drones, so expect the GPs to use heavy drones and other surprises.

Fusion-armed Hydrans should not be much of a problem as you can use superior speed to stay out of the close-range death zone (although this extends to 10 hexes!). Their fighters are just the right size to be crippled by a TRL at range-3, and you had better kill them there because at range-2 they will hurt you. If he keeps his fighters with the ships, DO NOT go to range-3 to kill a few fighters. Hellbore-armed Hydrans are much tougher opponents. The hellbore has a good probability of hitting you and can rapidly fill your panels with energy. Its ability to envelop you can also complicate several of the schemes described above to transfer energy to the batteries. The silver lining is that the power drain from the weapon is substantial, limiting the speed of the Hydran ships. Hellbore-armed Hydrans should be fought using the anti-Federation tactics described above (range-5 shots remain a good bet in an all-out attack).

SHIPS OF THE INVASION FORCE

Dominator: Besides the impressive array of systems (four DisDevs being the highlight), this ship also has a potent psychological punch. The biggest problem with this ship is that the fleets that it usually faces have enough long-range firepower to cripple or destroy Cobras at long range. The use of Mambas is highly recommended.

Intruder: This ship's power systems were considerably upgraded in the revision to bring it into line with the other Andromedan motherships. The primary weakness is the relatively low number of DisDevs (2).

Infestor: This rare Andromedan ship sacrifices TRHs for more hanger space and special sensors. Although it only has two channels, it has tremendous amounts of power for EW support. A favorite tactic is to jam a key enemy ship with offensive electronic warfare, helping all of the Sat Ships simultaneously.

Conquistador: With a nice power arrangement, armament, and two DisDevs, this ship's major weakness is the relatively small front panels. When facing an equal BPV opponent by itself

(but still with its Cobra), this can be dealt with, but you should fly this ship cautiously in larger fleet battles.

Python: This hybrid ship can be used to beef up the power of another mothership or can duel heavy cruisers on its own. In a one-on-one duel, there is usually little point in using the DisDev offensively as enemy fire control is not disrupted.

Mamba: This large Sat Ship was built in response to increasing GP firepower which made Cobras too vulnerable to damage in fleet battles. With 50% larger front and 33% larger rear panels and an extra TRL, this ship is more survivable without any net loss of offensive potential (per hanger space). Fewer Sat Ship hulls also make it easier for the motherships to transport and displace Mambas. The major drawback of the Mamba is that it has no more hull boxes than the Cobra, making it susceptible to leaks.

Cobra: The workhorse medium Sat Ship was slightly slowed down by the revision, but more importantly lost a rear PA panel. In small battles this ship performs well, but larger fleets should replace as many as possible with Mambas.

Viper: The original Sat Ship, quickly became too small to survive in a squadron battle, but useful for convoy raids and duels in its BPV range.

Eel: This excellent EW platform has plenty of special sensors and the power to use them (for a while at least). It is often the prime target for the entire enemy fleet, however, so survival can be a problem. You may want to consider using this ship in the sneak attack mode by beaming it out in the hex just behind the mothership and using a tractor to drag it during the 4 impulses that its fire control is disrupted. You can release the tractor when fire control becomes active so that the scout functions can be used and pick the Eel up at range-5.

Courier: This ship is also a useful EW platform (and was improved by the replacement of the nearly useless TR beam by another scout channel). The tactic described above for the Eel can also be used with this ship.

Terminator: This scary ship is a great way to cause the opponent nightmares. Best used in a sneak attack mode where you can place the ship as desired, it can unleash a devastating single attack or Mizia the target's weapons away. Remember that in a desperate situation you can fire at the Terminator to give it more power, but this will cause panel degradation.

Bull Snake: Of all the cargo ships in the game, this is the best. Even in moderately heavy combat situations, this ship does its job. The Bull Snake is the only cargo ship able to go two complete turns at speed 31 while applying 6 points of ECM. On the deficit side, the Bull Snake has few weapons and fewer transporters, making combat cargo transfers difficult, although most are made by docking or in the hangar and not a problem.

Ratler: A handy commando ship, with the added bonus that the mothership can transport it directly to the planet's surface.

Energy Module: These units, while not true ships, give a mothership more staying power. An excess energy depository, an energy module can substantially reduce the damage done to the mothership, allowing it to depart to fight another day. Since it replaces a Sat Ship and has no weapons, this unit reduces the number of weapons in the entire fleet. Best used if survival of the mothership is of paramount concern.

Pseudo Satellite Ships: These look like a Cobra, but cannot use its EM and ECM. Hence, Cobras have to try to look like PSSs, rather than the other way around. This can still be very effective, however, as the enemy won't know which of the "Cobras" approaching are the real ones, and once the real one fires, it can raise ECM and go erratic to evade. Best used once or twice a year to surprise an opponent. ✪

LYRAN TACTICS

by Leonard E Byrd

The Lyran Star Empire is made up of 21 counties, including the loyal but independent LDR. The empire covers a large area of space bordering the Klingon Empire, the Hydran Kingdom, and the Kzinti Hegemony. The LDR and the WYN also have a shared border with the Lyrans, and two Orion cartels (Cluster, Daven) operate within Lyran borders. Lyran ships were often deployed to the Federation front during the General War. The following general principles will give you the knowledge to operate against any of them with a reasonable chance of success.

THE SHIPS

While comparing your average Lyran ship to the ships of other races, you will find that the internal fortitude of your ship is equal to or greater than that of your opponents'. Your direct-fire capability (in ph–1s, ph–2s, and disruptors) will be better than your Kzinti counterpart, equal to the Hydran fusion ship (at all but point-blank range), and perhaps marginally inferior to the Hydran hellbore ship of equal class.

A Lyran ship's greatest disadvantage is the lack of non-powered offensive firepower, such as drones and/or fighters, resulting in constant power starvation (and concentration of enemy firepower on your ship rather than on expendable units). To offset this disadvantage, you have the expanding sphere generator, one of the most useful devices in the SFB universe when properly employed. This device can be used as a shield against drones, hellbores, and fighters or as an offensive ram.

Your greatest problem is the power to run your weapons and ESGs while moving at battle speeds (20+). There simply isn't enough. If Lyran ships had the power to operate every system and move at battle speeds, no race could defeat them. The only way around this is to fill the ESGs and phaser capacitors before attacking. It may be necessary to pull out of combat to refill them.

You must also be wary of the poor rear shielding of your ship, especially when fighting Hydrans with hellbores; proper use of shield reinforcement and maneuvering will offset this weakness. The refits corrected this problem.

Lyran firing arcs are very much like Federation firing arcs in that their main strength is in the FA arc, with disruptors and ph–1s in the dreadnought and cruiser classes, disruptors and ph–2s in the smaller classes. There is an advantage in the LS/RS ph–3 battery for defense, and the heavy phasers can generally fire to the side if required. Firing arcs become more diverse in the trimaran vessels, with disruptors firing in the FX arc.

Lyran maneuverability compares favorably with Kzinti and Hydran ships throughout all classes. Klingon and some WYN ships will generally be more maneuverable than an equal size Lyran vessel.

LYRAN BATTLE TACTICS

Your tactics will be linked to your ESG. This system, which devours energy like nothing else, is a third of your firepower.

If you are making an overrun, set the ESGs to 0 or 1 hex to maximize the field strength, use your ph–3s to destroy things (such as drones) which would weaken the field, and combine the ESG with your powerful direct-fire weapons. You want to fire when (or before) the target does, but don't give him enough time to turn another shield toward you before the ESG hits him.

You can make oblique (in-and-out) attacks, trying to clip the corner of overload range and wear the enemy down, using your ESGs for drone defense (firing the phaser–3s at the drones just before they impact the field to preserve its strength).

LYRAN vs. KZINTI

The Kzinti has a general advantage in power. His drones don't use power; your ESGs do. The Kzinti will generally be faster and have more EW operating than you do (but then, ESGs ignore EW anyway).

When it is necessary for you to be the aggressor, it is best to close the range and ram with your ESGs. If the Kzinti is going to sit and wait for you (or retrograde), the best thing you can do is to keep your speed in the 20+ range and charge your weapons before making your way across the board. Counter long-range drone fire by using T-bombs, ph–3s, and speed against slow and medium-speed drones.

Keep your ESGs off as long as possible so that when they are turned on your opponent has no time to react. Note carefully the tactic of launching fast drones from four hexes, where they will hit before you can get an ESG up (because of the four impulse announcement required). Be wary of mid-turn speed changes that can cause you to mis-time your ESG.

Keep your ESGs at a radius of 1 or 0 to maximize the field strength and drive over the Kzinti. Make sure that you have accounted for EW by shifting all EW points to ECCM before you hit; fire in the first possible impulse in which you can safely expect that he will not move again before your ESGs impact. The slower he is moving, the greater your chance of firing before he fires at you. Depending on the closing speed, you may be able to fire as much as 2 to 3 hexes before you overrun, giving him little or no chance to hit you and decrease your firepower. Beware the HET when using this tactic. In this case you may want to leave the ESGs at radius one so that you won't have to enter his hex when overrunning; allowing a Kzinti to fire all those phaser–3s at point-blank range is not desirable. If your opponent decides to try to hold you at range with tractors, use reserve power to break it or to make him work to maintain the tractor. If he keeps the tractor on, you still have the direct-fire advantage and your ESG will still be there next turn, providing your drone defense is adequate. The key to winning in this case is to not let the drones hit; you barely outgun the Kzinti in direct firepower, and you have the additional benefit of the ESGs.

If you want to fight an attrition battle at range, you have all the advantages. You outgun the Kzinti in phaser–1s (if you both have, or don't have, the phaser/C refits), are at least equal in disruptors, and your ESGs can be replaced with engine fuel while his drones cannot.

If the Kzinti is going to come out and maneuver with you, the situation requires some modifications to your tactics. If he's using fast drones, you will end up using your ESGs strictly for drone defense and playing the long-range duel. This will take longer but should end in Lyran victory. If the Kzinti is using slow or medium speed drones, you should be able to get around the drones and overrun with full ESGs. Keep your speed above 20 and watch the impulse chart. By moving at a 60° angle off from the Kzinti, his 20-speed drones will eventually end up giving you enough range to begin turning back toward the Kzinti and overrunning. If the drones end up following you, roll a T-bomb out of a shuttle bay (you have two) and get rid of them.

DRONE DEFENSE

The key to winning battles against Kzinti ships is to avoid being hit by drones. There are several ways to accomplish this, the first and most obvious being your ESGs. When using the ESG defensively in a single-ship battle, you should keep its radius at 0 or 1 at all times. This will give you the most defensive punch for the amount of power spent. Make efficient use of your labs to identify the type of drones coming in. Identify the most harmful to your ESGs, and use your flank phaser-3s to damage/destroy them before they make contact. Be especially wary of multi-warhead and armored drones. These might be worth a phaser–1.

The second method of drone defense is the prudent use of your very limited number of transporter bombs. You will find that many of your opponents have come to the conclusion that the way to win is to overwhelm your defenses by making hordes of drones arrive at the same time on the same shield. This sounds like a good tactic, but is easily overcome by a single bomb. In some cases it will be beneficial to set off your own T-bomb (when the drones are adjacent to it); one drone can easily do more than 10 points of damage, and if you have 4 to 10 drones coming in, it will be worth it to take the 10 points from the T–bomb if you kill all the drones. Be especially careful using this tactic if the Kzinti ship is coming in with the drones. If he is ahead of the drones, turn on the ESGs and deal out your damage to him per standard procedure. When he takes down your shield for you, use your transporters to place your T-bombs appropriately. Sometimes you can even damage some of his rear shields at the same time.

The same tactic will work if the Kzinti is in the same hex as the drones, except that you will need to get the T-bombs placed as early as possible; otherwise, the Kzinti can slip or turn to get on an open shield before it comes back up (8 impulses). If he is behind the drones, it makes the tactic work even better.

The third method of drone defense is the flank phaser–3s on your ship. To use your shots for best effect, make sure that the drones have been identified by your labs and then use the appropriate number of phasers to insure destruction. This will probably make you turn at least 60° to use all of your phaser–3s. If the drones coming at you are standard (four damage point) drones, fire one phaser at each drone at range-2. This gives you a 50% chance of destroying the drone. If the drone is not destroyed, you can take another shot next impulse before the drone hits. This method requires you to watch the impulse chart carefully to insure that you will not move at the same time as the drone. If this happens, you can sideslip to keep the drone away, and if you can't do that, you are going to eat the drone.

It is crucial to identify the drones as they approach, at least as much as possible. Swordfish drones, with their phasers, are a real problem. Double-space drones (with a ph–3 and an explosive module) are double trouble. Slug drones should be tractored before they hit (and collapse) the sphere.

Finally, it is *now* reasonable to use a WW if you need to. Get one charged ASAP, and follow your standard tactics. If you have several drones coming in and you can't get away, you can now use emergency deceleration and then launch the WW. This will normally only be necessary if he has used a scatter-pack.

LYRAN vs. HYDRAN

Hydran ships come in two flavors: fusion and hellbore. Fusion ships come with lots of fighters, which are a problem for your ESGs. Hellbore ships come with, well, hellbores, which are an even bigger problem for your ESGs.

Before inviting your local Hydran in for tea and combat, read the Hydran section. (He's reading it even now.) Hydran tactics are based on their fighters, so we'll consider them first.

FIGHTING THE FIGHTERS

There are five basic ways in which Hydran fighters are used:

- Moving ahead of the ship to cripple the target.
- Moving with the ship to combine their firepower. Slow fighters are often towed by the ship, which fortunately does not have enough tractors for the entire fighter group.
- Following the ship, to fire at any shields knocked down by the ship's weapons.
- Moving independently in an effort to outflank you.
- Held on the Hydran ship and launched after you fire and are

held in his tractor beam; the infamous Hydran Anchor.

Combat against fighters must avoid the concerted firepower of the ship-fighter combination. Don't take on the fighters and the ship at the same time. Maneuver to keep the enemy ships out of effective range, and pick off one or two fighters per turn with long-range fire. If he splits his forces so you can run in and take one group out without getting wasted by the second, go for it.

Hydran fighters, for the most part, take 10 points of damage to destroy. This makes them an excellent target for your transporter bombs. You can use many of the same tactics as you use to defeat drones. Never believe a Hydran when he tells you that "real Lyrans don't use T-bombs."

The ESG is not very effective against groups of objects which contact the field at the same time. If your opponent's tactics include putting several fighters in the same hex, you can ruin his day with one well placed T-bomb, or use one or two phaser–1s in combination with your phaser-3s and destroy a few of the fighters on the impulse that they enter the hex next to the ESG. If you move before he moves the fighters again, all he will have left to move is spare parts. If the Hydran ship is coming in with the fighters, watch his approach carefully. It is customary in this tactic to reinforce a #2 or #6 shield and slip into the ESGs. If your Hydran looks like he will try this, plan to leave a few points for tractor beams. When he moves adjacent to your ESG, grab him with it and keep him away. Either he will spend power to break your tractor, or he will let his fighters go alone, allowing your ESG to do greater damage on them. A fusion fighter becomes a "one-tooth tiger" when crippled.

When fighting in single-ship actions, you will rarely have any reason to turn on your ESGs at any radius greater than one. (Some Lyrans prefer to ram Hydrans with radius-3 ESGs to avoid getting into gatling/fusion range.) If you find need to go beyond radius one, bear in mind that the ESG is the universe's greatest mine detector. This sounds great except that even if you have the ESG at radius three any damage which the ESG cannot absorb is applied directly to the facing shield, period.

Your ESG is only effective against certain kinds of objects, and surprisingly enough one of them is the hellbore. This can be of great benefit in a few cases, but in some it will ruin your day. You will find that hellbores fired at a ship with an operating ESG automatically hit the ESG. You then take damage off the ESG on a one-to-one basis with the warhead of the hellbore (at the range to the ESG, not the ship); anything left over is applied directly to your shields. If you study the Hellbore Chart, you will find that two overloaded hellbores at a range of eight will effectively take down both ESGs on your Tiger automatically. This could be a definite problem if all of his fighters are just about to jump on you at the same time. The problem is even worse if some of those fighters are Stinger-Hs or you are fighting a fleet action.

If you can take out the fighters at long range, the ESG/ hellbore interaction becomes an awesome advantage in that it gives you massive shielding against his only heavy direct-fire weapon. If the Hydran doesn't turn and run at this point, he is meat on the table. If you are fighting a fusion-armed ship, your best tactic will be to keep the range at 3–5 hexes and blow his doors off with superior firepower. If you have a problem maintaining a 3-hex range, you might allocate 12 or 15 points of power to tractors and sit. When the Hydran comes running up to close range, lock your tractor on him at range-3. This will get you one round of target practice. (If he has the power to break it, you are in trouble.) Next turn he will probably want to break your tractor, so plan on not being able to hold it; overload weapons instead.

Next turn allow power for an HET and overloads. You should be able to run away without him getting a clear shot. You could also just let him go and, instead of running, allow maximum shield reinforcement and maximum ESG power. Unless he is moving pretty fast, he will eat your ESGs and another full volley compared to only one volley he can score on your ship if he comes in.

CONCLUSION

The general message of most of these tactics is "divide and conquer." You can't afford to fight any of your enemies all at the same time. You must split his firepower and concentrate yours. Don't fire at three or four different shields. Take down one or two and fire at those, and those only. At the same time show the enemy a different shield every time he wants to fire and make him waste his power against it. Use your maneuverability!

When fighting hellbores, balance your shields on the turns that he can fire them and you will decrease their effectiveness immensely. Avoid putting up long-radius ESGs when they will be within overload range of a hellbore ship that is not, itself, within overload range of your fleet.

If you know what kind of drone is coming in and you know that it is going to hit on a shield away from the enemy, it may be worth it to shoot a Kzinti instead of destroying the drone that won't penetrate your shield. In 80% of the battles won by the present author, at least three shields are damaged to within five points of failing, but the opponents will have one or two shields down with 50–75% internal damage. Any undestroyed shield boxes left when the battle is over represent systems that were not used to their full potential.

LYRAN SHIP STRENGTHS AND WEAKNESSES

Lyran ships initially come with a multitude of problems, but refits (shields, phasers, trimaran power) resolved them.

Lion DN: Good direct firepower and four ESGs, a good match for enemy DNs. Standard glass rear shields are a problem as on most Lyran ships but fixed in refits.

Wildcat BC: This ship was known as "great firepower, no energy" until the addition of two power packs. At that point, it could outrun and outgun any other cruiser in the area, and the sheer joy of 80-point ESG overruns brought smiles to the faces of the Lyran Marshals that commanded them.

Hellcat BCH: Solves the power problems of the Wildcat, creating a superbly effective ship. Note that the BCH refit did not add weapons, it added POWER, and with the power-packs added in Doomsday is arguably the best BCH in the game.

Tiger CA: Can stand up well against any enemy cruiser, but can be caught short on power in some cases. Note that the Lyrans use a variant of this hull for their two tugs, their mauler, carrier, and survey ship, all of which are excellent designs. And should you ever be bored with your Tiger, convert it to a Lion!

Bengal Tiger CC: The CC is *awesome!* Forty points of power and six phaser–1s, combined with massive front half shielding makes this ship one of the best in the game. Of course, the BPV on the ship reflects the ship's capability.

Panther CL: This ship is smaller than many ships that are considered CLs, but even so its two ESGs give it a massive amount of potential as long as they can be powered up beforehand. This ship does not have a great deal of staying power, and its (pre-refit) rear shields are very poor, especially #4 at 11 points. Had an edge over the Kzinti and Hydran CLs before they were refitted, but then Lyran CLs grow up to become BCs. The ship is too slow against late-war DWs and CWs.

Jaguar CW: A very popular ship, and (with packs) more than a match for other CWs. The failure of the shipyard to replace the ph–2s is criminal considering there are only three disruptors. The leader version is far superior.

Leopard DD: A better balanced ship than the CL, including a better #4 shield, the DD is an excellent ship when compared to enemy ships of the same class. One ESG is more than sufficient in this class of ship for either offensive or defensive purposes.

Alleycat DW: Once the power-packs were installed, this became one of the great DWs. It has more power than the Kzinti DW and is only slightly more expensive (which evens out when the Kzinti pays for drone speeds). The two ESGs make for deadly overruns in DW duels. As always, the leader version is even better than the standard ship.

Cheetah FF: The FF compares favorably to Hydran and Kzinti FFs. Its ESG and two disruptors can do a great deal of damage if used properly. It also makes a great hellbore sponge in fleet actions.

Manx Police Corvette: A handy little ship, undergunned like all police ships, but the only nimble ship in Lyran service. When combined with the firepower of a convoy, it can do its job. A few were converted into the larger Military Police ship after the LDR established the design as worthwhile.

Carriers: Pay attention to fighter launch and recovery cycles to avoid ESG interactions. When launching fighters, grab the first few with tractors to keep them with the ship until the entire squadron is launched. Note that the CV can enter direct combat, but the CWV is a medium carrier, not a strike carrier.

PF: Power problems force this unit to use standard loads in one or both disruptors. Even so, it remains an effective fighter killer and assault PF. In ship assaults, close to short range and fire the disruptors with whatever loads you had. If you are still alive on the next turn, plot zero speed and put everything into disruptor overloads. Your best chance for survival is the destruction of the enemy, and that goal is attainable. ✪

TACTICS OF THE LYRAN DEMOCRATIC REPUBLIC

by Stephen Koehler

Most of the factors affecting LDR doctrine are seen only at the campaign level. With relatively few heavy ships, and no replacements available, the need to keep these units intact is acute. The small size of the LDR makes it possible for the entire fleet to use reaction movement (in F&E) to counter any incursion.

The basic tactics of the LDR follow those of the Lyran Empire, being tied to the ESG. However, the gatling phasers installed on LDR ships add an extra dimension to the most standard of all Lyran tactics — the overrun. As with Lyran Empire ships, the overrun can backfire so careful planning is essential.

The gatlings provide increased defense against drones and fighters, allowing the ESG to be maintained at full strength for use as a ram. The gatlings also provide tremendous short-range firepower, particularly if the target can be lined up on the LS/RS border (i.e., directly ahead or astern). To get the most out of your gatlings, you will have to use overruns instead of a mid-range disruptor duel. To win battles, you must get the most out of your gatlings (and everything else).

Should you have to fight the Klingons, the small number of drones they can fire are all but a waste of time against your ph–Gs. You should otherwise outgun them.

The Hydrans can be a problem as their fighters have the same ph–Gs that you have. Once the fighter is in range of you, you are in its range. It's better to cripple all of the fighters to disable their gatlings than kill half of them.

The use of your gatlings is critical against a drone-using opponent. You are virtually drone-proof. Fire one ph–G blast at each drone, then let them hit the ESG. If you want to preserve ESG strength, you can use a second ph–G blast, but frankly you'd be better off to lose one point of ESG strength to a crippled drone and fire the ph–G at the enemy. You'll do more total damage that way.

The primary LDR contribution to naval architecture is the Military Police (MP) ship. While one of the better frigates in the game, it is not a war cruiser and should not be treated as such. It is best employed as an escort or minesweeper. The short-range of the weapons makes it impossible to operate in a mid-range duel. Like all small ships, it is in serious trouble if caught alone by a cruiser but can handle itself well against a frigate. That the MP is often used for border patrols, and often encounters more powerful marauding units, is indicative of the small size of the LDR fleet and the need to keep every ship on duty.

The "big cat" of the LDR is the BCH *Democracy,* converted from their original Light Cruiser. This is the most powerful non-X Lyran warship in space, and it's all yours.

The LDR, due to its lack of warships, makes extensive use of armed freighters and other auxiliaries. The LDR player in a campaign will survive or fail based on his ability to use them.

The LDR monitor was also converted to gatling technology, and it made the LDR capital safe from even major raids.

One of the few cases in which non-violent combat can be realistically employed is in skirmishes between the LDR and the Lyran Empire. Even so, this only works in mid-range duels as the ESG system does not understand the term "non-violent." Most combat between LDR and Lyran ships is of the inconclusive skirmish variety. Whichever party is out of bounds knows it, and they will withdraw when firmly challenged.

It is important to remember to employ a cosmopolitan approach when dealing with the LDR. Do not simply copy Lyran tactics, but seek to exploit the key difference (gatlings!) between LDR and Lyran ships. The LDR fleet, though small, is thoroughly professional and willing to deal with any challenge. ✪

WYN TACTICS

by Marc Spencer Cocherl

The WYN fleet is a rag-tag collection of up-gunned freighters and frigates that would be brushed aside in high space by any war fleet, but it suddenly becomes a fighting force to be reckoned with inside the WYN radiation zone.

The biggest problem you will face as a WYN commander is time. You don't have any! If you cannot defeat your opponent in 10 turns, you lose the battle and the war. If you win, those that survive will fight yet another day, and those that don't will have their names written in the WYN Book of Heroes. If you lose the battle, there are no heroes, no honor, and no memories. Not only is your life forfeit, but also are the lives of your family and loved ones. Your homes are destroyed, and all you once knew and loved will be erased.

The frame of mind of a WYN player is their most important key to success. As a player you must be prepared to take damage and not disengage. A crippled ship can still damage its enemies. Besides, you don't have anywhere to run to.

Always set your minefields for size class 3 or larger. This allows your smaller ships to dart in and out of this artificial terrain.

Ignore crippled enemy ships to concentrate fire on undamaged ships. If you win the battle, you can police the cripples up later.

Don't be afraid to lose the auxiliary ships. It can't be helped.

The vast majority of the battles a WYN commander faces will be fleet actions. The reason for this is quite simple. Until the introduction of the AuxBC, the WYN did not have a ship in their Navy that could fight a fleet cruiser of any race in open space. Conversely, no admiral in their right mind would send a lone ship into the cluster to be overwhelmed and captured. Considering how the WYN engineers modified a captured Lyran DD, think what they could do with a Klingon battlecruiser!

THE SHIPS OF THE WYN NAVY

The WYN fleet can be broken down into four main types of ships: converted freighters, optimized warships, Orion-built, and late model designs. If it can be helped, do not mix formations of converted freighters with other types because of their slow acceleration, low max speed, and their tendency to explode after taking 50 points of damage (including the front shield).

Auxiliary Cruiser: The AuxC is a thankless ship to fly. One solid hit from an enemy frigate will cripple this undersized ship. It takes four turns to accelerate to the maximum tactical speed of 25. By that time, however, half of the effects of the radiation zone are wearing off your opponent. Every warp hit is critical, and your heavy weapons have a disadvantageous RS-LS firing arc.

The advantages of this ship may not seem to outweigh its disadvantages, primarily because they are not readily apparent. The acceleration limits can be countered by keeping your speed up. All phasers are 360°. Another advantage is the use of optional weapons. This allows you to tailor your ship to the battle.

The amount of power this ship has is incredible. The AuxC requires 2.5 points of power to raise shields, power life support, and lock on fire control. In theory a WYN AuxC with disruptors in the option mounts and burning the batteries can attack at speed 24 while charging and firing all its weapons, and even overloading one disruptor per turn! How many D7s can claim that?

You need quick-firing hard-hitting weapons in the option mounts. Disruptors are the most common option. Choosing four type-C drone racks also has its advantages. If available, the choice of four plasma–Fs, two plasma–Ss, or four hellbores can be a nasty surprise. NEVER put photons in the mounts unless you have AWRs. Close with the enemy and give them your best shot. Use overloaded weapons and enveloping plasmas.

Auxiliary Carrier: This ship has the same disadvantages as the AuxC but with fewer phasers and less power. It has the same firepower of the AuxC but should not be used in direct combat until your fighters have had a chance to reload once.

Drones are normally your best bet on this ship. Type-B racks will give you sustained long-range firepower while your fighters support the attack. Turn as much drone control as you can over to other ships or an AuxSC (an AuxC with sensors in the mounts). This will allow your drone-armed fighters to launch drones at the enemy at a safe distance and return for reloading. If operating non-drone fighters, support them with your own drone waves until they can return to reload. In combat, start with fighters fully loaded (launched, if possible). Fire everything as quickly as you can, then return them to reload. You need to get the second fighter salvo off by turn 3 or 4.

The AuxCVA and AuxSCS are operated in the same manner as the AuxCV, but are obviously more capable.

Conversions: As a general note, the converted Lyran, Kzinti, and Klingon ships should be considered one size larger than their original class. Thus, the Lyran DD is equal to the CL, and the Kzinti FF to a DD. The tiny Klingon G2 is less than an E3.

Orion-Built: These are without engine doubling or cloaking devices. Even so, they are some of the best you have.

Auxiliary Battlecruiser: While it has poor acceleration, the turn mode of a bathtub, and the most disadvantageous firing arcs imaginable, this is the ship that finally made the WYNs a serious combat force. It was the first WYN ship that could give as well as take damage. With cruiser-size shields it could face any ship suffering from the effects of the radiation zone. All phasers have 360° firing arcs. With disruptors in the option mounts, this ship can attack at high speed, load and fire all phasers *AND* overload the disruptors, have six points of ECM/ECCM up, and put six points of reinforcement on the shields. Few, if any, non X-ship can make that claim.

Disruptors, drones, or hellbores were the preferred weapons. However, this ship has the power to carry any weapons in any combinations, including plasma torpedoes, photons, or PPDs. As with all option mount decisions, avoid splitting the optional heavy weapons between the drone and torp categories as this makes you more vulnerable to the Mizia Concept. Note that you already have four drone racks, so four "torpedo" weapons is a good choice. If you can get hellbores under the percentage limits, they make an incredibly durable weapons suite. If you take a plasma or drone option, it must be noted that the WYN AuxBC is probably the best ship in the game for performing the Gorn Anchor.

Pocket Battleship: After the Lyran invaders were defeated in Y181, the WYN converted their badly damaged Lyran destroyer into what became known as a Pocket Battleship. More accurately this design could better be termed a "War Dreadnought" because of its limited range and cramped living conditions. This was the flagship that defeated both the final Klingon assault led by C7 *Death* and the post-War ISC attempt to "pacify" the cluster.

The primary problem is the lack of long-range endurance and rear firepower. This ship represents the apex of the WYN's ability to convert and improve a starship design. With the firepower and front shields of most dreadnoughts and the ability to launch both fighters and PFs, it can dictate terms to any enemy entering the cluster.

In combat, the PBB should drop the PFs and fighters quickly, allowing them to attack at once. Then, with all disruptors overloaded, your scatter-pack about to open, and the ESGs going up, move toward the enemy flag ship at speed 20 and kill it.

Auxiliaries: Most of the traditional support vessels are built on freighter hulls. Get them into position quickly.

Always remember the motto that is inscribed over the entrance way at the WYN Space Academy:

"If you save the cluster, it's a good stardate to die." ✪

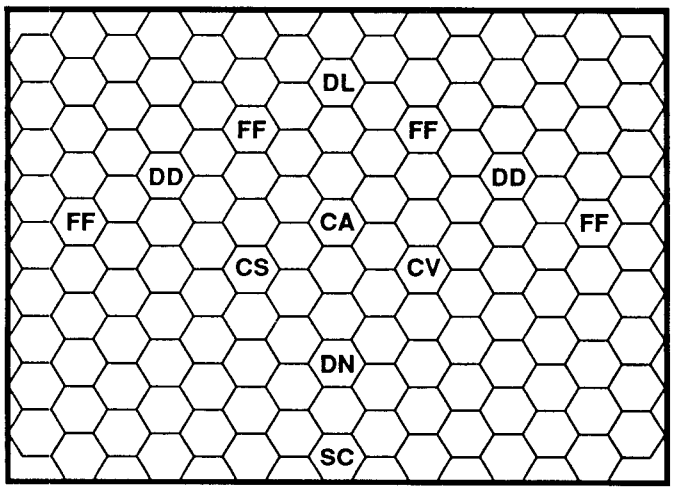
ISC TACTICS

by Frank Crull

The Interstellar Concordium (ISC) is the sole galactic power which did not participate in the General War. Located next to the Gorns and Romulans, the ISC were repulsed by the violence of the General War and resolved, when the opportunity arose, to insure that other races never had a chance to fight each other again. While this admirable goal was never achieved, it did bring ISC ships into conflict with virtually all other races.

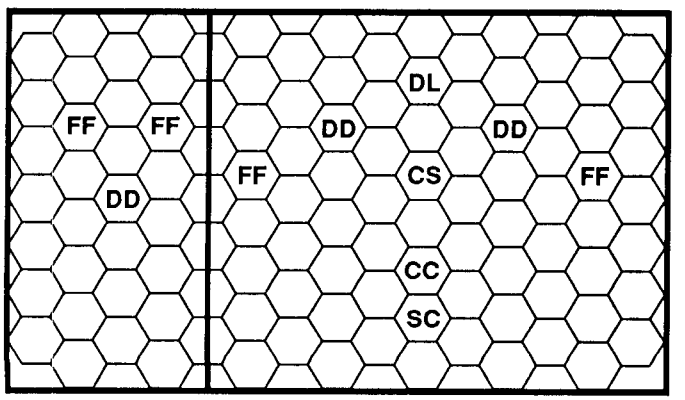
To achieve this goal of "pacification" of the galaxy, the ISC used their isolated position to study their opponents. This "study" allowed the ISC to build superior warships without having to conduct warfare. Two results came out of this study: first, the development of the echelon, the only fleet tactic that utilizes ships specifically designed to make the tactic work, and second, the integration of the plasmatic pulsar device (PPD).

ISC tactics are dominated by the Echelon Formation. This is discussed at length in the rulebook and need not be repeated here, except to show how an echelon is actually arranged.



As you can see, this is a full 11–ship fleet with three echelons. The gunline is composed of frigates and destroyers. A scout (for EW support), a carrier (for fighter support), and a cruiser (for firepower support) are all in the second echelon, while a DN forms the core. Since fleets are allowed a 12th ship (the "free" scout) in Doomsday, this formation can be improved by moving the vulnerable scout to a "fourth" echelon and adding another PPD-armed ship in the second echelon.

Echelons can be formed with fewer ships as seen below. As has been noted, even a destroyer and two frigates will operate in echelon. An 8-ship squadron led by a command cruiser might form the echelon shown in the right portion of the illustration.



The gunline ships will use standard plasma tactics to engage approaching enemy ships.

The primary purpose of the Echelon Formation is to create firing opportunities for the PPD. The formation will seldom have more than eight PPDs, with four to five being more common. These will, generally, concentrate fire on one enemy ship per turn (starting with command ships, carriers, PFTs, and scouts), forcing it out of the battle. The PPD operates specifically on the Mizia Principle, using multiple small volleys. The gunline ships, and second echelon ships, are counted on to help bring down the facing shield. Note particularly that ISC heavy units have two heavy weapons, the plasma torpedo and the PPD. This allows the plasma torpedoes to be used for general fire support, while the PPDs are used in their concentrated sniping role.

Against a base, the fleet will deal with the enemy ships while the PPD units pound the base itself. Overloads are particularly useful in this case as there is no probability that the range can reach the myopic zone (where the weapon cannot fire).

Note that PPDs can be set for fewer than four pulses if you don't have enough power for a full load or if you want to control the damage that you cause.

Each individual PPD (weapon) is a separate volley, so the Mizia effect on the target is considerable, and there is no need for the consecutive or overlapping pulses used under the old rules.

ISC formations are difficult to maneuver. Players using the ISC should set up the formation on a blank map and practice turning it one way and then the other.

The ISC prefer to force combat around fixed locations, such as a planet or base, where the enemy cannot retreat. In such cases, the echelon may be formed with the gunline in a single "wing" (rather than the wedge shown) to concentrate the firepower. Some of the small units may be held in the second rank and sent forward as necessary to replace casualties in the gunline.

Fighters are perhaps the one universal bane of the ISC. Too small for the PPD (which loses the splash elements against them), too numerous for torpedoes, whole waves of weapons can be brought to a battle by these disposable units. Furthermore, these units can utilize their dash packs and try to close. Your only choice is to divert phaser firepower or use plasma shotguns and your rear-firing torpedoes.

Sometimes retreat is inevitable. There are several ways an echelon can retreat from battle:

- Have all ships execute an HET.
- Have all ships slow down and execute a U-turn.
- Have all ships stop, then move in reverse. If you do this, you can retrograde, but you can only disengage by distance.
- Leave the gunline ships behind, while the heavier and more valuable ships take one of the above actions.

ECHELONS AGAINST ALL RACES

The ISC must adjust its tactics against its various opponents.

Gorns: Speed is critical; fly at 20+. The direct-fire capabilities of the PPD work to your advantage. Pick on the ships with the largest torpedoes.

Romulans: Similar to the Gorns. Be on the look-out for cloaked ships trying to get inside the echelon. When they uncloak, let them have every weapon that will bear. Look for the ships with R–torps or maulers and kill them.

Federation: Difficult to deal with because of the huge numbers of fighters. Use your weapons to kill the fighters quickly. Use plasma–Fs to deter their attacks. Nail the carriers with PPDs.

Tholians: Better left alone as their web casters can cut up the echelon. In this one case, it may be worthwhile to close up the ranks so that the core ships can't be blocked. Avoid high speed as you are asking for breakdowns.

Kzintis: Target the ships with the long-range disruptors. The only realistic time to use a PPD on a shuttle is against a Kzinti

fleet with 37 scatter-packs. Wild weasels should be kept ready.

Klingons: Same as Kzintis, with the proviso that SFG and mauler ships are key targets.

Lyrans: Closing can be painful due to the ESGs. Otherwise similar to Klingons.

Hydrans: These guys are a real pain. There will be eight or more hellbores present and *lots* of fighters. You cannot close with them. Hydran fighters can overwhelm you, and the fusions are death. Distance must be kept beyond 3 hexes. Key targets are the hellbore ships for their long-distance weaponry. Since most of their ships are carriers, there is no single carrier to target as the solution to the fighter problem. Ergo, kill the fighters, quickly.

Orions: Rarely encountered except on patrol. If found, most Orions would run away from any CL class ship on up to a CC, but your goal is to pursue and destroy these pests. Tactics will depend the Orion's weapons, which depend on the area.

Andromedans are difficult to deal with for the ISC. The Andromedans will either displace some ISC ships closer for destruction or attempt to attack the rear echelon ranks after displacing behind it (the depth of a full echelon makes this difficult). Now that Andromedan PA panels are not as difficult for plasma races to deal with, a healthy amount of enveloping plasma torpedoes should be used to keep the Andromedans busy and to damage the panels. The PPD should be fired in combination with phasers, plasma bolts, and other PPDs to force damage into Andromedans at long range. X-ships made dealing with Andromedans easier for everyone.

THE SHIPS OF THE ISC

The ships of the ISC fleet generally show their superiority with the CL-class and larger vessels. The destroyers and frigates are treated as attrition units and are not particularly outstanding.

ISC weaponry in addition to the PPD is not only balanced, but also has excellent firing arcs. The only poor phaser spot on an ISC ship is from the rear, and even then the rear ph–3s are available as well as 360° phasers and the rear type–F torpedoes. The phaser power is concentrated in the forward arcs to a far greater extent that that of the Gorns or Romulans.

ISC ships also possess the unique rear–F torpedo arrangement. Most ships do not even have any heavy weapons that bear to the rear; this is perhaps one of the ISC's most important advantages. The ISC have assumed that light enemy units will outflank the formation and are prepared for them. While the one-torpedo-per-turn rule is awkward, it is of little matter in a fleet duel with five or six ships available to fire. The torpedoes can be bolted in salvoes against PFs, punching through their shields without difficulty.

Power is another aspect where the ISC have excelled. Their CA possesses 40 points of power, compared to the Romulan FireHawk with 40 units of power, the Federation CA+ with 36, or the Lyran CA with 37. That extra power usually is used for ECCM or for tractors (used for drone defense or for a Gorn Anchor). This pattern of power runs true across the board, with ISC ships having consistently equal or better power.

Shielding is another area where the ISC excel. On most of their ships, the front three shields are equal so that they can operate in an echelon. This allows the echelon to operate from another direction if one of the side shields goes down.

The large shuttle bay on ISC ships also encourages some additional tactics. Whether flying in an echelon or solo, there are only three types of shuttle used by the ISC: weapons platforms (drone defense), suicide shuttles (extra firepower), or wild weasels (only when faced with massive torpedo attacks).

This does not mean that ISC ships are perfect. They do have some serious flaws. Their only drone defense is their phasers, and while generously endowed with ph–3s, even these will not be enough. This will tend to divert some of the FA–phaser superiority to drone defense. Here, your shuttles can be of help.

ISC ships generally have poor turn modes, but the rear-firing weapons help in that regard.

Frigate: This ship is an oddball. It's a match for some frigates, but inadequate against others. The point, of course, is that it's an attrition unit designed for mass production. It is not intended for independent duels against Gorn or Romulan frigates.

Destroyer: Again, this ship is not designed for independent duels against other destroyers, but for the gunline. An even duel against Romulan K5Rs and SkyHawks, but slightly weaker than a Gorn BDD. Can duel other destroyers with varying effectiveness.

Light Cruiser: After we step up to this class, ISC superiority takes over. The CL is the best one of the CL/CW classes. It has more armament than some heavy cruisers and outguns all war cruisers. The similar strike cruiser, with its PPD armament, is a deadly duelist and valuable in the second rank.

PFT Capable of direct combat, an asset to the echelon.

PF: Designed to protect the flanks or to counter-attack gunline penetrations.

Carriers: Generally adequate. Their fighters can reinforce the gunline or guard the flanks. The ships themselves are combat capable. The small escorts are incorporated into the gunline; the larger ones in the second echelon.

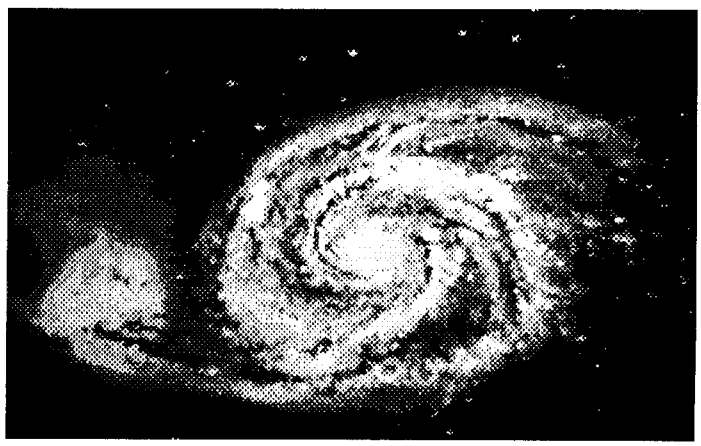
Heavy Cruiser: This class outguns any other CA and is equal to some BCHs. No other CA can afford to get in close combat with it. The PPD will pound shields on the way in; then the plasma torpedoes and massive phaser battery will open the target like a canned ham. If the ISC ship has to retreat, it can retrograde behind all those weapons or run behind a screen of type–F plasmas. The larger Command Cruiser outguns all BCHs and is not a ship to duel against without help.

Dreadnought: A monster that outguns every DN in existence, equals most X–ships, and gives the captain of the B10 a few anxious moments.

CONCLUSION

The ISC is one of the most balanced races. Having taken the best of everyone else, they were able to design some of the best ships possible. Maintain the integrity of the echelon, and all other problems will be solved. Your strength in a fleet action cannot be matched except by sheer numbers. But you will be respected, and you shall keep your mission: peace in the galaxy!

Overall, the ISC can hold their own against any opponent due to their integrated fleet approach. They have a weapon that can tear target ships to pieces at long range and plasma torpedoes to handle any opponent who gets within short-medium range. It is generally recommended that a player wishing to learn how to fly the ISC start with small echelons with just plasma torpedoes and then work on adding the PPD-armed ships. Furthermore, after you have mastered the echelon, trade places with a friend and learn to assault it. It will make you aware of the ISC's strengths and weaknesses. ✪



SHUTTLECRAFT TACTICS

by Frank Crull

Administrative shuttlecraft are incredibly versatile systems with a variety of suitable missions, but they are available in very limited numbers. As noted in the rulebook, shuttles can be used as suicide shuttles, wild weasels, and scatter-packs. In their basic configuration, they can be used as fighters, research units, transportation, and for tactical intelligence, all at the same time.

Most uses of shuttlecraft in combat tend to result in the destruction of the shuttle, and there are seldom enough shuttles for every job. The offensive use of shuttles as scatter-packs or suicide units will often be part of an opening gambit. If this fails, few ships have enough shuttles to repeat the attempt.

While it is more realistic to conserve your shuttles for future battles, doing so when your opponent is playing with a "no tomorrow" attitude will put you at a disadvantage.

SHUTTLE TACTICS

The first consideration in selecting shuttle tactics is how many shuttles you have. Some destroyers carry four, while some cruisers carry only two. With two shuttles, you will probably arm one as a wild weasel and the other for an offensive mission (or as a second WW). With several shuttles, you can use some as fighters, prepare more WWs and offensive shuttles, and even keep one handy in case you need to send the marines out for fresh prisoners.

The second consideration is the mission. Against a monster, shuttles may be useful for lab work, while wild weasels are unnecessary. Against a squadron of War Eagles with their type-R (for raunchy) plasma torpedoes, you may not consider two wild weasels enough. Against slow drones (or in a slow ship), they may be better used as fighters.

Be aware of the Chain Reaction rule when carrying armed scatter-packs and suicide shuttles in your bay. Having an empty shuttle box or two will give you some "padding" to prevent chain reactions from developing. It's better to have launched a shuttle and had it destroyed in space than to have it destroyed in your bay. (It will absorb more damage that way!).

ADMINISTRATIVE SHUTTLE MISSIONS

Fighters: The fighter mission is overshadowed by the special missions. Used as fighters, shuttles provide an extra 360° ph-3 for area defense. More than one duel has been won by the last shuttle firing into an open shield. They are vulnerable to destruction, and most players will pick off shuttles whenever the opportunity arises. Two restrictions must be considered: they are slow, and they can't fire until eight impulses after launch. The delay means that you can't keep the shuttle on board to the last impulse waiting for the situation to develop. You have to decide that you are going to use it as a fighter and get it out there. The speed problem is the worst drawback, which can only partly be solved by dragging it on a tractor beam (and releasing it when it needs to shoot). If your enemy cripples the dragged shuttle, it may be dragged to death by your own tractor before you can release it.

Wild weasels are the most-talked about shuttle mission, and many types of non-fighter shuttles can be used as such. Many players believe that just about every ship, in just about every scenario, should have a WW warmed up just in case it's needed. (Against a powerful seeking-weapon ship, you actually need two WWs, the second to protect you while you are stopped by the first one. That should run the enemy out of immediate use ammunition.) Others find WWs a suicide maneuver, as they leave your ship at low speed and unable to fire in the face of a determined enemy. A middle view would be to have a WW when fighting a ship with lots of seeking weapons, but against an enemy that depends on direct-fire weapons, another type of special shuttle may be more worthwhile.

A wild weasel will flush your ship completely of any tracking drones and plasma torpedoes, but should only be used when there is no other option, and you should strive to be certain that there IS another option. While the restrictions it puts on your ship are awkward, they are less so than asking the engineer to repair the damage done by a dozen drones or a hundred-points of plasma. You won't be doing the engineer any favors, however, by parking your ship in front of the enemy and giving him the initiative. The use of WWs (both defensive and offensive) is covered in the Drone and Plasma sections, but the basic principle is that a WW should only be used against an overwhelming attack, one that will destroy your ship if uncountered and one that has left your enemy's weapons empty and unable to take advantage of the restrictions you will be under. Knowing this, an opponent with seeking weapons won't fire the whole load at once (unless he has you in an anchor) because he knows what a WW will do. However, if you assume that he will do this and don't have a WW...well, you see what a guessing game it can be.

It should be noted that wild weasels are not just for seeking weapons. As they provide six points of ECM, they can be used to protect your ship (to some extent, anyway) against the nightmare of space (a Federation ship with fully overloaded torpedoes) or anyone else with lots of direct-fire weapons and his scanners locked onto your ship. While a WW cannot directly shake off a PPD wavelock, it can provide enough ECM to force a re-roll.

A careful study of the wild weasel rules is mandatory. Note the implications of the four-impulse explosion period. Also note that when using a weasel, your fire-control is off, and many non-weapon (e.g., tractor, transporter) systems and semi-weapon systems (e.g., ESGs, probes) require active fire control.

Several tactics involve voluntarily voiding your own weasel. Let the enemy weapons pass you, then change to a higher speed. The weapons will have to waste time making an HET and then chase you, giving you time to engage your target while your otherwise useless rear phasers reduce the threat of the following weapons. Self-guided seeking weapons (ATG drones and plasma torpedoes) can be launched under passive fire control if the target is five or more hexes away. Some plasma ships make a habit of launching one weasel, then voiding it by launching plasmas under passive fire control, then launching a second weasel. This dumbfounds an enemy that expected the target to be impotent due to weasel restrictions.

Klingons, with their SFGs, can turn WWs on and off.

Scatter-Pack: Somewhere there is a fleet supply clerk responsible for writing the checks for replacement shuttlecraft. He hates the scatter-pack with a passion. Its use is not required, and any captain worth his stripes could figure out how to win without it. Using a shuttle as a wild weasel can be understood; it's an act of desperation. But no one *has* to use a scatter-pack; they just want to. And replacement shuttles are expensive.

Somewhere there is a contractor (with a shuttlecraft factory) who wishes scatter-packs had been invented sooner and wishes that even races that don't use drones could have them.

Scatter-packs are covered rather well in a separate article. For now, let's say that they provide a devastating attack and are a means of getting a lot of drones into space quickly. For a Klingon ship with two slow-cycling drone racks, they are the greatest thing since strained gruel. For a Kzinti with four fast-firing racks and six control circuits, they are a waste of a good shuttle that could be better employed as a suicide vehicle, consuming some of that leftover power Kzintis are famous for. (Note: Some Kzintis vehemently disagree. Many of their ships have double control, and use an SP to put 12 drones in flight.)

Suicide Shuttles: Another glow of warmth in the hearts of the Shuttleyard workers union. The only problem is that not enough of them are used. The supply clerk is hoping that no one will notice them.

Suicide shuttles are the only seeking weapon available to every race (except Andromedans), and for some races they are the only seeking weapon available. (Note the Tholians, and the fact that Tholian suicide shuttles slip through webs.) It takes three points for three turns to fully arm one of these, and it has to be warp energy. Even so, the 18-point explosion can be very satisfactory. (Less energy, but the same three turns, can be used, but will yield a smaller explosion.) More of them are not used simply because they are inefficient. They take too long to arm and use too much power (compare the damage caused by three phaser-1s firing for three turns). For this reason, they are most commonly prepared before the scenario begins. Worst of all, they are too dang slow. The most effective way to use them is the Gorn Anchor.

Marines: Fighter/standard/scientific shuttles can carry marines as well as perform their other missions. A shuttle can deliver two boarding parties for a combat assault, or four if there will be time to unload them. Flying a shuttle full of marines into the enemy landing bay can destroy his entire shuttle force quickly.

This mission is most commonly used for ground assaults, where the shuttle is protected by the atmosphere and can land outside of the combat zone. Gorn ships (as well as commando ships) are particularly fond of this role.

Cargo is the most mundane function of the standard shuttle, but there are times when passengers or crystals or other cargo must be carried. For serious work, the heavy transport shuttle is preferred.

SPECIAL SHUTTLE TYPES

Minelaying shuttles are carried by specialized ships. Their use is straightforward and generally limited to non-combat areas.

Minesweeping shuttles are also carried by specialized ships. They are used (in preference to the ship itself) to look for mines. When using them, proceed slowly, protect them from enemy forces with covering fire, and keep careful track of what you find.

Heavy transport shuttles can carry huge amounts of cargo or deliver ground combat vehicles to a planetary surface. Ground assault shuttles have a primary function of delivering Marines, but are in fact excellent (and tough) replacements for some of your administrative shuttles.

MULTI-ROLE SHUTTLES

MRS shuttles are a unique shuttle design. Carrying the armament of fighters, they possess the liabilities and capabilities of normal admin shuttles though they are somewhat faster and more durable. They can also provide EW support to their home ship after the 8-impulse launch restriction period is over.

MRS shuttles come in different types, all possessing the same capabilities but different weapons.

The drone-armed versions used by the Federation, Klingons, Kzinti, WYNs, and some Orions are powerful defensive units and can be made into a superb scatter-pack. The ability to control seeking weapons is optimized for these races as the MRS can support ships by guiding drones while the ship is erratic or even under a weasel. Finally, the drone-armed MRS has a limited ability to provide some ECM support to other ships of the squadron through the use of ECM drones.

The Lyran MRS is totally defensive, providing EW to its home ship and trying to stay alive. However, when assigned to a Lyran carrier, its drone control abilities could be useful. The same could be said of the Tholian MRS, but it does have one function that makes it more valuable than its Lyran counterpart: it is capable of laying down a web wall.

The Hydran MRS, like the Hydran fighter, is deadly at short range because of its gatling phaser, but can be safely ignored beyond that distance except for its ability to lend EW and defend its home ship from drones.

Romulan, Gorn, and ISC MRS shuttles have type-D torpedoes, providing a limited offensive capability similar to the drone-armed versions.

In most cases, an MRS will be kept with its ship as a defensive unit. It provides EW support, can fire its own weapons at wandering drones and fighters, and is available for various other missions. The EW support counts as lending from a scout, and unless a scout is actually with the squadron, the MRS will be the only support available to the ship. In a fleet battle, the two or three largest units (command cruiser, carrier, dreadnought) can use their MRS shuttles for EW support and point defense, leaving the scout free to help units in more serious need.

In some cases, an MRS will be attached to a fighter squadron to provide EW support. This is sometimes required by the environment of the destination, but the MRS will probably be the slowest and most vulnerable unit in the squadron. Thus, the defensive mission becomes the most common one.

The next most valuable mission, although seldom utilized, is the minelayer mission. The MRS is invaluable as a layer of T-bombs, assuming that there is time to get them in place. It can lay four of these weapons (or even two large mines) in a critical area. This becomes vital in a multi-scenario campaign in the same area (such as the Bargantine Campaign), where defenses require maintenance and refurbishing.

For drone-using races, the scatter-pack function becomes paramount. The MRS can carry more drones than any other shuttle in this configuration. Because of this, it is a prime target and should never be launched within the enemy's effective range.

An MRS can perform any administrative shuttle mission and is superior in two respects. First, it is faster (speed 8 instead of 6), which can save a turn or two in crisis situations (such as the Sun Snake scenario). Second, it takes more damage (10 instead of 6) to destroy an MRS, giving it a better chance to survive.

SWAC SHUTTLES

The highest form of MRS is the SWAC shuttle. These units are used only by the Federation, and only by certain key units. They are expensive (costing as much as a frigate), and the production rate is low. Because they are key targets, there are never enough of them for the CVA groups, let alone those peons down in the CVS and CVB groups, although they get one by mistake sometimes.

SWACs are the only shuttles with scout functions. These allow it to break drone lock-ons, identify drone types and plasma targets, control drones, detect mines, or analyze ships by tactical intelligence. The drone control function is paramount because a Federation CVA group can pump out a lot of drones.

Like MRS shuttles, SWACs have an EW function, providing EW points to their carrier. They can do this from a range of 10 hexes, twice as far as the MRS.

The most devastating effect of the SWAC is its ability to "go wild" and attract every seeking weapon within a wide area. While a SWAC can be used in this mode as a wild weasel, it is better to have it go wild while in operation. This will pull most (or all) of the seeking weapons threatening your fleet toward the SWAC. The problem then is that the SWAC will be destroyed unless it is defended by something, and if you had enough phasers to kill all of those drones or plasmas, you wouldn't need a wild SWAC.

This creates the tactic known as the "Daisy Chain." One SWAC is deployed on the left side of your fleet, the other on the right, 15 hexes apart. When a massive attack begins, the SWAC farthest from the attack goes wild, pulling all of the weapons that

way. Just before they hit, the wild SWAC goes tame and the other SWAC goes wild. The weapons then reverse course and head for the other SWAC. While the weapons are running back and forth through your fleet, you can target them with any convenient weapons or wait for their endurance to run out. Simply be careful about launching your own seeking weapons while doing this. As the first SWAC can't go wild again for 32 impulses, special precautions must be taken to protect the second one.

Another tactic is to designate a ship (frigate or PF Leader) as the "SWAC Recovery Ship" and have it pick up the SWAC and run as far and as fast as it can. It can't flush the weapons (WWs won't break SWAC-attracted lock-ons), but it can outrun the endurance of a plasma torpedo and drop T-bombs to kill drones.

The only solution to the SWAC is Swacicide. The things must be killed, immediately, whenever possible. If necessary, allocate an entire squadron of cruisers to snipe at them at long range, or send a war cruiser to kill them. ✪

FAST PATROL SHIPS

by Frank Crull

Mission is the key to the successful employment of PFs, but there are some general tactics that apply to all PFs regardless of their role in combat. The entire flotilla must be thought of as an entity, not as six separate units. The flotilla is a "ship" that has one tractor, one transporter, two scout channels, one shuttle, and LOTS of weapons. This "ship" can be destroyed piecemeal, but is very difficult to destroy in its entirety.

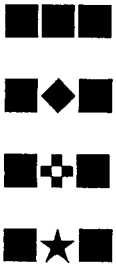
PFs do not use Specific Shield Reinforcement, but their General Reinforcement is just as efficient, power-wise. The drawback is that a PF might want to reinforce the shield facing enemy A and have enemy B burn off the reinforcement with a couple of long-range phaser shuttles from an entirely different direction.

Two overloaded disruptors, one overloaded photon torpedo, or a type–S plasma bolt will more than adequately penetrate your front shield. This makes direct close-range combat against ships very dangerous for your PFs, even more so because this is when your PFs are most effective against the enemy ships.

Since your most powerful weapons are not effective until you are inside of 10 hexes and the enemy's weapons are effective well beyond that range, you must take steps to avoid disaster.

The best ally of any PF flotilla is electronic warfare, and a flotilla's PF scout is its most valuable unit. Using EW from the scout, you can usually put a +2 shift on any firing the enemy will conduct. Furthermore, if you are trying to reach attack range, combining EW with erratic maneuvering will increase your chances even more. The PFS can also perform the "wild" maneuver, attracting every seeking weapon within 15 hexes that is targeted on the flotilla or PFT. This is a desperation move as the PFS is at risk (limited to speed-12) and the flotilla will be without its normal EW support. The flotilla should try to destroy the seeking weapons with phasers to protect the PFS. After the excitement is over, the flotilla can return to normal operations against an enemy that is short of critical ammunition.

STAR FLEET CAMPAIGN AWARDS



Awarded to all Federation Star Fleet personnel who participated in a specified campaign, for example: Kzinti Expedition of Y167, Klingon Invasion, Y175-6 Counteroffensive, etc. Different colors indicate the specific campaign. Plain awards are for those who were present in the theater. Those who served in combat, under arduous conditions, or for extended periods can receive the higher grades: diamond, cross, or star (from lowest to highest).

If the PFT is in the battle, your EW potential increases.

Your next ally is speed. By operating at speed 30, you can effectively overtake any enemy units and still charge weapons. You can also run away from any seeking weapons without having to use your own weapons to defend yourself.

FAST PATROL TACTICS

Tactics similar to those of fighters must be employed. Any cruiser will brush off an attack by one or two PFs, but will be reduced to scrap iron by an entire flotilla.

All the aforementioned tactics assume you are keeping your booster packs. Generally, it is best to do so. Your booster packs add 6 internals, even though engine hits could wipe the engine out. These 6 points, and the power that they represent, may make the difference in whether your PF explodes or not. Some PFs (those with drones, Fi-Cons, cargo, commando, etc.) do not need a lot of power and can dispense with the packs. (PFs with plasma–Ds can do so after activating the torpedoes.)

When performing the fleet escort mission, your PFs must maintain the speed of your ships. The fleet's scout (and probably the flotilla's) will be committed to breaking drone lock-ons. General Reinforcement is useful in this case because the PFs are not generally the target. You can handle the occasional phaser, dogfight drone, or D-torp that hits your PFs because of General Reinforcement. Keep your PFs 3 to 4 hexes apart, but make sure that a minimum of two PFs are in defensive positions between your fleet and the enemy.

PFs should never be combined in the same hex with fighters. PFs are very easy to explode with long-range fire, and fighters are very vulnerable to explosions. Conversely, PFs are the best fighter-killers ever made. They have plenty of speed, can absorb a fighter's firepower and still function, and can reload their weapons.

PFs are not as vulnerable to T-bombs as fighters, being able to survive one and still (barely) function. However, a full-sized mine can wreck an entire flotilla if the formation is too tight.

PFs have several maneuver advantages. They are nimble (with one HET bonus), have (with packs) more power than they need for maximum speed, and can HET on battery power alone.

PF ROLES AND MISSIONS

Some PFs perform some missions better than others.

Ship Assault: For ship assaults, the Klingon G-1B, Tholian Arachnid, Gorn Pterodactyl, Orion Buccaneer (depending on options), Fed Thunderbolt-B, and Romulan Centurion are all effective. These PFs have adequate power to overload weapons or to hold them.

A Romulan Centurion is effective in assaults. With five type–F torps and two PPTs, it can occupy enemy attention for several turns if it remains at moderate range where its lack of phaser power won't leave it exposed to counter-attack. A better role is to keep it cloaked and uncloak it only when a target is seen.

The G-1B is effective because it can fire two phasers, two disruptors, and one drone at an opponent. This is substantially better than a Kzinti Needle or Lyran Bobcat. Orions are just plain dangerous, being able to come in with overloads *and* reinforcement. The Fed Thunderbolt–B is devastating, but can't reload effectively.

Counter-Fighter/PF: PFs are effective in attacking enemy PFs and fighters. Some of the best are the Hydran Harriers, Romulan StarHawk–Es, or Kzinti MRNs with ph-1s.

Hydran Harriers will gut a PF, even on EW and EM, with their array of gatlings and fusions. The Howler (see the Hydran section) can be deadly at knife-fighting range.

Romulan StarHawk-Es with their D–racks are able to run up and down the enemy line of ships dumping torps. It's amazing

how quickly a fighter squadron disappears when StarHawk-Es start firing D-torps at them in rapid succession.

Kzinti MRNs and Romulan StarHawks can be tailored to the mission with various modules. The MRN-B becomes an effective ship assault unit due to its direct-fire weapons.

Power-oriented PFs like the G-1B or Lyran Bobcat can't compete effectively against other PFs because of the high speed of the opposing enemy attrition units and the fact that charging overloads takes up more power than you have. Plasma PFs can't hit another PF with a torp due to their speed (unless they engage head-on and the enemy PFs don't want to turn away), thus they have to rely on the more risky plasma bolt. Energy efficient weapons become more important when fighting enemy PFs.

Defense/Escort: A defensive action with PFs guarding friendly ships is very difficult. Hydran PFs with their gatlings phasers are very good at guarding the assigned object. Romulan StarHawk Ds & Es, if they have access to reloads for their D-racks, also do a good job of guarding a fleet. The Klingon G-1P with its multiple phasers has lots of shots available. The Kzinti MRN-E with the ADD racks is especially effective.

Perhaps the best overall PF is the Gorn Pterodactyl. Armed with lots of phasers and a large supply of F torps, this PF is probably the best available if you are preparing blindly for a mission and don't know what to expect from the enemy. With the plasma bolt and a large phaser battery in the flotilla, you can adjust your battle strategy to suit the situation at hand.

Death-Rider: This is a special suicide function covered in its rule section in Module K.

SPECIAL CASES

The two exceptions to conventional PFs are the Orion Buccaneer and Federation conjectural Thunderbolt.

The Orion has two factors that render it outside of normal examination. The first is its option mount capability. As with all option mounts, players tend to ignore the historical restrictions on available weapons (most of which should be of the local races) and select any weapons. If players play with the "realistic" limitation, Orion PFs become more bearable.

Option mount selection is critical, but even more so is to remember that all six PFs comprise ONE unit and need not all have the same optional weapons. Combinations of various types of weapons can reinforce each other's strengths and cover each other's weaknesses. A photon torpedo could make a hole in a shield, which a hellbore could then exploit. One PF with gatlings can protect the whole flotilla from drones.

The second factor with Orions is the warp doubling capability. This changes everything said previously about PFs. Orions can move at speed 30, overload weapons *and* reinforce shields. The only options the Orion faces is to burn the warp packs or burn an engine. Usually you burn the packs if you are closing into combat, taking your hits on the pack since it is lost anyway. If you need power, burning a PF engine on your ship is better. Either way, the opposing player must realize what is happening and be prepared to postpone combat for as long as possible and then concentrate on one or two PFs, hoping to make them blow up and take out the reinforcement of the other PFs so those PFs can then be treated like normal PFs with no reinforcement.

Federation PFs are a special case. Officially they don't exist; they were created to accommodate player requests. If you are using the Thunderbolt, the best tactic is to overload the photon to 16 points. You can do that and still move at speed 30. The best approach is to move to range 8 using an Oblique Attack, fire the photon, and turn away. You can't survive a head-on pass (something true of other PFs, but not of Federation warships) and don't have any reason to get closer unless EW shifts are against you. A closer approach can be more effective (as the phasers can be employed) but only against a weak enemy. ✪

PF TENDERS

by Frank Crull

The PF Tender (PFT) is the lifeline and support all PFs need to function in the field. However, due to the value of this unit and its general weakness in armament as a class, this unit needs special tactics so it can function.

Not all PFTs are alike. Some have weapons equivalent to a ship of their size class; others do not. Some are built on cruiser or war cruiser hulls, some on frigate and destroyer hulls. One (the Hydran Pegasus) was built on a purpose-built hull.

Generally speaking, the larger the ship is, the more likely it can survive in combat, the more power it will have for repairs and for electronic warfare, and the higher its battle speed will be. If the ship has weapons, it can defend itself. However, PFTs (like carriers) should only be risked in direct combat (i.e., allowed to come within overload range of the enemy) when there is no choice or when victory is assured by the presence of the unit.

This is particularly important in a campaign environment, where the PFT must survive if the PFs are to continue in action.

ROLES AND MISSIONS

PFTs will normally function in one of two roles: Independent strikes or fleet support.

In an independent strike, the PFT, its PFs, and perhaps other ships are sent to attack or intercept an enemy force. Here the PFT's role is to deliver the PFs and give them EW support. The ship should remain out of direct combat (except as noted) and should maintain sufficient speed to avoid any problems. At the least, maintain a speed of 16+ to allow the ship to disengage in one turn. Those PFTs built on war cruiser hulls and retaining war cruiser weapons are best for this role as they can fight beside the PFs, complete the PF mission after the flotilla is destroyed, and fight their way home. The ISC PFT is probably the best suited of any for this type of operation.

In fleet support, the PFT does double duty, replacing the carrier and scout. (Note: The replacement of the scout is for strategic purposes only. Most PFTs have only two channels, one of which is used for self-defense. If the second is used to support the PFs, there is no support available for the fleet. This can be offset if the PFT is kept far enough back that it does not need self-defense jamming, but that loses the support of its weapons.) Its position is in the fleet rear, out of overload range. Its mission is to rearm and repair the PFs as they expend their weapons and return for more. Keep the phaser capacitors full. You probably won't be able to maintain high speed due to the need to keep 12 or 18 points of power in EW (6 for your own defense, the rest to pump through one or both channels, plus the two points to run the channels). Those PFTs without heavy weapons are more than adequate in this role as those with heavy weapons won't be able to fire them anyway (due to blinding the channels).

TYPES OF PFTs

The space control ship is a special kind of PFT, combining near-dreadnought firepower with PF carrying capability. This doesn't save you a ship as most SCSs have no sensors, so you'll have to replace a DN and PFT with an SCS and CWS. The SCS is designed for direct combat and is a waste if held in the rear. (One exception is the ISC SCS, which is used as an echelon core ship.) An SCS should be protected by escorts and supported by scouts as it is too valuable to lose. Unfortunately, recovering and repairing PFs cannot realistically be attempted under combat conditions. There is considerable question as to whether an SCS,

escort cruiser, and war scout are more effective (with a fleet of 8 other ships) than a dreadnought, medium carrier, and PF Tender.

The two SCSs that have sensors (Kzinti SSCS and Romulan ThunderHawk) take special planning for weapons use.

Casual PFTs are those that carry a couple of PFs for fire support, but don't have facilities to repair them or scout channels to support them. Having a few PFs with the fleet is a bonus, but as these are not an organized flotilla, their tactical use is limited. They can be assigned as escorts or ordered into direct attacks on enemy units (which they probably won't survive). While the Lyrans advertise their extensive use of this concept, most races use it to some extent.

The best PFT is probably the Klingon D6P (or the Romulan KRP), the only PFT built on a full-size cruiser hull (and with full cruiser energy). A challenge exists in the Romulan SpH-E, which has more sensor channels. The worst PFTs are probably the smaller Tholian or Gorn ships, which are too small to survive any serious attack and were replaced by larger types.

Hydran PFTs should take advantage of the option to carry fighters in some of the shuttle bays. Against a seeking weapon race you'll want at least one admin shuttle for a wild weasel.

The introduction of PFs and their tenders caused drastic changes in warfare. PFs are powerful but expendable units, and PFTs are relatively uncomplicated warships able to deliver these eggshells-armed-with-sledgehammers to the scene of the action. A flotilla of PFs has the firepower of a heavy cruiser (or dreadnought, if properly employed), and its loss requires only a few weeks to replace. PFs made the last eight years of the General War economically possible, and PFTs made PFs tactically feasible. ✪

CARRIER TACTICS

by Frank Crull

Carriers are the first type of ships that were capable of delivering attrition units into combat. The advantage of this was that easily replaceable fighters were lost instead of expensive and difficult to replace ships.

The loss of a carrier can be devastating to the fleet, due to the loss of the future ability to deliver attrition units. Carrier captains are selected for steady nerves and never display "fight to the last man" heroics. Their prime mission is to safeguard their ship for future use.

Carriers can lend EW support to their fighters if the fighters remain in close proximity to the ship. This is useful only when the fighters are operating in the fleet defense mode, or when the carrier is following (or leading) the fighters into combat.

Like all classes of ships, carriers all serve different purposes. Carrier deployment and tactics are based on the specific type of carrier, so we will examine each in turn. Note that fighter tactics are covered in a separate article on the next page.

ESCORT CARRIERS

Escort carriers are built on frigate or destroyer hulls, carry about six fighters, and have little offensive armament. Carriers of this type can be used as convoy escorts, to support small squadrons, or to stand in for larger carriers in fleet support.

In the convoy escort role, the fighter group will be launched whenever pirates or marauders approach and will attempt to damage them sufficiently to interrupt the raid. One point here is that the convoy will be moving fairly slowly, so the fighters won't have a problem keeping up.

In support of a frigate or cruiser squadron, the CVE provides a small measure of fighter support. The low number of fighters is a problem, but at least it should be possible for each ship in the squadron to tow one or two of them to the contact point.

Added to a fleet, a CVE provides some fighter support for anti-fighter/drone protection although obviously not as much as a fleet carrier. Tactics are based on the mission.

In general CVEs try to remain out of the battle itself. They will probably have only one small escort. Their primary firepower is in their fighters; their primary duty is rearming them.

LIGHT CARRIERS

Light carriers are usually built on light cruiser or large destroyer hulls and carry eight or nine fighters. They will generally come with one escort, but will probably not have much offensive firepower outside of the fighter group. Too large for convoy escort duty, these ships will be used for independent patrols and fleet support. They could be used for an independent strike on a very weak target. Their primary function is, again, to rearm and repair the fighters. The handful of CVLs which mount standard destroyer or light cruiser weapons can enter offensive combat in support of their fighters. If matched against an appropriate target, they can function as miniature strike carriers.

FLEET CARRIERS

Fleet carriers are built on cruiser or war cruiser hulls and carry 12 fighters. (There are a couple that carry 10 fighters; these can be treated as second-class fleet carriers.) These ships are divided into two types: medium carriers, which lack offensive heavy weapons (having lost them during conversion), and strike carriers, which retain full (or almost full) cruiser firepower.

Medium carriers are used almost exclusively for fleet support. Position the carrier and its escorts behind the fighting ships of your fleet. This is also a good protected location for your scout and any other vulnerable units. The fighters will be deployed with the fighting ships to provide protection or a supplementary attack capability. See the fighter article for details.

Strike carriers have cruiser-type weapons and can enter combat themselves. Their best mission is the independent strike, where the carrier and its escorts attack a small base or squadron. Here, the carrier goes into direct combat with the fighters. See the fighter tactics section for more details.

Fleet carriers possess a full fighter squadron, generally with EW-fighter and MRS support. Their fighter squadrons are strong enough to be sent on an independent mission against a single enemy cruiser or other small force.

HEAVY CARRIERS

Heavy carriers are dreadnoughts with fighters. They are expected to enter direct combat as the flagship of the fleet, occupying the same position in the formation as the dreadnought. The problem here will be rearming the fighters. With drone-armed fighters, there may be time to have some fighters salvo their drones, land, reload, and re-launch before the fleet enters direct combat. There are some non-traditional CVAs (Hydran Cavalier, Tholian CVA) which have the 24 fighters but not the weapons and are treated as large "medium" carriers.

Reloading the fighters while the CVA is in combat will be a difficult matter, but can be arranged. Don't have too many fighters arrive at the carrier at the same time. Be conservative in salvoing your drones so that not all of the fighters will be weaponless at the same time. Work the fighters in teams of three or four, allowing the full deck crew force to rearm them quickly.

Given a choice, CVAs would be better kept out of direct combat. Only rarely will your fleet have both a dreadnought (to lead the fleet) and a CVA. If this is the case, keep the CVA and its escorts behind the fleet. If the fighting ships get in trouble, they can fall back into the carrier group. If the enemy wavers, the carrier group can charge into direct combat.

These ships possess enough fighters to send them on an independent strike against more than one enemy ship.

One advantage is that CVAs will almost always have the best fighters available for the time period. CVAs will also have the relatively small supplies of heavy assault fighters, such as disruptor, photon, and hellbore types, in numbers (usually six) sufficient to be used as a cohesive unit. CVAs will also have one to two MRS (Feds have SWAC).

ESCORTS

Escorts are never very far away from their carrier. Their mission is to protect not only the carrier, but also the vulnerable arriving and departing fighters. Escorts should be willing to accept a drone hit if necessary to use their own phasers against a drone targeted on the carrier. All of their weapons are for carrier defense.

Escorts provide more than weapon support. Their labs (and aegis systems) can help identify approaching seeking weapons, and their shuttle bays usually have fighter reload facilities. In the case of a CVA which is entering direct combat, it might be preferable to put one of the escorts in the rear of the fleet (tell everyone it's protecting the scout) to provide a fighter reload facility away from the hottest action.

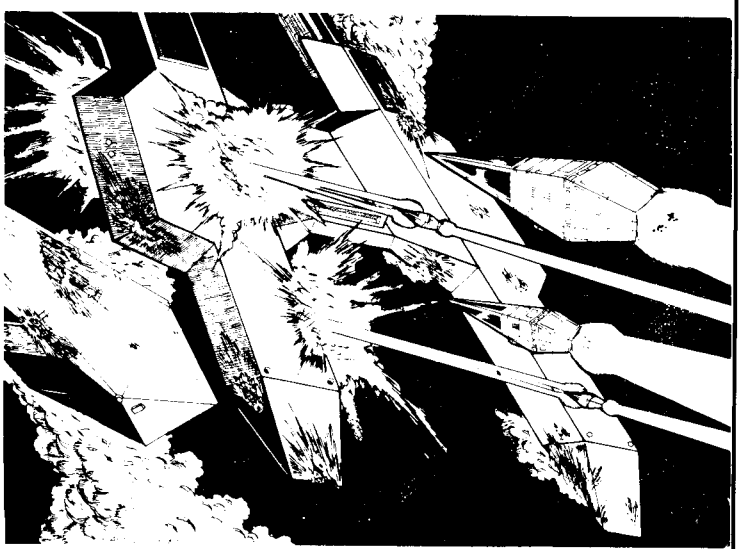
Selection of escorts is seldom left up to the player, but in cases where a choice is available, take those escorts with aegis fire control and the most suitable weapons.

OTHER CARRIERS

Auxiliary carriers are used by all fleets. They can be used for convoy escorts or (in desperation) in fleet support. They are too slow for independent strikes. If your fleet has a CVA that must be used in direct combat, a small auxiliary carrier in the rear can provide reload facilities. Auxiliaries will have to be abandoned if the fleet is forced to retreat from an overwhelming enemy force.

Carrier tugs can, generally, replace medium or strike carriers (depending on the tug's weapons). They will probably be more sluggish and slower, so account for that in your planning. CVA pods provide huge numbers of fighters, but tend to make the tug even slower. In a campaign environment, the availability of tugs is limited, and the loss of a tug can be devastating.

Some survey ships combine scout and fighter capabilities, becoming an early version of the PFT. These make some of the best carriers. These should never be risked in direct combat; they are just too valuable. ✪



FIGHTER TACTICS

by Eric Nussberger

The *STAR FLEET BATTLES* fighter is a souped-up shuttle armed with heavier weapons. It is faster and tougher than the admin shuttle, but it remains a shuttle nonetheless. It has the same weaknesses and strengths as a shuttle. This article will discuss the basic types of fighters, their missions, their strengths and weaknesses, some general rules, and specific tactics.

FIGHTER TYPES

A fighter can be classified into four categories: assault, superiority, general purpose, or heavy assault. This classification is based on weaponry, dogfight rating (DFR), and maximum speed. Understanding this concept of classification is critical because the different types of fighters were designed for different missions and perform best when used in the role they are suited for.

The assault fighter carries heavy weapons (type-I drones, any plasma torpedo, disruptor, photon torpedo, fusion beam, hellbore, or a phaser–2) and has a DFR of two or less. An example of this type of fighter would be the Klingon Z–1. Assault fighters are best used for direct attacks on enemy ships as they have the heavy weapons necessary for the task but lack the speed and agility necessary for anti-fighter work.

The superiority fighter, on the other hand, carries no heavy weapons and has a DFR of three or four. Additionally, the superiority fighters tend to be faster than their assault counterparts. Superiority fighters such as the Romulan G-SF and G–FSF are ideally suited for escort duties, whether escorting ships or other fighters. Fleet escort duties place the fighter within 5 hexes of friendly ships, where the fighter squadron lends firepower support against seeking weapons and closing enemy units. Superiority fighters can be assigned to engage other fighters in dogfights.

The general purpose (GP) fighter has the assault fighter's heavy weapons, but a high DFR and speed. It can effectively perform any of the missions of an interceptor or an attack fighter as it combines the best capabilities of both. A fighter such as the Stinger–2 or F–14 qualifies under this heading.

The heavy assault fighter has a very heavy weapons load, but a DFR of zero or one and a low top speed. Examples would be the A–10 or any two-space fighter. With the faster speed allowed in the new edition of the game, these are now useful against warships, whereas they were previously limited to attacking bases, convoys, and other slow or stationary targets. They are still very good at defending fixed targets.

The Federation F–111 is something of a special case. While it is a heavy fighter, it is as fast as any of the hot standard-size fighters. It has a heavy weapons load and far more flexibility in what it carries than any other fighter.

FIGHTERS: BIG PUNCH IN A SMALL BOX

The biggest weakness of the fighter is its vulnerability. This can best be understood by comparing its offensive and defensive abilities to those of a starship. If offensive potential is defined as the average damage produced by firing all of a unit's weapons at 2 hexes, and the defensive potential is defined as the damage required to cripple the undamaged unit through a non-reinforced forward shield, the two potentials can be expressed as a "firepower ratio" of offensive : defensive.

For example, the Klingon D5 has a ratio of 53:53, or 1:1, while the Klingon Z-Y fighter has a ratio of 34:8, or about 4:1. It takes one-quarter as much damage to wreck a Z–Y as it can do to your ship. If your weapons can generate 56 damage points,

firing them at a D5 would destroy part of its 53-point damage potential. Firing at seven Z–Y fighters would completely eliminate 224 points of potential damage to your ship. You can't afford not to kill fighters, and that makes it hard for fighters to stay alive. (Note that you should compare the fighter with its target since some weapons are more effective against smaller targets. If you are defending shuttles, those type–VI drones are more effective than if your ship was the only target.

The fighter's greatest asset is speed and maneuverability. An intermediate class fighter can move at speed 20-24 with packs, turn inside any other unit on the board, and still fire all of its weapons. Speed balances out the vulnerability of a high firepower ratio. Of course, by the late-war years only the "hot" (speed-15 without packs) fighters are in service.

FIGHTER DEPLOYMENT

Fighters are generally operated in "flights" of 2 to 4, dividing the squadron accordingly. This allows flexibility while making the squadron relatively easy to operate. Each flight engages and returns to reload in sequence, although all can be used at the decisive moment in a concentrated attack. Weaker fighters need to be in flights of six to be effective; the best fighters can operate in pairs.

There are two doctrines for flights: stack them all in one hex or spread them out across several hexes.

Spreading them out has some advantages, such as the likelihood that some will survive a mine explosion (although with the wider formation they are more likely to cause one) and the chance of identifying the target of an incoming seeking weapon more easily.

Stacking a flight together has its own advantages (besides just having one thing to move instead of three or four). Their weapons fire can be concentrated (although a drone swarm might be more vulnerable to a T-bomb), and it is harder to get a drone into their hex. If challenged to a dogfight, others can quickly join in to gang up on the enemy. They are also better able to accept EW support from the squadron electronic warfare fighter or an attached MRS shuttle.

EW fighter deployment is a science itself. Fighters armed with drones may prefer to have the EW fighter, or the flight including it, hang back and accept control of launched seeking weapons. This allows the fighters which launched the seeking weapons to use erratic maneuvers to close with the target and use direct-fire weapons. The Federation, with its drone- and gatling-armed fighters, is best able to do this, though drone and direct-fire torpedo fighters can use it as well. Fighters with no seeking weapons tend to keep the EW fighter close by, using it to provide its benefit after the attack fighters drop out of EM to fire.

Of course, the use of the EW fighter will, partly, depend on how near the carrier is to the object of the fighter's attack. If the carrier is close by, the EW fighter may simply be another fighter in the attack. However, do not overlook the fact that the EW fighter provides its benefit at no cost in power, while the carrier must use that precious commodity, power, to provide EW to its fighters; this will reduce its speed or prevent it from overloading weapons. Of course, the carrier can provide its EW further away, allowing the fighters to, in turn, be further forward.

Fighter formations are complicated by the launch rules, which limit them to one fighter from each bay every second impulse. If your carrier is moving at fleet speeds, your fighter squadron will be strung out like a planeload of paratroopers on a windy day. Take a moment to calculate just how rapidly you can launch the fighters before taking an unfamiliar carrier into combat. This problem is avoided by Hydran launch tubes and Tholian external bays. It can be reduced by balcony systems, but while these allow the launching and recovery of fighters to be done quickly, they are still moved in and out of the bay one at a time. Fighters on the balcony are destroyed by hull hits and the high speed of disengagement.

FIGHTER TACTICS

Combat is always hazardous to everyone, including fighters. There are certain basic considerations that should be kept in mind. Bear in mind that the same basic tactics which work with ships apply to fighters as well. Use the principles of concentration of firepower and opportunity fire along with the more fighter specific tactics presented in this report. Lastly, always match the fighter with the mission. The fighters were designed with certain duties in mind and perform best when used in this function.

The first of these considerations is disengagement, either leaving a lost battle or after the objective is completed. A lost battle may be when your carrier or base goes down and your fighters can escape to a planet or retreat with the ships. Surviving or retreating is essential to fighter tactics. One of the first assets for a retreating healthy fighter is speed. If you have kept the booster packs on your fighter turned off, you should turn them on now to escape from the enemy. Speed can be your ally. As soon as you have top speed, switch to EM. That will increase your chances of being missed. If your EW fighter has survived, form around it and escape with it. With its EW capabilities, you should have an increased chance of escaping. Don't try to fire leftover drones. If the enemy is not in your FA arc, it's not worth turning around. Instead, use those weapons against opponents that are blocking your path to retreat.

Most fighters disengage by distance. Disengagement by acceleration has its own rules (C7.13) and restrictions. A fighter using it cannot fire or control weapons or use EM.

If your carrier has survived, all fighters should try to keep up with it. Don't try to land all at once. You could lose the fighters due to a hidden mine or ship explosion nearby. Try to keep up with the carrier until you are out of effective enemy fire range, and then start landing. The one exception is if you have balcony and track systems, then multiple landings can be done. Just don't let the carrier go faster than "death dragging" speed until the operations are complete.

Crippled fighters should not panic. Head to any friendly ship and get repaired. Don't pick fights unless the carrier needs it.

Except in situations when speed is absolutely necessary, keep the speed one point lower than full and use erratic maneuvering. (Remember that you can't guide seeking weapons under EM.)

Each uncrippled fighter can make one HET per turn if necessary, with no chance of a breakdown. Even if you have made your one HET in a turn, you can make another to break a tractor lock and avoid "death dragging."

Remember the fighter's vulnerability. Heavy weapons must be fired before the fighter is crippled, or they will be lost.

Keep your fighters out of the hex containing your PFs. Exploding PFs are the best fighter-killers available to the enemy.

Never forget that it takes time before the fighter's weapons become active. If your fighters get within 8 hexes of the enemy before they become active, the enemy is likely to use preemptive fire to cripple them before they have a chance to shoot. One solution is to launch the squadron at low speed, under EM, 15-20 hexes from the enemy. When the entire squadron is active, turn on the packs and boost to full speed. (Have the fighters in the rear hit their afterburners first so that they can catch up with the formation.) The best way to lose fighters is to launch them too late, too close to the enemy.

Chaff is the defense of the last resort. A fighter under the protection of chaff can't launch or guide seeking weapons or fire DF weapons. Use chaff only when a wave of drones at long range is suspected to be targeted on the fighters or when a seeking weapon is about to impact. In dogfights, use it when appropriate as the restrictions are over by the next DRI.

DRONE ASSAULT TACTICS

Drones are the primary weapons of most fighters. A squadron of fighters can launch and control more drones than any ship, but these huge waves will be wasted if not properly organized. The classic tactic is for the squadron to salvo its drones against the enemy and then use its phasers to defend itself against enemy drones. The fighters do not close to point-blank range for a phaser attack unless the target is crippled.

Drones should be launched from fairly long range: 12-15 hexes for medium-speed drones and 20-25 hexes for high-speed drones. If you have huge numbers of drones, you can launch a wave that is large enough to force him to use a wild weasel, then launch another from the same range before (possibly) closing for a direct attack. Otherwise, you'll need to launch two waves 5-7 impulses apart and follow them in with direct-fire weapons. The 5-7 impulse spacing may be far enough apart to avoid drawing the weasel, but still won't allow weapons to recycle. When making your direct attack, have a few fighters (perhaps half the squadron) retain their last drone to use after a weasel has been launched and destroyed.

Delay launching the second wave against fighters equipped with chaff. Have your launch units within 5-7 impulses (of drone movement) from the target fighters when the first wave reaches them. Your first wave of drones will force the fighters to use chaff. They cannot fire their own weapons for 8 impulses, by which time your second wave will be there.

For those seeking glory, close combat maneuvering could be used to launch drones (in the target's hex) at any shield.

FIGHTER WEAPONS

Type–III Drone: Carried by the best fighter of each drone-using race, these drones are essentially long range type–Is. They are long-range harassment weapons, used to break-up incoming fighter or drone waves or to saturate an opponent's anti-drone defenses.

There are three types of warheads which are effective on the type-III drone:

The explosive warhead is the standard type, useful for anti-ship work but a waste when launched at a fighter.

A more versatile choice is the multi-warhead module, which contains three dogfight drones. This module should always be set to break outside of the direct-fire weapons range of the target, which gives the short-range dogfight drones most of their range to chase the enemy. See the MW drone section for more data on their use. The starfish multi-ADD drone has the advantage that its submunitions cannot be stopped by chaff or phasers, but they can only cripple a fighter; they can't kill it. Also, each ADD must target a separate fighter, and some could be wasted.

The last type is the probe module. If using the Tactical Intelligence rules, a few probe drones launched at long range can provide important information before ever closing with the enemy. (This module is also used on the type–I drone.) These should be added to waves of drones hurled at the enemy fleet, where numbers may protect them from identification. Support them with ECM drones.

Type–I Drone: Most drone-armed fighters have either two or four of these. Because of firing restrictions, many fighters cannot launch all of them in the same turn. This is really no restriction for the well-planned attack. Fire one drone from each fighter at each opportunity (this should come once per turn). Ideally, the drones should arrive at their target in two or more waves, each 5-7 impulses apart, as discussed above. The last of these waves should be launched at 4-5 hexes, just outside the target's point defense zone. This way the fighters will enter the point defense zone at the same time as the drones, forcing the enemy to disperse his fire. Make sure that units are available to control the drones of those fighters which are destroyed as destroying a fighter makes its drones inert if they cannot be transferred.

Dogfight Drone: These type–VI drones are primarily used against fighters and other drones. They are difficult to distract and will do an adequate job, but have a very short range of 12 hexes, creating tactical restrictions.

When defending a fleet, these drones are used to intercept fighters and the drones that they fire. You can fire fast-VIs when the targets come within 24 hexes, so long as you are certain that those targets won't turn and leave. Thus, they are effective against drones (any drone will kill a drone, more or less) but not fighters when fired at that range. When used against fighters, the maximum effective range is 6, and even then the target can turn and outrun the drone. While this is a deterrent, it is only a temporary one, for as soon as you are out of these drones the enemy will cease to run away.

If you expect to dogfight the enemy, save at least one (preferably more) of these drones.

Never launch these weapons against a ship unless you can hit a down shield, don't have any choice (as you are about to be destroyed), or you can launch large numbers of them.

Plasma Torpedoes: As the only type of seeking weapon which weakens with range, plasma torpedoes should always be launched as close to the target as is practical. For fighter-launched plasma–Fs, this means 4–5 hexes, the last instant before entering the point defense zone of the enemy ship. Remember not to launch plasmas at a rapidly receding target, unless you just want to make sure he keeps going. The same tactic applies to the plasma–D torpedo. This weapon has the same range attenuation factor as the plasma–F torpedo and so should be launched in the same circumstances. The only difference in doctrine between the two weapons is that it's worthwhile to launch a plasma–D torpedo at an attrition unit or seeking weapon. A plasma–F torpedo is overkill on anything smaller than a PF, but it can't be distracted by chaff.

Phaser-2: An uncommon fighter weapon, carried only by a few standard fighters and most heavy fighters, the ph–2 is not particularly effective. Its damage breaks over at three hexes, forcing the fighter to go into the point defense zone in order to get a good shot. Recognize that any ph–2 fighter will tend to be a kamikaze. Launch all seeking weapons according to their doctrines, close to three hexes, and fire the phaser, and then get out, or continue to close to fire a ph–3 at two hexes. Try to use the phaser to exploit a weakness created by seeking weapons. The phaser is a low damage weapon and is unlikely to knock down a shield without help. In a long attrition battle, a pack of phaser–2 fighters can operate at ranges up to 15 and constantly peck at enemy shields. (Phaser–G fighters can do this as well.)

Phaser–3: The most common fighter armament, the ph–3 is first and foremost a defensive weapon. Use it against seeking weapons and other fighters before even considering a ship assault. Unless the target ship has been stripped of its defenses (for whatever reason), any fighter which closes for a phaser assault can expect to die before getting back out. The benefits gained should be carefully weighed against the probable losses before attempting such an attack.

Phaser–G: The phaser–G works like a phaser–3 (same range), only much better. The same tactics should be followed when making an assault, but gatling fighters make assaults more often because they can do worthwhile damage. When considering a close assault, remember that the potential damage is greater, but so is the loss. This is the only phaser which can generate enough firepower to significantly damage a shield, so the gatling-armed fighter has considerably more flexibility in the attack.

Disruptor: Deploy your disruptor-armed fighters behind the drone-armed ones. They should form a final wave which will exploit the advances gained by the earlier fighters. The disruptor fighters have two charges for their weapons, so don't lose them

on the first pass. Fire the disruptor at 5 hexes the first time (outside of the point defense zone), and then close on the next turn for the second shot (you have less to lose). As with the ph–2 fighters, your weapon only packs a small punch; don't try to knock down fresh shields with it.

Photon Torpedo: Possibly the scariest of all fighter weapons. No subtlety here, just close to 4 hexes and blast them. If the shield wasn't down before — it certainly is now!

Fusion Beams: Discussed at length in the Hydran section. The most common Stinger tactic remains the sledgehammer blow. Run in, expect 50% losses, and you'll still kill him.

Hellbores: Discussed at length in the Hydran report. This fighter should be cruising behind the Stinger–2s and fire after the shield has been knocked down. Or fire the hellbore at an ESG to allow the fusion fighters to close and deliver their message.

Rail-Launched Anti-Drones are a new weapon in the Doomsday Edition. They are, literally, an ADD hung on a drone rail and usable as a direct-fire weapon. Their best use is to kill incoming drones, or as a dogfight weapon. They probably cannot kill a fighter, but can cripple one.

BOOSTER PACKS

When using WBPs, you trade vulnerability for double speed. Not all fighters can afford to make this trade-off. Fighters can be divided into classes by how many points of damage are required to cripple them when their packs are on. Lightweight fighters have up to 9 damage points and are crippled by 3 points when under pack. These fighters are low and medium technology fighters which were not designed to be used with booster packs. Accordingly, don't use packs with these fighters (at least not within range of enemy weapons); they're too fragile.

Middleweight fighters are killled by between 10 and 14 points and are crippled by 4 or 5 points when under packs. These are medium and high-tech fighters built to use packs. When using WBPs with a medium fighter, drop them when the damage from a single weapon has a 50% or greater chance of crippling the fighter. Every weapon can be said to have a "crippling range" versus middleweight fighters. This range is 8 hexes for photons, 5 hexes for phaser–1s and D–racks, 4 hexes for disruptors, 3 hexes for phaser-2s and ADDs, and 2 hexes for phaser-3s. Tholian Spiders, with 14 damage points, can afford to get closer before being in trouble. Inside these ranges, your opponent can cripple you with a single shot, so he probably will.

Finally, heavyweight fighters need 16 or 18 points to be killed. These fighters are tough enough to use packs, although (in the new edition) marginally fast enough without them.

Crippled fighters should never use packs within range of enemy weapons; they make too good a target to pass up.

WBPs can be turned on or off once during the turn, so plot the fighter's speed to allow it to close as fast as possible, then turn off the pack at a safe distance from the enemy.

DOGFIGHTING

Dogfighting serves one purpose only: it ties up fighters. Remember that dogfight resolution interphases come up only four times a turn, and that a fighter is out of combat at least until the next interphase. With this in mind, a simple rule of thumb can be developed: If trying to tie up the enemy, close and challenge; if trying to get around enemy fighters, avoid being in the same hex with an enemy fighter and separate at the first opportunity if challenged.

The first tactic is used by patrolling fighters, the second by attacking fighters. As an advanced technique, remember that ph–3s can cripple a fighter using packs. Therefore, when about to enter a dogfight, fire a ph–3 at 1 hex range. This gives a 67% probability that the target fighter will be crippled. If he is, he will be easy to dogfight; if he isn't, there is a 50% chance you would be disadvantaged in the dogfight and unable to use the forward firing ph–3 anyway.

One last point on dogfighting: dogfight crippled fighters with admin shuttles. The shuttles take more points to kill, have nearly as much speed, and have a ph–3 which may be fired whether advantaged or disadvantaged. A shuttle has a 32% chance to kill a DFR 4 fighter (one with 4 damage points left) in a single round and a better chance against crippled fighters with lower DFRs or less damage remaining.

ANTI-FIGHTER TACTICS

Consider all of your weapons.

T-bombs beamed out can be very effective.

ADDs make extremely effective anti-fighter weapons if the fighters come into range.

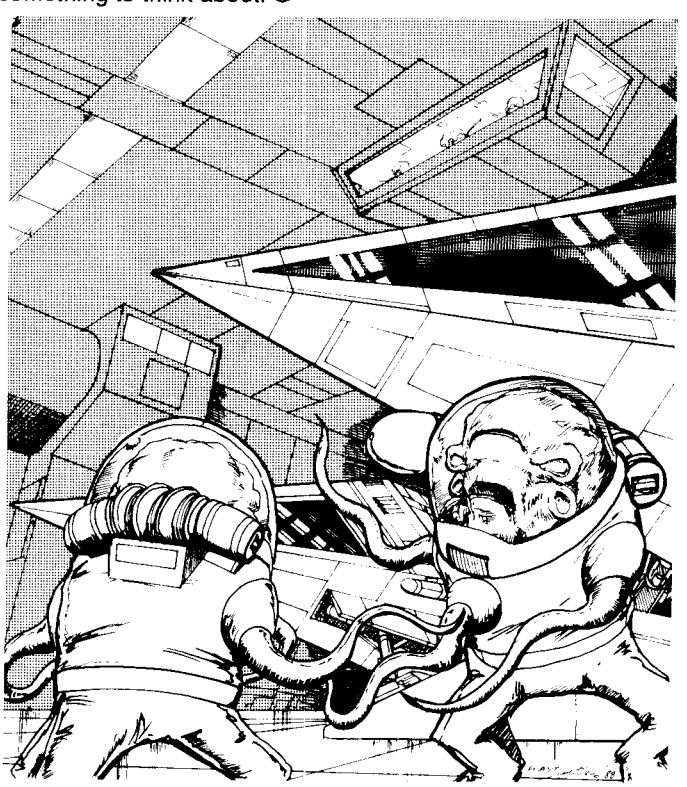
Tractor beams are very good at dragging a crippled fighter to death. It also will keep an uncrippled fighter away, but don't be surprised if the fighter HETs and then comes for you.

High speed is an asset, but most advanced fighters are fast enough to get into your hex and use close combat maneuvers to hit a down shield. The primary advantage of high speed is the ability to maneuver another ship into a position to kill the fighter.

Of course, phasers and heavy weapons are helpful. The plasma shotgun was, literally, made for fighters.

CONCLUSION

Fighters are some of the more valuable units in the game. Their capabilities make warfare different and exciting to say the least. The Hydrans and Kzintis survived the General War by their use of fighters. The Federation dominated battles with their fighter groups. The Coalition never really caught up with fighter warfare, but were on the offensive during the entire period of Alliance fighter superiority. The Coalition introduced the PF to redress the balance in attrition unit technology and spent the rest of the war fighting a draining defensive battle. Perhaps that is something to think about. ✪



TACTICS FOR BASES

by Stephen V Cole and Frank Crull

Bases are the early warning system and supply line for any fleet. It is bases that stand vigilant on the border waiting for the enemy to cross and attack. It is bases that provide the supplies and reinforcements for fleets when they are engaged in a campaign. It is bases that provide a secure position to retreat to when fleets need to do so. Bases provide coordination for the entire sector of space they are assigned to. Bases are indispensable, but they are also vulnerable to certain types of attack.

There are many types of bases in the game system, ranging from small ground bases to mighty starbases. From a tactical standpoint, however, the type of base is not as important as its location. Bases can be on a planetary surface, in orbit around a planet, or in open space. How a base is defended, and attacked, depends first of all on the location.

BASES ON A PLANETARY SURFACE

Two elements are the key here: the atmosphere and the body of the planet. These affect all tactics for planetary bases.

The atmosphere (if there is one) produces several effects. It slows down units moving to or from the planetary surface. It provides an ECM benefit. It provides protection from various effects, including explosions and ESGs.

Bases on a planet cannot be targeted by ballistic weapons from beyond four hexes. The "small" ground bases can be hit by anything from beyond five hexes.

The planetary body creates a 180° blind spot for the base. In this area, the base cannot fire or be fired at. For bases on the surface to protect a planet, there must be at least two of them, and preferably several more.

Assaulting a planetary defense system of this type, assuming relatively equal forces, is to attack one or more adjacent bases with overwhelming force. The point is to create a blind zone where the other bases cannot fire. The ships can then take refuge in the blind area while reloading weapons or conducting necessary repairs.

Ships in the blind zone can also launch ground assaults by having shuttles move around the planet. One tactic is to prepare the shuttles, which are on the surface in the blind zone. One or more ships expose themselves. If the bases fire at the ships, the shuttles are free to move in with a ground assault. If the bases do not fire, the ships have firepower superiority.

Fighting from this blind zone requires careful timing. The attacking ships plot a low speed and then sideslip into firing position. After firing, another ship, in the blind zone and facing the opposite direction, tractors the ship that fired and (using a speed change from 0 to 10 plotted for that impulse) pulls it back into the blind zone. While the bases can fire on the ships for the one impulse when they are exposed, they cannot conduct a repeated Mizia-type attack and cannot engage with seeking weapons.

BASES IN ORBIT

Bases in orbit are similar in some ways to bases on a surface. There is a blind zone created by the planet itself, and ships can retreat into this blind zone to repair and rearm.

There are no atmospheric problems to contend with.

The base is moving, which has minor effects. Your ships can expose themselves near the end of the turn, fire weapons, and then watch the base move on around the planet, putting the ships back into the blind zone. You should conduct such an exposure attack whenever base rotation brings the same (damaged) shield into view.

BASES IN OPEN SPACE

For all practical purposes, only base/battle stations and starbases are deployed in open space. These are usually festooned with modules, guarded by ships, and surrounded by minefields. They are not at all gracious hosts for unwelcome guests.

The ring-type minefields deserve note. These should be deployed close enough that any minesweeper will be within the effective range of the phaser–4s, but far enough out that ships outside the minefield are not within overload range of the base itself. Ships hit by mines should immediately be targeted by phaser–4s to generate a Mizia-type effect. Generally, command-controlled mines will provide a passageway through which friendly ships can come and go. Captor mines will provide the base with additional firepower.

Combat against bases is effectively a siege operation. The ships select a range where the firepower ratio is favorable (or the least unfavorable) and position themselves at that point. These ships will generally not move as they need all of their power for EW and shield reinforcement. The ships will conduct tactical maneuvers to turn fresh shields toward the base and will try to concentrate firepower on a single shield. Because they are at speed zero, they can easily withdraw in reverse if necessary.

At some point the ships may try to charge into overload range in an overwhelming, final assault. Such an assault must be prepared carefully. All ships will need overloads on hold and capacitors full, with suicide shuttles in the hangars and scatter-packs ready to deploy. Penetrating the minefield means clearing a narrow gap (the narrower it is, the faster it can be cleared) and sending your ships through it. Drone using races will want to use large number of drones to overwhelm the base. Having a carrier with its large number of drones around will help keep the pressure on the base. Plasma races should emphasize using enveloping plasma torpedoes because they will damage all shields.

COMBAT WITH BASES

Bases in any location have certain features in common.

They do not move. (Those in orbit move very slowly and in a predictable pattern, which is very much the same thing.) This allows attacking ships to pick their range.

Bases have an EW capability, which ranges from trivial in the smaller bases to phenomenal in starbases. This must be countered by scouts, which must themselves remain out of effective phaser–4 range. The special sensors on a base have a multitude of useful capabilities. The problem with a base's sensors is that they can be blinded by its own weapons. This forces the base to make tough decisions about when to fire. Generally, don't blind your channels if you can't at least penetrate the shield reinforcement of the intended target.

When forced to accept a battle around a base, determine if the base can survive. If not, keep your ships out of enemy overload range and fight until the base is destroyed; then leave. Any ships which are destroyed or crippled trying to defend a doomed base are a waste of valuable assets.

Small ground bases are primarily a "damage sponge" that will absorb the firepower of an attacking squadron while the fleets battle in the space above.

Rotation rate has been debated endlessly. Faster rotation rates will bring new shields into action quickly and allow most of the base's weapons to fire every turn. Faster rates also bring damaged shields back around during each turn, allowing the enemy to sit in one place. Some weapons (hellbore, EPT, and PPD to some extent) are able to ignore base rotation effects, eliminating that factor from consideration.

Tholians can conduct an actual siege by placing a web barrier and fighting from the blind zone behind it. Their ships move

into the barrier, fire, and then are hauled out by the ships behind it.

Power is the lifeblood of a base. Bases have more power than ships and can gain more from power modules (which, unfortunately, replace fighter/PF modules) or from ships docked inside or to them. Note that power transfers are limited by the new rules.

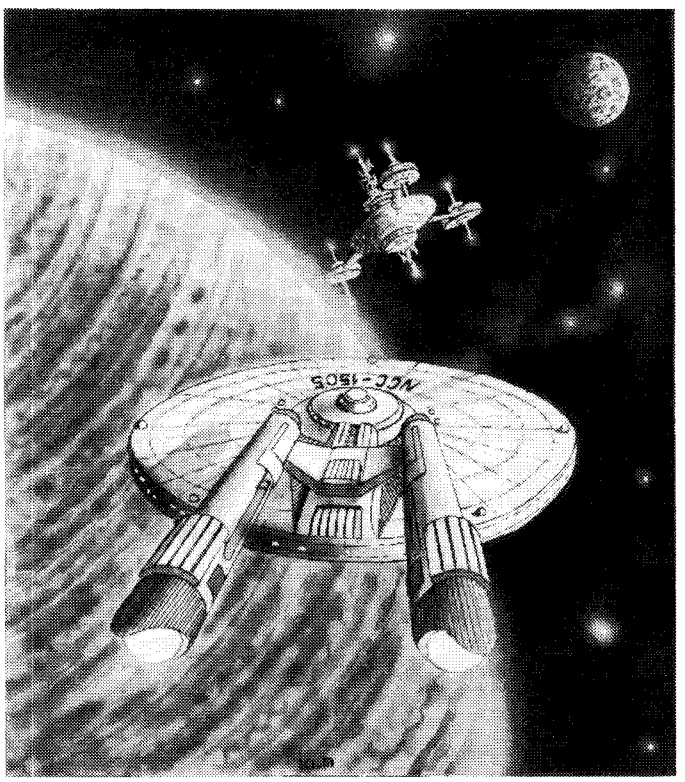
Massive drone attacks can work, but must be truly massive and include special drones, particularly armored drones. The large starbase labs will make deception difficult or impossible.

When a base launches a WW, destroy it in the same hex so that collateral damage will affect the base.

Mines might be laid in the path of an orbiting base and set for drones and shuttles. When the base launches fighters, or when your drones approach it, the mines will damage the base. You can always set it for the base itself and hope for luck.

Most hits will be cargo/repair. Make your decision on where to take these hits based on the scenario. If cargo boxes are not a victory item, take the damage there and save the repair bays for your ships.

Modules can also be essential to the construction of a base. Select modules that increase firepower and improve defense. Fighter and PF modules should be taken first, power modules if needed for the weapons. Cargo pods/modules are gigantic damage sponges, able to absorb damage points for little cost. ✪



CONVOY TACTICS

by Stephen V Cole and Steven J Kay

Convoys are, in a very real sense, the reason why star fleets are built. The purpose of every navy that was ever built is to protect friendly commercial shipping and, under certain circumstances, to interfere with unfriendly commercial shipping. Because lone freighters have no real defense against a warship (beyond the hope that a friendly warship will arrive soon or the vague deterrent that some of the lone freighters in the area might be Q–ships), most freighters in dangerous areas travel in convoys for mutual protection.

A convoy will consist of a number of freighters, some of which may be armed, possibly including one (very rarely two) Q–ships, and usually some escorts. These escorts will normally be of the police corvette classes, but may include an occasional frigate or escort carrier. Most scenarios provide for a cruiser to arrive after so many turns, but this merely tends to force the pirates (or marauding enemy warships) to finish their business and leave.

ASPECTS OF A CONVOY

Convoys have several aspects that distinguish them from ships. While most are obvious, all are significant.

Foremost of all, convoys are SLOW. They operate at speeds of 10-16 (or less, if trying to fire weapons), well below "fleet speed" for warships. Equally important, their acceleration rate is slow, requiring several turns to work up to their maximum speed. They cannot disengage by acceleration, only by distance.

Convoys consist of large numbers of individually weak units. This tends to give them the aspect of a sponge, able to absorb huge amounts of damage. Consider a typical convoy of six small and four large freighters. Even assuming that none of these are of the armed or Q-types, there are still 10 ph–3s and 4 ph–2s, about the same as a Kzinti cruiser. If one assumed that one of the large freighters was armed with disruptors and a couple of small ones had drones, you would very closely approximate a light cruiser in total firepower.

But this firepower is carried around in a series of flying sponges, each requiring considerable damage to silence. Silencing the phasers on a Kzinti CS would require a succession of small volleys through a down shield. Silencing the phasers of a convoy requires knocking down the (admittedly weak) shields of 10 ships and scoring enough damage on each one to hit the phasers.

A word should be said about "military convoys," which tend to include tugs, armed freighters with military shields, troop transports, etc. These can be much faster than merchant convoys and are far more heavily armed. Pirates attack such convoys only if they are tired of living. A squadron of warships will not come away unscathed.

CONVOY DEFENSE TACTICS

First of all, stay together. Second, keep all of your weapons armed. Third, move as fast as you can toward safety. If one ship is unable to maintain convoy speed, you have a problem. Slowing the convoy makes everyone vulnerable; abandoning the cripple may give the pirate his victory condition. If a ship can keep up only by leaving its phasers uncharged, it may be worth it.

Staying together doesn't mean staying in one hex, but it does mean staying close, even to the extent of having two or three ships per hex. The point is that your weapons are short-ranged (more so than a typical fleet's), and you cannot afford to leave any of them unfired. If your convoy occupies an area 5

hexes wide and 8 hexes long, a pirate can close to point-blank range on one of your ships and remain out of effective range from half or more of your phasers.

Keeping together doesn't overly risk damage from explosions as most freighters explode at relatively low levels. Moreover, the pirate is not trying to destroy your ships, but to simply capture one or two. Even so, if you kept 10 freighters in one hex, you are asking the pirates to destroy one to damage the shields of all the others.

A convoy has few enough weapons; all must be used, to their maximum effect, every turn. If possible, concentrate them on a single shield although it would be better to fire a phaser–3 at an undamaged shield than to leave it unfired.

Under heavy attack, slow to speed 6 (you can't outrun a pirate anyway) and launch your shuttles, which will just about double your phaser firepower.

ESCORTS

Convoy escorts will, in most cases, be barely adequate (or completely inadequate) to the task. If they are able to duel with the attacker, they should (of course) do so. Turn toward the approaching pirate/marauder, overload your weapons (he will have to come to you), and have the convoy move directly away at its best speed. If there is an armed freighter around, have it stay with you to fight the attacker. If there is not an armed freighter or Q–ship, have one of the standard freighters turn and move aggressively — the pirate might fall for the trick and leave.

If the escort is outgunned, it should stay with the convoy, perhaps moving in retrograde if that is necessary to keep weapons pointed at the approaching pirate. The escort will have a tractor beam, something small freighters lack.

ATTACKING A CONVOY

Anti-convoy tactics are different than ship-to-ship duels. A convoy protected by one or two escorts requires a completely new approach. It is obviously necessary to eliminate the escort, run down the convoy, waylay it, and take the cargo. Some general conditions apply to both pirates and marauding warships.

Mission is always the key. A pirate wants to capture a freighter. A marauding warship wants to destroy or cripple as many freighters as he can.

Your time schedule will be dictated by the arrival of reinforcements. If none are expected, you can follow the convoy at just beyond the effective range of its weapons, kicking in the shields of one or two ships per turn until all are crippled, slowed down, and weaponless. Then you can wrap up the whole batch. If they try to scatter (appropriate in some circumstances), cripple them or put marines on board as fast as you can. Hit all of the ships going in one direction to simplify the later chase.

Convoys are vulnerable to seeking weapons (due to their low speed), but the forest of phaser–3s provides some defense (and each freighter has the effective abilities of one lab to identify the weapons). Large freighters have tractor beams for added defense, but using them prevents towing a damaged comrade. Combine seeking weapons with a direct attack for best effect.

If reinforcements are expected, you must examine the victory conditions and determine how great a victory you can aspire to in the time available. Don't duel with the reinforcements. At worst, plan to accelerate and disengage on the turn they arrive.

Do not take convoys lightly. Even a weak convoy has more phasers than a typical pirate. A strong convoy will completely outgun you. If you can split up a convoy, you have cut their firepower in half (or more) and can afford to close and board. The traditional way to split up a convoy is to cripple one or two of the ships (more if the escort insists on towing them) and watch them fall behind. If that doesn't work, a pirate will make a high-speed pass, punch out a couple of the heavier units (where a shield penetration will destroy two or more weapons, instead of only one), and grab a small freighter or two. These can be dragged away from the convoy and dealt with out of range. A marauder will probably seek to destroy one key unit, spending any leftover firepower to damage a second one.

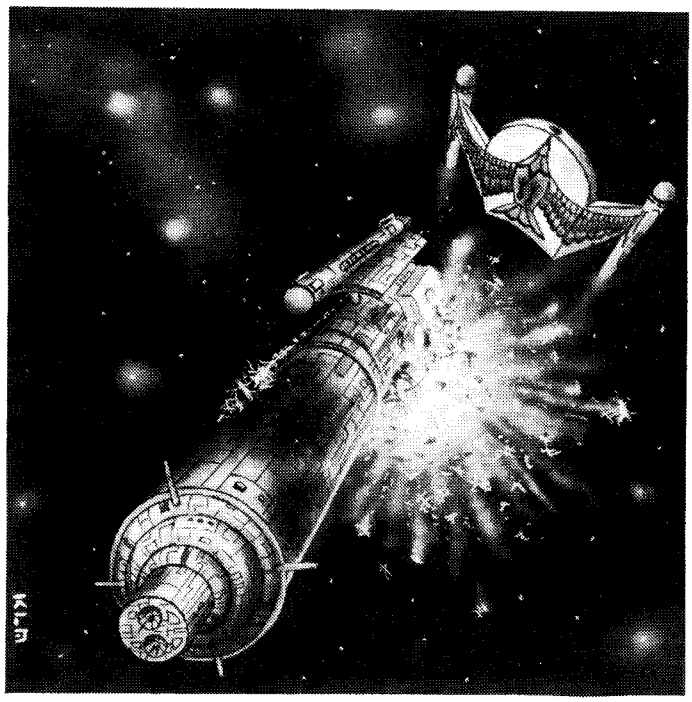
Escorts need to be crippled, but they don't need to be destroyed. One solid overload volley should be adequate to leave a police ship crippled and out of the fight. One point: If you overrun the escort, don't coast into range of the convoy. Your down front shield will be facing a hornet's nest of phasers.

Examine the convoy and determine where its firepower is the strongest. Most armed freighters have FA weapons. If they are present, attack from the rear quarter. Large freighters have two phasers, one ph-2 360° and the other a ph-3 RA; attacking these from ahead cuts their firepower by a third. Q-ships (which can't be detected until they fire) come in two flavors: FA and RA (exception: Kzintis). Attack from the opposite direction of the local Q-ships. Ships which turn around to face you are suspect, but the defender may turn several ships toward you to hide the one that is the Q–ship. Examine the entire convoy, and calculate where its firepower is the weakest. Attacking from head-on will force the convoy to reverse direction, keeping more ships within range of your attacks.

Both pirates and marauders will tend to be alone and far from repair bases. A convoy battle is not a border skirmish where you can both retire to a convenient base. Avoid getting your ship crippled.

Pirates will use boarding parties to capture a freighter or two. Marauders will keep the marines home as the mission is destruction, not capture. Hit-and-run raids on key units may be worthwhile.

Nothing is worse than unloading your weapons on a freighter, only to have a Q–ship expose itself in front of your unloaded weapons. Expect a Q–ship and plan accordingly. ✪



MINES AND MINEFIELDS

by Frank Crull

Mine tactics are determined by the type of mines being used and how they are deployed. Mines are produced in three forms (explosive, captor, and sensor) and two modes (command and automatic). There are variations within these categories.

Mines will usually be deployed in three manners: in a belt like a fence, sphere surrounding a certain object, or randomly.

THE BASIC BELT MINEFIELD

The first type, the belt minefield, is used to guard a border or to keep intruders out of areas you don't want them to enter. In the belt approach, you have basically drawn a line and said: don't cross it. The enemy is dealing with a very dense line of mines, but it is a short line and lacks depth. After a few hexes are cleared, he will be through the minefield. The trouble with this minefield (and the sphere) is the number of types of mines you are dealing with, including mines that explode, mines that fire at you, mines that are linked to explode at the same time, and mines set to trigger if you sweep another mine.

The types of mines you will see in a belt will be large and small explosive mines, captor mines, and sensor mines. Controlled mines will not generally be used in a border belt since supervision is not always possible. Deadman mines are very common, especially with explosive mines. In setting up your minefield for a belt pattern, you must remember the size class of your target(s) and your own weapons. Size 2–4 will catch ships but ignore fighters and PFs. Setting mines for size class 5–7 and then using drones in a captor mine is not smart because your own drones will blow up the mines.

You need to make an intelligent decision on the composition of the mines used. Explosives will make up the bulk of your minefield, so you can either distribute them evenly across the belt or bunch the explosives in one area and allow captor mines to guard your flanks. If your minefield is supposed to deal with enemy minesweepers creating holes (and most belt fields are), you then need to look at the race you are dealing with. A Federation minefield on the Romulan border could use drone-captors (with the explosive mines set for sizes 2–6) since the enemy has no drones to sweep your mines. Conversely, on the Klingon border, using drone-captors is risky due to the high number of drone-using minesweepers. Their weapons can't be blocked without blocking your own.

Drones are difficult to use but can be valuable. If you set your large mines for size 2–4 and your small mines for size 5–6, none of them will accept the size-7 drones. This allows you to use drones on the attacking enemy, while his drones can be dealt with by command explosive and captor mines.

A deadman switch is risky since you need the field for protection, and if the mines only destroy one ship, the other ships can close in and get the base. This form of arming should only be used for a few mines as a means of confusing the enemy.

RING MINEFIELDS

The second type of field is the circular belt. This is used to guard stations and planets. Using minesweepers here is more difficult. Against a belt they can count on leaving the area before the enemy fleet arrives. Around a planet or base, an enemy with weapons able to cripple your minesweeper is already present. Command mines are more valuable here since they are turned off and on at the whim of the base/planet. Usually you will use the command-explosive mines to create an opening in the field to let friendly units get in and out. If the enemy is careless, he may send ships rushing into the breach and suffer the effects of several command mines going off simultaneously. Also, being at a planet/base gives fire support to the minefield and insures that the enemy will spend time with it and ignore you.

LAYING MINES IN MID-SCENARIO

The last type of mine warfare is random. This usually occurs with transporter bombs (see separate article) and very limited numbers of large mines (usually from older Romulan ships) dropped out of the hatch. Mines placed under these conditions are used to take out drones/shuttles and to drop a surprise in on an enemy ship or patch a minefield. Again, care must be taken in planning since you could end up running over your own mines. Plan whether the mine is for enemy drones/shuttles or for the ship itself. Also note that, if an enemy ship is slowly picking its way through your mines, you could (had you set them to do so) detonate the mines by launching drones through them.

ATTACKING A MINEFIELD

If you are attacking a minefield, you are probably using a minesweeper. You should have a supply of minesweeping shuttles. Those should be used first since they are cheap and can be easily replaced, at least in a strategic sense. In a tactical sense, they are irreplaceable, but the battle should be over before it matters.

Once you have made a hole in the field, you can rearrange the field with your own mines, thus causing problems for the enemy if he tries to come and patch your hole. Be sure to leave yourself a way in, and a way back out.

Some races are better at sweeping than others. Lyrans can turn on their ESGs and just plow through the field, unless, of course, the enemy knows that Lyrans are in the area and makes the field dense enough to crush the ESG and the ship inside it. Other races can send a succession of shuttles and/or drones through the field and, if the opponent set the target parameters of his field carelessly, detonate a hole in it.

A minesweeper will draw enemy firepower like a magnet; hold yours back until other options are exhausted or firepower is overcome. A multi-channel scout makes a good substitute. Sweeping can perhaps be accomplished by ramming a series of small units into the field. Web casters can reduce the explosive strength of a mine. An X-ship can blow right through a minefield in short order. If you are facing a well-planned minefield, the best tactic is to sit back and use long-range firepower to attack enemy units and attempt to start devastating the planet or base.

Wild weasels can also be used to detonate minefields, but it will take several of them to do the job. This makes survey ships (many of which have sensors and large shuttle bays) excellent minesweepers, but they are also excellent at many other jobs, and relatively few survey ships are available.

ANDROMEDANS: THE SPECIAL CASE

These tactics will work on most galactic races. Andromedans are a major exception. They will either displace over your field or run through it to gain power. That is generally unacceptable on both counts, so if you are fighting Andromedans, a small dense minefield is better than a large sparse one. One or two mines catching an unsuspecting Andromedan is better than several mines going off against an Andromedan who wants the power.

Of course, Andromedans can use their transporters without "dropping shields," so you can expect them to use mines often. Even worse, their satellite ships can be launched several hexes from the mothership, where they can drop T-bombs from their hatches and return to the mothership. ✪

DAMAGE CONTROL

by Stephen V Cole and Mark Schultz

Ships in combat will, more than likely, be damaged. Continuing the fight after damage, or repairing the ship sufficiently to escape, is a serious consideration. The key to this is damage control, the ability to repair battle damage while the battle continues.

There are several types of repair, each of which should be considered separately.

SHIELD REPAIR

Most units with shields are able to perform shield repair. It is designed exclusively to repair destroyed shield boxes, restoring the shield to a portion of its normal strength. All that is required is a damage control rating and power. There is no limit to the number of boxes which can be repaired or to how often a given shield box can be repaired and destroyed and repaired again.

The amount of power that can be used is limited to the damage control rating. For every two points of power, one shield box can be repaired. Thus, most cruisers can repair two shield boxes per turn, smaller ships one or two, and dreadnoughts three (rarely four).

There are three specific cases in which you should utilize this type of repair.

One is when you have a down shield. Repairing one or two boxes will allow you to reinforce the shield with specific reinforcement, which is far more effective than general reinforcement.

Another time to use shield repairs is when you are engaged in a long-range duel. If you don't keep up your repairs (keeping at least some boxes on all shields), your opponent will wait until your shields have enough dents and then change the battle to a short-range duel. Extended repairs may not be worthwhile in all cases. The power may be better spent for shield reinforcement if you are continually receiving damage. If your ship is one of several, however, and isn't being hit continually, shield repairs can be an important investment in continuing the siege.

The third use for shield repair is to balance your shields in the presence of hellbores because of their "weak shield" effect.

CONTINUOUS DAMAGE REPAIR

Continuous damage repair (CDR) is the most important type of repair. It costs no power. You receive repair points equal to your damage control rating every turn (after you decide to start accepting them). The only problem is that you are limited to repairing a number of system boxes equal to the damage control rating (4 on a typical cruiser). The selection of which four boxes to repair is vitally important.

No single rule can define what you should do in every situation. There are, however, some guidelines.

* Less powerful weapons can be repaired more easily.
* Some weapons, such as the PPD and hellbore, are prohibitively expensive to repair by continuous damage repair.
* Phasers are more quickly repaired, take less power, and can be armed more quickly than multi-turn heavy weapons. However, heavy weapons may be a more survivable repair. A ship's entire quota of system repair expended on phasers can be wiped out in a single moderate volley, while only one heavy weapon repair will be destroyed in the same volley. Ships with more power than weapons should definitely repair heavy weapons. If the opponent has more power than weapons, you should repair phasers since your opponent will not have the weapons to destroy your repairs and because phasers are less susceptible to the EW, which will most likely be used by a power-heavy ship in an attempt to even the odds.
* Look for critical shortages. With no tractor, you cannot use a Gorn Anchor. With no transporters, you can't recover the troops from the planet. With no security stations, you can't control the unwashed masses. Without a sensor rating of 6, you can't be sure that you can hit anything you fire at.
* You do not necessarily have to begin repairs immediately on the first system to be damaged.
* If you are losing, repair one impulse engine. When done, you can drop the warp engines and try sublight evasion.

EMERGENCY DAMAGE REPAIR

Emergency damage repair (EDR) is a desperate abuse of the engineering department. You permanently reduce your damage control rating (or risk such a reduction) in exchange for a chance (not even a guarantee) that you can repair a key system. Because of this reduction, you should avoid using EDR until your CDR quota is exhausted. EDR is best used on those systems that take the most repair points, but which will strongly alter the balance of power if successfully repaired. This usually means heavy weapons. Ships with many labs (e.g., a Fed CA) can make multiple rolls on each system and virtually guarantee a complete repair.

In fleet battles, where a ship can be withdrawn for a few turns, it is often useful to do so. The ship can then burn its damage control rating on EDR, saving one or two boxes to allow the use of CDR and shield repairs and return to the engagement with greater combat capability. The Federation CAs, as noted above, are especially good at this. A CA burning its three 2 boxes and one 4 box on its damage control track could potentially repair 10 critical systems due to its multiple roles. A Klingon D7 attempting the same thing is not likely to repair more than six systems because of its smaller labs.

DECK CREW REPAIR

Damaged fighters and shuttles can be repaired by deck crews. This is a long process, if total repairs are sought, and is more often used to bring a crippled fighter up to minimum operating conditions on the theory that it will be lucky to fire before it is destroyed anyway. The key here is the selection of which fighters to repair. You should concentrate on those fighters most appropriate to the battle conditions that currently exist. The squadron's EW fighter can be important if eight or nine fighters are still flying, but if only two or three are out there, sending the wizard out isn't going to help all that much. An F–18 with four drones and nine damage points may survive to launch while an F–15 with eight drones and only six remaining damage points may not.

REPAIR SYSTEMS

Few captains will be fortunate enough to fight their battles next to a friendly repair base or repair ship, but if you do, you may want to take advantage of it.

First, don't bring in every ship that takes a few internals, unless you have a lot of ships still out there.

Second, bring in the ships that are most important to get back into operation.

Third, select ships which can be repaired to minimal operating conditions in the shortest period of time.

Fourth, consider that a ship will be extremely vulnerable at the time of docking and undocking. Bringing in a very crippled ship may beg the enemy to blow it up just outside of the bay. ✪

CLOAKING DEVICE TACTICS

by Jeff Smith

The cloaking device is an electronic system designed to make it difficult for an enemy ship to lock onto a cloaked ship.

The cloaking device is not a free ticket home or a free ride into firing position. Any captain who uses a cloaking device without proper preparations before hand, that is to say, without knowing before the scenario started just when and where he was going to use it, is only asking to be hunted down and destroyed.

This is because of the primary penalty of the device — it blocks your own ability to fire weapons. If the effects of the device are voided (by one of the numerous items listed in the rules), your ship will take severe damage before it can respond. Note, for example, that most Romulan enemies have seeking weapons. If a lock-on to a cloaked ship can be attained, these become even more devastating because the cloaked ship cannot fire weapons in return. While the cloak provides penalties for such weapons, reducing their effects, they can still be devastating.

All cloaked ships are not created equal. Depending on the power available and the operating cost of the device for that class, some ships ("offensive cloak") can move and reload weapons while cloaked; others ("defensive cloak") can't afford power to reload weapons quickly.

Before the scenario starts, calculate how much power you have, how much is left after obligatory expenses and the cost of the device, and determine how much is left. This amount must pay to reload weapons (torpedoes and phasers), power EW, move the ship, and do anything else (e.g., arm a WW, decoy, or suicide shuttle). Calculate how fast you can accomplish all of that before the scenario begins. If you can reload a significant amount of your weapons in three turns while moving at a moderate speed, your ship has "offensive" capabilities. If the ship can reload weapons or move (but not both), it is "defensive."

Of course, many factors will adjust the equation. If you still had your phaser capacitors full (or left some empty), you can reload more quickly (although never less than three turns, of course). If you are being hunted and must spend power for EW (or a HET, or EM), you will have to give up speed, extend the cloak to allow another turn for rearming, or uncloak without a full load of weapons. If you have lost some power or weapons, or have some torpedoes still armed, the equation changes again. Arming a WW and using EW are usually a trade-off on the final turn, mostly depending on what speed you will be going when you uncloak.

If, in your current condition, you cannot reload a significant number of weapons in five turns, you should probably give up the attempt and get out of the scenario as quickly as possible.

To re-arm in three turns will require you to charge the phaser capacitors during the first two turns, when plasma torpedo arming energy is low. You can possibly cheat the clock by completing the first two turns of your reload cycle while cloaked, then uncloaking at the start of the third turn and using the energy previously used for the cloaking device to complete the torpedo arming.

STAR FLEET BATTLES continues to evolve. As new cloaked ships are added, you should calculate their energy to see if their cloak is offensive or defensive.

PREPARING TO CLOAK

For the cloaking device to be successfully used in an evasion maneuver, either to disengage or to rearm, certain specific preparations must be made in advance. As many as possible of these things should be done, even if all cannot be. The object here is to make sure that you break his lock-on. All of these steps are designed to give you the best chance of breaking the lock-on when you cloak or to give you another chance to break the lock-on if you aren't successful the first time.

First, be as far as possible from the nearest enemy units. This makes it harder for them to retain a lock-on and will make it less likely that they can surround your area of probability and hem you in with mines or ships.

Second, tie down the main enemy units with your own seeking weapons. You can't afford to hang around waiting for the torpedoes to hit. Use an oblique approach, launch the torpedoes, then turn away and (possibly at the start of the next turn) cloak. If your enemy wants to follow you to the hex where you cloaked, he'll have to come through the torpedoes to do it.

Third, reduce speed at the point of cloaking, and plot another speed reduction, possibly two, during the remainder of the turn. Using speed changes will allow you to concentrate your movement into the first half of the turn, getting farther from the enemy ship. The faster you are going, the easier it is for him to retain a lock-on. Slowing down when you cloak gives you a better chance to break it. The speed changes will give you another chance to break lock-on if the cloaking maneuver itself isn't successful. Many players choose to use emergency deceleration when their attempt to break lock-on fails, but this is only valid when you absolutely, positively MUST succeed in breaking lock-on. Granted, the speed of 0 all but assures you of success, but you are now left motionless for at least 16 impulses, enabling the enemy to come over and await your decloaking.

Fourth, have an armed wild weasel ready for release. This will clean your ship of seeking weapons and provide increased protection from direct-fire weapons during the fade-out period. If you are going speed-4 or less, you can launch it just before or after beginning fade-out, depending on other tactical factors. (Note: Modern "speed is life" tactics prefer to move faster, forget about the WW, and use the power for maximum EW. Of course, if the enemy has more plasma torpedoes ready than you do, you might want to consider the WW tactic after all.)

Fifth, allocate power to electronic countermeasures to try and break his lock-on. Also, have all reserve power on standby. This can be committed to ECM for another attempt at breaking his lock-on, should one be required. Remember that you can have a maximum of six points of ECM. But it is not necessary to have maximum ECM before cloaking; increasing to maximum levels later may break the lock-on. And there is another, more desperate, alternative if all else fails to break the enemy lock-on. To do this, drop all or part of your own ECM. While this makes you temporarily easier to track, you are already being tracked anyway so you lose nothing. But by suddenly increasing ECM with reserve power, you get another chance to break the lock-on. This technique is called *the ECM yo-yo.*

It suggests another tactic, which is termed *the roller coaster.* If the sudden drop in speed does not break his lock-on, speed can be increased and then decreased again, earning another lock-on die roll and possibly breaking the lock-on.

If all else fails, there is a last ditch effort you can try that will most likely succeed in breaking your opponents lock-on to you. Declare Emer-Decel. Once you come to a complete halt, the new speed adjustment factor will be a -2. This is usually good enough to break even the most persistent attempts to maintain lock-on, even though the tactical penalties of speed zero are considerable. This can also be used by a cloaked ship that has previously used tactical maneuvers (which add to the maneuver rate of a cloaked going speed zero).

In summary, the way to successfully evade the enemy is as follows: Reach your chosen position, slow down, drop the wild weasel (optional), and activate the cloak to break the lock-on. If lock-on was retained, increase ECM to maximum and try to break it again. If he isn't using much ECCM, there might be enough power for two stages of increase, giving two attempts to break the lock-on. If that fails, slow down (your previously plotted speed change), gaining another chance to break the lock-on. If that fails,

use the ECM yo-yo, possibly in two stages. If that fails, start preparing to come up, fight for one round of torpedoes, and then cloak again.

You shouldn't give up any more speed than necessary to trigger another attempt to break the lock-on. Speed is necessary to maneuver. If you are forced below a speed of 8, you probably won't be able to evade the enemy and may not be able to control the situation when you want to uncloak.

The same procedures are used if you are using the device to provide time to reload weapons and resume the battle, or simply escape the scenario to fight another day.

PREPARE TO UNCLOAK

Probably the most difficult operation is to uncloak within range of the enemy fleet. This can happen during an initial approach or after you have reloaded torpedoes.

Plan ahead. Have your weapons armed when you uncloak. Have a wild weasel available to provide ECM. If possible, uncloak after the nearest enemy ships have fired or in firing arcs not covered by their heavy weapons. Take particular note of the arming cycle of enemy weapons. If it is possible to uncloak outside of overload range (particularly against Federation ships), you should do so.

In a fleet battle, have several ships uncloak at once to prevent the enemy from picking them off one at a time. If a scout is available, it could lend ECM to these ships, although it will have to remain uncloaked and will be a prime target.

You may find yourself required to uncloak when you did not plan to, perhaps when a lucky shot knocked out a plasma tube and you have eight impulses to get the torpedo away. Give yourself the best firing position you can, get the torpedo (and the PPT) on the way to the target(s), and go back down.

OTHER CONSIDERATIONS

If your ship has ECM drones, these can be used to provide additional ECM during the vulnerable fade-out period. A Romulan will not have these weapons, but a pirate will, as may other ships equipped with cloaking devices for special cases.

Pay close attention to things that will void your cloak. If there is an asteroid field, don't allow yourself to be trapped against it, but stay within range of it. While contact with an asteroid may expose you, the asteroids will provide ECM which could (if desperate) help break a lock-on.

Minefields are death to cloaked ships. They will expose your ship; you can't avoid them. They can do a lot of damage, and they don't even provide ECM benefits.

Your own mines, however, can be useful in discouraging pursuit or disposing of drones. These can be dropped from the shuttle hatch to avoid exposing your ship. Cloaked ships make excellent minelayers. Approach areas, areas around bases, and ships that have stopped (to launch a WW?) are excellent places to place mines.

ANTI-CLOAKING TACTICS

Several useful principles should be considered.

Avoid letting him cloak. The Gorn Anchor is good for this, especially since he is paying so much power for the cloak that he won't be able to break your tractor..

If he cloaks, avoid letting him break the lock-on. Increase ECCM to the maximum, possibly with scouts.

Fighting cloaked ships takes patience. Load all weapons but fire the phasers (and disruptors) only, and those only in rolling relays, to keep a crippling salvo loaded. Use narrow salvos to yield substantial damage; minor damage is almost worthless unless you can hit a down shield. If you have drones, spend your option points on ATG since self-guiding seeking weapons get a double chance to retain a lock-on and have more ECCM. Plasmas, of course, get this bonus for free. Type–VI drones can provide a nasty (if minor) surprise for a cloaking ship.

If you get a lock-on and have a good chance of penetrating a shield, unload most of your weapons into him. This can be particularly valuable if you will have a chance to reload before he can. Beware, however, that he may be trying to trick you into firing so that he can uncloak against empty torpedo tubes.

Get closer to him, but avoid running directly over his last known position. If you can, hem him in with ships, physical obstacles, and temporary minefields. T-bombs are excellent for this work, where they function as "flash cubes" to expose his ship when he bumps into one (or you detonate it with a drone, shuttle, or ship). Standard mines are even better, although almost never available in this situation (unless the cloaked ship wandered into your minefield).

Once a cloaked ship has been exposed, immediately try to apply a tractor beam to it. If a tractor beam can be established on a cloaked ship, the vessel that has applied the beam should have no troubles in making the cloaker suffer an invisible death (G7.99).

If you're in command of a Tholian ship and your opponent cloaks, try to get him trapped in web. This will allow you to lock-on to him while he's trapped. You did prepare a couple of suicide shuttles for just such an event, didn't you?

Remember that the best time for him to uncloak is at the start of a turn as this is the only point he can switch power from the cloaking device to the final arming turn of his torpedoes, so be sure that, at the end of every turn, you are in position to hit him with an oblique attack and then turn to outrun his torpedoes.

The best time to hit an uncloaking ship is during the last impulse of the fade-in, when he still can't fire back but your firing penalties are minimal. ✪

STASIS FIELD GENERATORS

by Graeme Bayless

The stasis field generator (SFG) is a weapon designed and used almost exclusively by the Klingon Empire. It is a weapon whose purpose is not to damage an enemy ship, but merely to freeze it in space and time until the Klingons are ready to deal with it. The weapon appears on only a few Klingon ship designs, primarily because of the cost of the weapon, but is a very powerful tool. It has been described as the "most powerful weapon in the game."

The SFG's primary purpose is to provide a special kind of fleet support, allowing the SFG ship to temporarily disable enemy ships by freezing them in time. As the Klingons used this weapon, however, they discovered many new uses for the system, beyond the simple offensive uses, ranging from freezing a friendly ship for protection to freezing enemy seeking weapons to stop them from hitting.

USING SFGs

The traditional operation of the SFG, the offensive trapping of an enemy ship, is still a very viable and useful technique. In this situation, the proper usage depends on whether the engagement is a fleet action or a one-on-one duel. If the former, the SFG-armed ship should become the middle of the offensive formation, 3–5 hexes behind the front ships, where it can still provide defensive support for the rest of the formation but where it can quickly move into range of opposing vessels. When the fleet closes in, the SFG ship should accelerate if necessary, using reserve or mid-turn plotted acceleration, and try to close the range after the enemy ships have fired. Arrange to end the turn at that range so that you can plot zero speed next turn. Then, at the beginning of the next turn, the SFG ship can freeze several enemy ships, BEFORE they can fire. (SFGs activate during impulse activity, not direct fire.) This is one of the biggest features of the SFG — it goes before direct fire, allowing you to freeze an offending ship before it fires at 5 hexes.

If possible, freeze an enemy ship that has not satisfied its turn mode. This ship can then be surrounded by mines that it cannot avoid.

SFG ships can use emergency deceleration to stop, but this has penalties and problems. The SFG cannot be activated for 8 impulses, giving the target time to evade or respond. The SFG ship is, itself, stuck in that hex for half a turn. Better methods are plotted speed changes (still hard to use as they require the ship to be at low speed) and having a "stopped" SFG ship *towed* into firing range.

If the situation is a duel, then the SFG should be treated as a weapon you use on later turns to freeze the enemy ship while your weapons recharge. You should fly as you would normally in a duel, remembering your weaker firepower. On the turn after you closed to range 5 or less, you activate the SFG instead of overloading disruptors. This allows you to recharge phasers, reload drone racks, and even finish special shuttle arming (if desired) before your opponent can begin to respond. You then release the enemy ship, at the beginning of a new turn when you have overloaded your disruptors, and pound him into scrap before he can wake up. You might even re-freeze him eight impulses later.

The SFG can be used defensively as well. The second primary use of the weapon, in fact, is defensive. This is the freezing of a friendly ship to prevent its destruction by any means. Take our earlier fleet battle example. With our setup (SFG armed ship 5 hexes back from the lead ship), we can support our whole front line, freezing them if they get seriously endangered or damaged. If any seeking weapons are targeted on the frozen ship, they simply hit harmlessly and are destroyed on the outside of the stasis sphere. This makes the SFG a very powerful "wild weasel" substitute, although difficult to use as the SFG-ship must be stopped before the problem arises. (The solution is, of course, to tow the SFG ship.) The SFG can also protect a ship that suddenly had a shield downed, interrupting the "Mizia Concept" of weapons removal.

One last common usage of the SFG is as an emergency plasma stopper. An SFG can stop any plasma torpedo in its tracks, giving the target ship the ability to recharge phasers for another shot at the plasmas before they hit or (except for the SFG-ship itself) to move outside of the weapon's range. The same technique works for drones, but tractors are generally a much better bargain in that regard.

OTHER USES OF AN SFG

Primary usages aside, there are some other tactics that are used less but are still quite powerful. The foremost among these is the "stasis pop." This is a tactic where the SFG is used early in a turn and then turned off before impulse #4. The SFG ship, using mid-turn speed changes (plotted are best), then accelerates to join the fleet again. The effect on the enemy ship is that fire control is disrupted for 4 impulses, allowing the rest of a fleet to close and fire without response from the "popped" ship. This is significant in only some cases, but can be a useful tactic in those situations.

Another function of the "pop" is its use on enemy escorts. "Popping" an escort may allow seeking weapons to pass by before the escort can fire at them. You can, of course, keep the escort in stasis until the drones hit their primary target, but this ties up your SFG ship when you could use it elsewhere. This works better with high-speed drones and plasma torpedoes, however, because 4 impulses just doesn't go far enough with speeds less than 32.

SFGs can be very useful against monsters, preventing them from moving, scoring damage, etc. Rescue scenarios also become easier with an SFG to stop the monster.

SFGs should be guarded by marines to prevent destruction by hit-and-run raids. Some monsters are immune to stasis.

In general, the SFG is a very powerful, yet limited weapon. It is special in its capabilities but limited in range (5 hexes) and, therefore, a weapon that requires aggressiveness. To win with SFGs, you must close quickly while protecting the SFG ship from long-range damage. This is possible against a skilled opponent only by careful deployment and careful maneuver. However, against a careless enemy, you can often sneak a stasis cruiser into a larger fleet and freeze an opposing ship before it realizes what is approaching it.

One last thing to remember on SFGs is that their functions are best suited to fleet actions. DON'T send SFG ships on flanking maneuvers; they are just as powerful in frontal attacks. Always have ships around to protect and support the SFG ships as they are valuable and expensive.

You should not, however, be reluctant to commit the SFG ship to battle. It is a very powerful fleet support unit and won't hurt your opponent if you keep it in the rear the whole game. There is no victory without risk. ✪

STAR FLEET MARINE INSIGNIA	
▼	Corporal
▲	Sergeant or Squad Leader
▲ ■	Senior Sergeant or Platoon Sergeant
▲ ♦	Technical Sergeant

BOARDING PARTY TACTICS

by Stephen V Cole

Marines in *STAR FLEET BATTLES* have three primary functions: capturing ships, hit-and-run raids, and ground combat. We will briefly examine each of these and discuss some of the general principles for boarding party combat.

CAPTURING SHIPS

While it is unusual to capture warships in combat (in all of World War II this happened less than five times), it is not impossible. You must utilize your marines to avoid having your own ship captured and take advantage of any opportunity to capture an enemy ship.

Boarding party (BP) combat assumes that the marines of one ship have, by some process, been transferred to the other ship. The most common mechanism involves transporters. Once an enemy shield is down, you can drop one of your shields (or use one that your enemy dropped for you) and transport troops onto the other ship. The problem here is that most ships have relatively few transporters. The result is that capturing an enemy ship is uncommon in single ship actions, but possible in fleet actions, where several friendly ships can send marines onto a crippled enemy vessel.

Two points of reserve power could be used to create one point of general reinforcement, blocking the transporters, but reserve power is in short supply, and one phaser hit will eliminate the reinforcement.

Another means of transportation is by shuttle. This is risky because the shuttle is vulnerable to fire from even long ranges. After marines are on board the intended prize, any shuttle approaching her will be regarded with the utmost suspicion. Therefore, if you are going to try to capture the ship, send over the marine shuttle simultaneously with the first transporter assault.

The boarding party system in (D7.0) provides for an attrition battle as both sides score casualties. This tends to favor the attacker, who is initially outnumbered but who theoretically has access to more troops that will arrive on the next turns. This can be complicated by several factors, such as the creation of militia units, diversion of BP to guards, and the ability to give up ground (control rooms) without losing BP. A more advanced BP combat system will be presented in Module M, SF Marines.

Transporters can be used at "non-combat" rates, moving four boarding parties instead of only one (a 300% increase!). These units cannot be used offensively on the turn of arrival and must land in a "bridgehead" (a new concept in the Captain's Edition), but will absorb casualties. This system should be used for the second wave.

The final means of getting your troops on board is to actually dock with his ship. This is very dangerous (the target could self-destruct) unless the ship has been captured and you are simply rounding up the last few defending marines. It also imposes tactical penalties on your ship and is best done when other enemy ships have been destroyed or forced to disengage.

The ship you are trying to capture could explode in your face, so be sure that you execute your attack quickly (over as few turns as possible), pursue it with great force, and don't give your enemy any more opportunities to self-destruct than necessary. Marines can, possibly, prevent self-destruction. Don't be timid or hesitant in sending in the marines. Send enough to do the job, or keep them home. Support the attack with commandoes and legendary officers if you have them. Remember that Klingon security stations give them an edge in defense, so eliminate those first if you can since that may also induce mutiny.

HIT-AND-RUN RAIDS

The hit-and-run raid is one of the most important aspects of the game. While it is effectively a high-risk venture, it does have a 33% chance of destroying a specific system. The operative word is "specific." This is the only combat system in the game that allows you to target a specific box on the SSD.

The counter to hit-and-run raids is to place guards on key systems. Graeme Bayless proposed a formula under which you deduct one boarding party for every transporter you have (to be used for hit-and-run raids) and one for every transporter the enemy ship has (to provide general defense against a takeover attempt), assigning the balance to guard duty.

Great anguish has been spent trying to outguess an opponent on where to place guards or where guards have been placed. Since the presence of guards reduces the effective chances of success to 5.55%, it is advisable to place guards on systems that you can't afford to lose and to conduct hit-and-run raids against systems that he isn't likely to guard. Klingon security stations are the most obvious guard post and should be raided from time to time (not necessarily in every game) just to keep him honest.

Beyond security stations, there is great debate. Control stations, weapons, and engines are obvious targets, as well as tractor beams and your last undestroyed box of just about anything except hull (and sometimes even that). The "last box of anything" should be raided immediately after the volley; that way, there isn't time to assign guards to it.

Klingon boom engines are sometimes good choice. Batteries are a key target as they reduce the ability to use reserve power. If you go for batteries, attack every one of them. Sensors and scanners are good targets if one hit will lower the rating. Note, for example, the vulnerable sensor/scanner tracks on the Klingon D5 and some other war cruisers. UIMs are a wonderful target; DERFACS is probably not worth raiding.

The prime time for hit-and-run raids is after an exchange of weapons fire. The facing shields are likely to be down, reserve power used (since it can toss up general reinforcement to block transporter operations, even after they are announced), and weapons are likely to have been fired. Picking off one or two boxes at such a time can add insult to injury.

If you have enough boarding parties (and transporters) available, beginning a takeover attempt can force him to pull some of his guards off their posts and use them in the general melee. When you suspect that guards are being pulled, you should immediately hit-and-run against the systems that you thought were guarded. On the other hand, a series of hit-and-run raids will force him to put defenders on guard duty, allowing you to gain first turn firepower superiority in a takeover attempt.

GROUND COMBAT

Ground combat is similar to shipboard combat, except that a lot more troops are involved, and it is possible to transport dozens of marine squads to the surface by means of landing ships.

Ground combat is a war of attrition. You should target first those enemy systems and units which can do the most damage. On the defense, organize as many militia units as possible and use them to soak up casualties.

If the attacking forces are wiped out on a turn, give up your control stations as casualties. As he has nothing to occupy them with, you get them back for free. ✪

INSIGNIA OF A COMPANY FIRST SERGEANT STAR FLEET MARINES

TRACTOR BEAM TACTICS

by Matt Leuthold

The tractor beam is one of the most versatile systems available to the starship captain. It can be useful in almost any tactical situation. It can be used offensively (e.g., the Gorn Anchor) or defensively (to stop drones). It can alter the tactical balance of the game. Yet many players underrate its offensive potential and fail to consider its other uses.

Tractor beams may be used to crush enemy shuttlecraft and fighters, a tactic known as "death dragging." (Uncrippled fighters can avoid this with an HET, but that aborts their attack run.) You must be moving at least twice their maximum speed. If you are not, consider crippling the shuttle or fighter before you attach the beam. This will prevent him from breaking the tractor beam with an HET. The maximum speed of a crippled shuttle or fighter is halved. This allows you to crush shuttlecraft with tractor beams at a lower speed. Note that this makes fighters particularly vulnerable to enemy fire when pulling them into a shuttle bay with a tractor beam.

A cloaked ship can be exposed in various ways. If you can achieve a lock-on for that impulse, attaching a tractor beam will maintain your lock. Seeking weapons may now be targeted on the cloaked ship, although only by the ship with the tractor link. The ship that has the cloaked ship in tractor is exempt from the double the range penalty and the +5 range penalty for firing at a cloaked ship (G7.99), although the chart in G13.37 is still applied. The cloaked ship is basically helpless since it must still go through the fade-in period before it can fire.

Moving a ship operating a stasis field generator with a tractor beam will break the field and release all units held in stasis. Since the SFG is relatively power hungry, an SFG equipped vessel will have less power to spend on a tractor auction. If, during the Energy Allocation Phase, you find yourself within 3 hexes of a SFG ship that you think is going to go speed zero on the upcoming turn and put you into stasis, try this tactic (from 1991 National Champion Paul Paella) to avoid the trap. Put enough energy into movement so that the sum of both your ship and the SFG ship's movement cost divided into this energy will be at least one. Put the rest of the power you can afford into tractors. Since tractor activation comes before the announcement of SFGs, you can put a tractor on the SFG ship and restrict him from using his SFG since he is now being towed (G7.32).

Perhaps the most well-known of all tractor tactics is the "Gorn Anchor." The Gorn Anchor has been much maligned in some groups, mostly because the negative tractor beam function makes it easy to defend against. It can, however, be used successfully if prepared properly. This tactic is so important that it is covered in a separate article. Listed here are some tractor tactics which can be used with the Gorn Anchor or with any other ship-vs-ship tractor situation.

Note specifically that, in the Captain's Edition, tractor beams cannot reset turn modes (G7.331), eliminating several interesting tactics used in the previous edition.

●●●●	**RANK INSIGNIA OF A CAPTAIN**
●●●	**RANK INSIGNIA OF A COMMANDER**
●●○	**RANK INSIGNIA OF A LT COMMANDER**

TRACTOR AUCTIONS

Negative tractor can be used much more efficiently than positive tractor at any range beyond 1. For example, 5 points of battery power can cancel 15 points of positive tractor energy at range 3. With this in mind, there are several methods to increase your chances of achieving and maintaining the Gorn Anchor.

It is possible to allocate much more power to the tractor beam than your opponent might think practical at first glance. A 15-point tractor beam can be quite deadly, and if it fails, it still has good shock value.

If you are unable to generate such a powerful beam, it may be possible to deceive your opponent into misallocating his negative tractor beam energy.

If you suspect that your opponent has enough reserve power to negate your beam, some method must be devised to make him expend his batteries. The captain who wishes to use the tractor beam might, in desperation, fire his phasers at his enemy in hopes that the enemy will use his batteries to absorb shield damage. A worthy opponent would save some batteries and not be fooled. Instead, a clever captain might try this: tractor your opponent using only a few points of power and *allow* it to be negated, making sure that you have at least two points of tractor beam power (and another tractor) to use later. Remember, your opponent's negative tractor energy is available throughout the turn, and you must cancel the point he used to negate your earlier beam. Fire some of your phasers and bolt a plasma torpedo or two, but make *sure* that you have plenty of seeking firepower in reserve. This implies that you have made your once-and-only attempt to tractor his ship, and that you have given up on seeking weapons and are now switching to a multiple-bolt Mizia attack. Your opponent will hopefully now use his batteries, believing that you have no more tractor power available. Next impulse, close the range, grab him with your other tractor beam, and anchor him for being so gullible.

One defense against tractors is to have another friendly ship attempt to tractor the ship which the enemy is attempting to tractor (maulers can serve usefully in this role). As only one tractor beam can be attached to any single unit, a large ship can protect a smaller one in this way. Remember that your own negative tractor will still be in force and must be overcome by the friendly unit as well in the auction.

Tractor beam auctions during the Energy Allocation Phase can be a real pain, especially if your opponent clearly has more energy than you. This tactic also requires two operational tractor beams. During the auction only bid one or two points, but allow your opponent to win the auction. Do not bid too high since you must cancel the negative tractor allocation he bids later in the turn. Try to convince him that you used all of the power you could afford, and hide the fact that you are really allocating enough extra tractor beam energy to overcome his negative energy plus a reasonable amount of reserve power. (Plotting a mid-turn speed reduction can liberate power while deceiving your opponent as to how much power you are spending.) Hopefully your opponent will be fooled and use his extra energy for something else, ignoring his tractor beams. As soon as possible, reestablish your tractor beam with at least one point more than you spent during the tractor auction.

Tractoring an enemy ship can be decisive (i.e., the Gorn Anchor) or simply a tactical ploy. Remember that a tractored ship (if it is smaller) can only fire at the ship holding it. When you tractor an enemy ship, it may rotate toward you to fire. A good move here is to drop the tractor and have a second, friendly ship, behind the target vessel, tractor it. This will keep it from firing at either one of you. ✪

ELECTRONIC WARFARE

by Frank Crull and Stephen V Cole

Electronic warfare serves one purpose: making it more difficult or impossible for your opponent to damage your ship, while preventing him from blocking your weapons. It is mostly an individual unit problem, with the limited exception of scouts contributing to electronic warfare. Electronic warfare is, in essence, a quest for die roll modifiers.

UNITS USING EW

While all units are legally able to use EW, some are better at it than others.

Most war cruisers and larger vessels are able to use EW effectively. This is because EW is powered on a one-to-one ratio, with one unit of power producing one EW point. This is different from movement, which is based on mass. Thus, a cruiser must slow down by three hexes per turn to use three points of EW, while a typical destroyer must slow down by six hexes per turn and a frigate by nine.

Smaller units are, because of this, less able to employ EW effectively, giving larger units an advantage. Smaller units must utilize other means of obtaining an EW shift. One offsetting advantage is the use of erratic maneuvering, the cost of which is based on mass, and the effect of which is to create ECM points. A unit conducting EM, however, cannot effectively function in the escort role assigned to frigates and destroyers.

Smaller units can use ECM drones for protection. If targeted for a multi-volley attack, they can even use a wild weasel to gain more ECM or may require scout support.

Smaller units can use ECM effectively as a survival measure, but only at the expense of most other systems and offensive capabilities. For example, a Klingon F5 is fighting a Federation DNG. The Klingon has no chance, but would like to stay alive until help arrives. The F5 throws out an ECM drone on a type-III frame, puts 6 points into ECM, and then goes onto erratic maneuvering. All of these measures will contribute to the F5's survival while it prays that reinforcements come soon.

SOURCES OF EW POINTS

The sources of EW points are covered in detail in the rulebook and on the ELECTRONIC WARFARE READY REFERENCE card in Module R1. A brief rundown will be provided here, with some notes on special uses.

Some seeking weapons have built-in ECCM (counter-jamming). These include plasma torpedoes and some drones (only after they are launched, of course, and their ECCM does not benefit the guiding ship's direct-fire weapons). Small units can overcome the jamming of a large unit by combining their EW with that of their weapons. For example, a Gorn BDD is trying to attack a crippled KRB before it can escape. The Romulan is trying to disengage and has no weapons operating, but does have the maximum of six points of ECM. The Gorn BDD cannot reach a firing position if it slows down enough to generate six points of ECCM, but by launching the torpedoes and combining a moderate amount of ECCM from the ship with the ECCM of the torpedoes, the jamming can be overcome.

Shuttles, drones, and nimble units gain additional ECM benefits at long range through the small target modifiers. Fighters can survive during their initial launch period by using a combination of ECM, erratic maneuvering, and/or the small target bonus. Note that the small target bonus is not used if the fighter is using EM.

Command cruisers and carriers should avail themselves of MRS shuttles, which have many uses including an ECM benefit for the home ship. The cost is only a couple of points and two pages of rules. Carriers can use MRS shuttles to supplement the lone EW fighter, allowing the squadron to be operated in two elements, each with its own EW support unit.

Orions have special EW capabilities. All of their ships come with a built-in ECM factor for the "stealth" hull design. The factor makes the fragile Orion ships workable units. ECM of this type requires no power and can be used in addition to the normal six EW points allowed.

Wild weasels can provide a desperate ship with six points of ECM but place the ship under many tactical restrictions. Because of this ECM, wild weasels can be very effective against enemies that do not use seeking weapons. The resulting +2 shift will make photons very ineffective, and few ships can overload photons, move at battle speed, and power EW at the same time.

X–ships have their own special EW rules, which are covered within the rulebook.

Some terrain can produce ECM effects.

USING ELECTRONIC WARFARE IN COMBAT

The purpose of EW is to obtain die roll shifts that reduce the effect of enemy weapons.

For EW purposes, weapons can be divided into three categories: Seeking weapons, direct-fire weapons with range-of-effects (R-o-E), and direct-fire weapons with a hit-or-miss (H-o-M) probability. The effect of common ECM shifts on various weapons at typical battle ranges are summarized on the table below. Note that this table shows the amount by which the effect of the weapon is reduced. A +1 shift reduces a seeking weapon, for example, by 8.3%, leaving it at 91.7% of nominal effectiveness. The chart is a statistical average of all die-roll combinations.

REDUCED EFFECTS CAUSED BY EW SHIFTS

Weapon	+1 Shift	+2 Shift	+3 Shift
Seeking Weapons	08.3%	16.6%	29.2%
R-o-E Weapons			
Ph-1, Range = 2	13.8%	27.6%	37.9%
Ph-1, Range = 8	30.8%	53.8%	76.9%
Ph-2, Range = 2	08.7%	26.1%	43.5%
FusOv, Range = 1	16.1%	37.5%	55.4%
TR, Range = 2	09.7%	24.8%	41.6%
TR, Range = 8	27.0%	50.8%	69.8%
H-o-M, Range = 2			
Photon	20.0%	40.0%	60.0%
Disruptor	20.0%	40.0%	60.0%
Plasma Bolt	25.0%	50.0%	75.0%
Hellbore	09.1%	21.2%	36.4%
H-o-M, Range = 8			
Photon	33.3%	66.7%	99.9%
Disruptor	25.0%	50.0%	75.0%
Plasma Bolt	33.3%	66.7%	99.9%
Hellbore	19.2%	42.3%	61.5%

Of the three types, seeking weapons are the least affected. A +1 shift will produce an average 8.3% reduction in warhead effect, compared to far higher figures for other weapons. Even the difficult to achieve +3 shift produces half of the effect seen with other weapons.

Range-of-effect weapons are those for which the die roll produces varying levels of damage (i.e., a range of effects), rather than a hit-or-miss proposition. The primary example is the phaser. At knife-fighting ranges (2 hexes), the ph-1 will always

produce some damage, no matter how bad the die roll is. At this range, it takes a +4 shift to gain any chance of a clean miss (rolling a six, shifting four columns to the right, resulting in range 6–8 and zero damage). As the chart shows, phasers suffer substantial penalties at longer ranges. A key point here is that in a short-range battle, phasers will suffer from EW effects less than other weapons (with a couple of exceptions). At longer ranges, all direct-fire weapons suffer more or less equally.

The hit-or-miss weapons are those which do a fixed amount of damage (at least for that range), but either hit the target or miss it completely. These weapons are badly affected at all ranges. The hellbore is an exception because of its 2–12 die roll (compared to 1–6 for most weapons).

In all cases, EW has more effect at longer ranges, where the appearance of zeros on the bottom of the chart turns even range-of-effect weapons into hit-or-miss weapons. At long ranges, EW can make direct-fire combat impossible or at least ineffective. Note that a photon cannot hit beyond range 8 against a +2 modifier, while a disruptor has a 33% chance. This disparity is offset by proximity fuzes.

OTHER ECM EFFECTS

Some weapons are unaffected by EW. These include anti-drones and dogfight drones (seldom a threat to ships), mines, and the Lyran ESG. This is a bonus for the Lyrans, who don't have enough power for both ESGs and ECCM.

The effect on maulers is minor (16.6% for a +3) and does not get worse due to long range.

The phaser–4 effectively ignores EW at close ranges.

The web caster deserves a brief mention. ECM can partially reduce the strength of the cast web if the Tholian ship is not itself using 6 ECCM (or being lent enough ECCM to equal 6 ECCM when he uses the system. This makes it very unlikely that a cast web can be reduced. A variety of other means (emergency deceleration, a maneuver, an HET, or a change in speed) can enable a player to avoid the cast web.

EW can help avoid displacement by an Andro. While the Dis-Dev does not damage your ship directly, it can put you in a tactically disadvantageous (or just plain dangerous) area. EW shifts can cause displacement devices to fail.

The stasis field generator also works by the hit-or-miss concept and can be affected by ECM. Tractor beams and transporters can also be avoided by an ECM shift. This can protect you from enemy marines or the Gorn Anchor.

It should be noted that Andromedans (with huge power reserves) and X-ships (with their special rules) excel at electronic warfare.

ELECTRONIC WARFARE TACTICS

As the point of electronic warfare is to gain EW points, you should seek to have as many as possible at all times. The problem is, like everything else in *STAR FLEET BATTLES,* you just can't get enough.

Each ship is allowed to generate six points of EW (technically, an amount equal to the sensor rating). These include both ECM and ECCM. You can run offensive ECCM, defensive ECM, or some of each. Generally, you will be using entirely one type or the other, depending on the tactical situation.

Shifting your EW strength is difficult. In a developing situation, you might use less than six allocated energy points, counting on reserve power to provide more EW (of either type) when needed. Shifting from ECM to ECCM (or vice versa) is expensive if done outside of the Energy Allocation Phase. The only way to do it is to drop some of your points and replace them from reserve power. There is never enough reserve power.

This becomes critical, however, when you consider that ECM shifts are based on squares. It takes nine points of ECM to gain a +3 shift, but one point of ECCM will reduce this to a +2. Because of this, one or two points of reserve power can often cause dramatic effects. Evaluate the current EW state between your ship and your enemy, and determine if a one or two-point change in EW will affect the shift level.

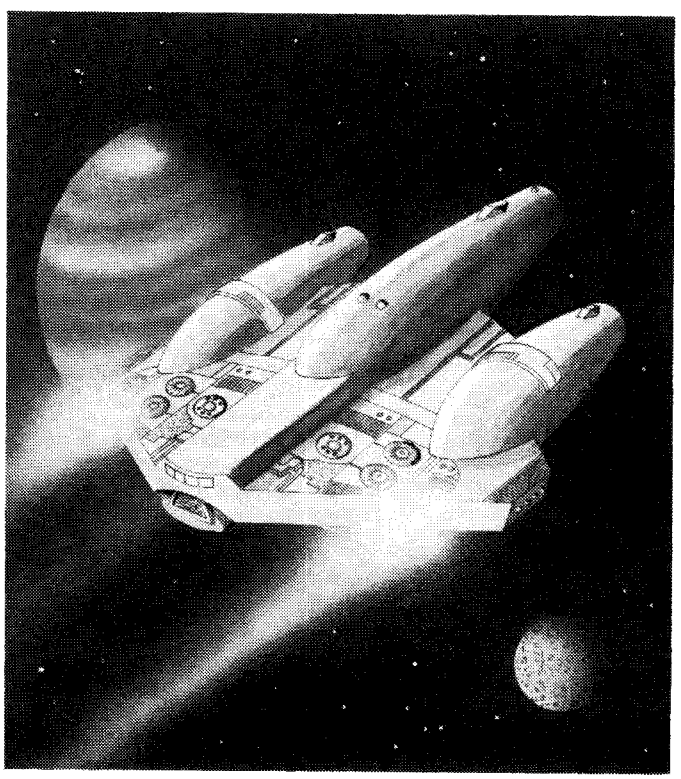
Free ECM is available in all sorts of ways, particularly including terrain. However, it all comes with tactical penalties.

The best general source of non-powered ECM is the ECM drone, the most overlooked and important weapon in the game. An ECM drone provides a +1 shift and puts the protected vessel in reach of a +2 shift. Unfortunately, the people with the most drones (the Kzintis) also have so much power available that they don't need them. This doesn't stop the Kzintis from using them in large numbers. The Klingons, with their afterthought-class drone racks, are the greatest users of ECM drones in the galaxy. If you happen upon a Lyran fleet that has picked up a stray Klingon F5D, you can quickly guess why that Klingon ship is there and what you need to do about it.

SCOUTS

The one "wild card" in electronic warfare is the fleet scout. By using their sensor channels, scouts can suddenly and radically alter the EW situation at a key point in a fleet battle. PFTs, Klingon and Kzinti drone bombardment cruisers, and survey cruisers can all serve as fleet scouts.

For example, your dreadnought is bearing down on a crippled command cruiser, which has just used every ECM trick in the book to gain a +2 shift. Your dreadnought has maximum ECCM, but it's not enough. So your fleet scout uses a channel activated for this purpose during the Energy Allocation Phase and pumps six more ECCM points into the C8, cancelling the shift and sealing the doom of the command cruiser. On the other hand, if a Federation scout had been present instead of the F5S, the CC could have received more ECM points and reached a +3 shift against the C8.



In the Captain's edition, a new EW function was added: offensive EW (O-EW). In this system, the scout lends an enemy ship ECM which affects its fire at all targets. (Indeed, this is the only way a scout can effectively lend ECM to seeking weapons or an entire fighter squadron.) This enables scouts to protect many ships from one ship rather than one ship from many ships. The major drawback of this system is that the scout must expose itself to enemy retaliatory fires by being relatively close to the unit it is loaning the O-EW to. A scout loaning EW to friendly ships can be up to 15 hexes behind those ships, but a scout lending O-EW must be within 15 hexes of the enemy ship. In our above example, a Federation scout might loan six ECM to the crippled CC AND six ECM to the C8, allowing, if EM is included and assuming the F5S was not there, the CC to have a total of 22 points of ECM. Since the C8 (without the F5S) can only generate six points of ECCM, the CC would be guaranteed a shift of +4 in this instance, virtually guaranteeing its survival from all but point-blank phaser fire. Of course, the C8 might instead shift its attention to such a bold Federation scout.

Scouts also have other capabilities and, because of this, are generally considered to be prime targets. They are usually kept well away from the action and are the scene of frequent raids by a flanking war cruiser.

FIGHTER AND PF ELECTRONIC WARFARE

Fighter squadrons and PF flotillas are treated as a single entity, rather than separate ships. Each fighter squadron includes its EW fighter or MRS; each PF flotilla includes its scout. These units can (within range limits) lend EW support to the rest of the squadron/flotilla. This makes the EW units key targets.

CONCLUSION

Electronic warfare is one of the most complicated and important sections of the rules. Many players never explore its aspects and possibilities, but all should at least attempt to understand them. EW can save your ship and bring you to victory. ✪

TACTICAL INTELLIGENCE

by Frank Crull

This subject is covered rather thoroughly in its rules section, but there are a few points which should be considered:

* Adding probe drones to your drone attacks will gain intelligence levels.
* Remember to ask for levels when you earn them. Assign a junior player as science officer for the fleet. Have him take care of TacIntel while he's doing drone identifications, etc.
* Actions speak louder than information levels. If it launches nine fighters, it's a Ranger, not a Dragoon.
* Before you send a frigate on a death ride into their fleet to find out what that D-hull is, ask yourself if you really need to know. How will your tactics be different in each possible case?
* The most important levels are D (30 hexes), where you can pick out obvious variants, and H (12 hexes), where you can distinguish the class type. Note that H is outside of overload and mauler range. Remember that EW can gain you better levels.
* Use probes when they can tell you something. Use them only when you need to make a tactical decision about a specific enemy ship, not just when you are curious.
* A fighter cannot achieve level H until it is 3 hexes from the target, within the point defense zone.
* Scouts have a 50% advantage in detection range. This does not, however, justify putting them within overload range. ✪

FIGHTING MONSTERS

by Frank Crull

If you are bored with fighting starships and wish to fight a different type of opponent, try fighting a monster. Monsters come in two types: automatic and player-controlled. The automatic monsters are designed for solitaire play. There are a number of different tactics that apply to monsters, and these will be discussed.

Monsters can be placed into various categories. Some monsters damage your ship with weapons, others by simply being near you. These characteristics determine your tactics.

Many monsters include the Monster Close In Defense System (MCIDS or CIDS). This allows them some chance to destroy drones launched at them, to destroy or cripple shuttles, and to weaken or totally disperse plasma torpedoes. This latter is a Captain's edition change from the Commander's edition rules. Automatic monsters are able to discriminate threats in order of most to least dangerous.

THE PLANET CRUSHER

We will consider, as an example, a duel with the Planet Crusher. This is, perhaps, the simplest monster of all. Virtually all ship functions are available, and we already know how to destroy the monster (with 200 damage points). This scenario can even be played with slow drones.

The ship starts off 30 hexes from the Planet Crusher. You wish to get within 10 hexes of it the next turn. You do not need to power shields on the first turn since the Planet Crusher cannot fire beyond 6 hexes. AFC also does not need to be powered unless you have drones to launch. Probes should not be powered unless and until the ship is crippled. (Put all of the extra power into overloads if you have photons.) Shuttles should be utilized as fire platforms, suicide shuttles, or scatter-packs. WWs are unnecessary since no seeking weapons can be launched by the Planet Crusher.

On turn 2, close with the monster. At 6 hexes, it will fire its anti-proton beam. Depending on the roll, the facing shield could collapse. (Naturally, give it a shot at the #2 or #6 shield, not #1.) Put enough reinforcement on the shield you have selected to face the monster to ensure that the shield is not destroyed by this initial salvo and keep all ship systems intact. Overrun the monster and launch a string of shuttles as you go. Launch suicide shuttles from close range and scatter-packs from beyond 6 hexes. Any drones that are launched should be timed to come in with the scatter-pack wave. That will reduce the effect of the Monster's CIDS. Fire all phasers as you overrun the monster. This will insure optimum damage and possibly put the monster over the 200 points requirement. If you have plasmas, don't pay for EPTs as they won't work against a living monster.

Since the monster is much larger, you can sow the area with T-bombs set for its size class (see Annex #12). These will ignore your size-3 cruiser, but add more damage to the size-1 monster. This will work against many monsters.

Like most monsters, the Crusher has no shields, so you don't have to maneuver to hit a down shield. Damage from any direction all counts the same. As there is only one system (and it takes 200 points to destroy), there is no need for the Mizia Concept here. This makes the Planet Crusher an excellent scenario for beginners.

Be sure that the overrun takes the ship away from the planet. The Crusher will follow you whenever you are within 2 hexes. Make sure you are leading him away from the planet to gain time. Use speed changes to stay within 2 hexes of the monster for the middle part of the turn, but be outside of 6 hexes by the start of turn 3 when he can fire again unless your own weapons are also ready to fire.

If the front shield has gone down, don't panic! The monster is still moving slowly, and his maneuvers are entirely predictable. If your ship has multi-turn arming weapons, during the reload turn use damage control to patch up any damaged systems. Fire phasers if you want to risk coming into range again. Continue making passes whenever your overloads are ready. As each pass may cost you a shield, three of them will eliminate your forward shields. If necessary, overrun in reverse (firing your weapons as they clear). Eventually, the Crusher will go down.

MORAY EEL OF SPACE

The Moray Eel displays some different characteristics from the Planet Crusher, and these characteristics define your tactics.

Against this monster, shields are useless and should not even be powered. The Eel moves at a speed of 12.

The trick to this monster is that you can only hit him if you are at a range of 6 hexes or less, and if you do hit the monster, he will bite your ship or shuttles, or all of them if they all fired.

It may be necessary to lure the monster away from the planet to gain time to kill it. This is not that difficult to arrange against a monster with predictable movement. One tactic to buy time is to string your shuttles behind your ship. Then you can fire your ship from 6 hexes behind the monster and, on the following impulse, have the shuttle 6 hexes behind your ship fire at the monster with its phaser. This will cost the monster an entire turn's movement towards the planet (though your shuttle pilots may not be too happy with you). Again, mines, drones, suicide shuttles, etc. can be used with good effect. You can stop attacking and repair damage if you need to.

The problem begins when you have scored the 200 points and have to begin rolling a die on any impulse that you score 10 points of damage. This requires your ship to stay within 6 hexes range for extended periods to get multiple opportunities and get bitten multiple times. On the Fed CA, for example, you can arrange several volleys (one photon, using the dial-an-overload system for a 10-point warhead, or two ph–1s), each with a chance of scoring 10 points of damage. Plasma ships might consider using two turn F torpedoes to launch more often. While incredibly bad luck can cause you to lose, reasonable skill can give you enough opportunities to fire to eventually get a destruction result.

HOW TO KILL A MONSTER

In many cases, the means of killing the monster are unknown. You must accumulate scientific data, and that means getting close to the "mystery monster." Solution #3 requires you to accumulate 200 points of damage, but Solution #6 says that if you scored more than 50 points, you could lose the scenario. So during the initial phases, leave the heavy weapons unpowered (put the power into shields or speed as appropriate to the monster you are facing), score 50 points (no more!) with phasers, and wait for the die roll. Note that some heavy weapons have adjustable warhead yields which make them ideal for use in scoring precise amounts of damage.

A good example of this is the Space Amoeba. This monster does damage based upon how close the player gets to it, a sadistic twist on the lab rules.

In this case, your shuttles can prove invaluable. (A Klingon ship, with few labs, could actually do more good with shuttles, except that it has few shuttles.) As these shuttles will take one point of damage per turn, they can function for several turns before you need to pull them back aboard and have your deck crews repair them. One shuttle may be required to destroy the monster. A Federation ship, with plenty of labs, could keep one suicide shuttle "warmed up" in the bay to save time later. The shuttles should operate 4 hexes from the monster, outside of MCIDS range, but close enough to gather an average of 3.5 points of information per turn. Four shuttles could provide about a quarter of the required information in four turns, by which time they will need to be recovered and repaired.

As there is no time limit for this monster, you can pull your ship outside of range 10 and do repeated turns of damage control until your ship's shields are full. Always do 49 (or as close as you dare) points of damage just in case the monster solution is to do 200 points of damage. Make sure that you do not do 50 points of damage so that you will not lose to a friendly monster.

Probes can also be used to gain information, although the last two or three should be saved for use if Solution #4 presents itself. Probe drones can be of value, as can sensors. (Survey ships can wrap up a monster of this type before breakfast.)

Shields must be evaluated for each monster. If the monster (or the terrain) doesn't require shields, don't power them. The two points isn't much, but it could mean more speed or a readied probe if nothing else.

The basic tactic is to get as close to the monster as you dare (no need for in-and-out tactics here since time-at-range doesn't increase casualties) and wait until you learn how to kill it. Upon determination of the manner to destroy the monster, exercise that option immediately to minimize further damage to your ship.

The Cosmic Cloud is similar to the Space Amoeba, but there is a subtle twist. Here, your crew units are dropping like flies. Calculate the benefit of a closer range for the labs against the cost of more casualties.

The Mind Monster is in this class. Again, long range (4 or 5) would solve the problem, but now we are under a time constraint: the monster is going for a library that we must not allow to be destroyed. This will require us to get closer. As with the Cosmic Cloud, damage to the ship (again, crew units) is based on the closest approach, not on the time spent there, so there is no need for in-and-out tactics. The monster will follow you, but will not move farther away from the planet. This gives you some control over the range. In desperation, as the monster is about to reach the library, you will have no choice but to move within two hexes and stay there until you win or lose.

Perhaps the most frustrating "mystery monster" is the Sun Snake. Here, your ship's ability will make a difference. First count up transporters and labs. Whichever number is higher dictates your tactics. Ships with lots of transporters, like a Klingon D7 or Kzinti CS, or any plasma-using ship (which lacks the firepower to kill the monster) should make for the planet and try to rescue crew units. By going to the planet, the scenario can be salvaged.

The Sun Snake will not follow you, so you can't extend the deadline. As Solution #6 is changed, you can score as many damage points as you wish and hope that Solution #3 comes up. If you operate beyond range 5, the monster won't even attack you, but at that range you cannot find a solution in time. You need 400 points of information, and for 6 labs to get that in 12 turns, you need to stay at range 2. Shuttles can be used (once, as they will be destroyed). Probe drones are useful (again, only once), as are probes.

For a ship with a chance of destroying the monster, the key decision is when to abandon the attempt and head for the planet.

OTHER MONSTERS

Perhaps one of the hardest monsters to fight is Arastoz. This monster works on getting its act together, and as it does so, it gets harder and harder to defeat. The player faces a difficult choice in attacking the monster or escorting the ship. As the monster only gets worse with age, we'll have to deal with it first, switching to freighter defense only if forced to do so. Destroying one part of the monster only takes 100 points, so an overrun attempt and firing all weapons at point-blank range is acceptable. Never let your speed drop below 10 because you may have to accelerate to reach another monster part. Make sure that the

freighter does make it to at least one planet. Have the freighter fire every turn on parts of the monster. A damage point is a damage point as any amount will help. After the monster combines into greater and greater parts, the player needs to start fighting more and more of a distance battle due to the damage that can done by the monster. It will take longer that way, but the monster can be worn down. Keep in mind that the monster gets slower as the scenario progresses. Save your shuttles for the final kill, when you want to do over 100 points to finish the monster off. But above all, kill one part of the monster. The difference is 400 points of monster.

Consider the Energy Monster. For once, being in a cruiser is to our disadvantage. We need a lower energy profile. The monster is capable of 32 speed movement, which makes it one of the fastest monsters around. It tracks on our energy signature. The best thing to do is to arm probes and suicide shuttles. We want to be able to generate objects that can distract the monster. If the ship can go less than the energy amount of these items, it can maneuver and rescue crew units. Ships with lots of transporters should, in fact, concentrate on rescuing crew units. When you start rescuing, you only need two points of power for the most part, one for life support, one for transporters. That way, you can utilize fighters, shuttles, drones, and plasma torpedoes as distractions and lure the monster out of range.

Remember that living monsters and size class 0 monsters cannot be attacked with enveloping plasma torpedoes unless their rules specifically allow otherwise. See Annex #12 before engaging a monster with a plasma armed ship.

PLAYER-CONTROLLED MONSTERS

The other class of monsters are two-player monsters, which include Space Dragons, Death Probes, and the Juggernaut.

The Juggernaut requires a concerted attack by all four ships. You must distract the rotating shield, then hit the exhaust pipes with everything you have.

The Death Probe is, basically, a very nasty spaceship and can be dealt with as such.

The Space Dragon is very difficult to destroy since it involves a variety of tactics. Your opponent is faster than you and more maneuverable. Generally, we need to assess the result of each volley and adjust your tactics. If the wings are damaged, the monster will be slower and you can outrun it. If the tail is gone, you can fire drones. If the claws are damaged, you can then attempt overruns. As the characteristics change, so do your tactics. *Just don't get between mamma and her babies.* ✪

PROBES

by Ray Olesen

Most starships are equipped with a probe launcher and five probes that can be used for gaining information and, in an emergency, as a weapon. Some ships, notably survey ships, carry extra probes. Most players ignore the probe launcher, considering it a free hit. While it is one of the less significant systems on the ship, it has its uses, and like everything else, you must learn the proper technique to get the maximum effect.

The most common use for probes is for information, usually about a monster. Probes are very efficient as they cost little energy but gain 20 points of info. As it has a 360° firing arc (for information only), the only requirement is to pass within six hexes of the monster. All five probes can gain up to 100 points of information, but if one of the ways of killing the monster is a probe, you will want to save one or two for this possible use. A sure hit requires point-blank range.

Another common use is for TacIntel. It works the same, except you do not have to be within six hexes of the target. The probe moves six hexes, then gains info on one ship, so pick your target well. Cruiser classes with many variants are prime selections. Probes can also "look around the corner" of a planet. The best launch time is at the end of the turn, when you can allocate energy based on the results. Naturally, make sure that you don't waste a probe to gain information that you will get by normal procedures before you need it.

You should be aware of the types of terrain which block a probe, such as ESG fields, webs, planets, black holes, etc.

As mentioned above, probes are sometimes used as weapons against monsters and (in dire circumstances) against other ships. You have many more restrictions. You can only fire it straight down the hex row directly in front of the ship; otherwise it works like a photon, but you can't hold it. Only one may be armed at a time. You cannot launch or prepare info probes while arming one as a weapon, and your hit chance decreases by one for every hex of range. It can be fired through an ESG field, and if called for against a monster, you win the scenario with a hit.

In a fleet battle, your escort ships should use their probes liberally since they won't likely need them as a weapon. (The difference between a crippled frigate and a dead one is two torpedoes.)

Like all the systems on your ship, the probe launcher is a valuable asset if used wisely and to the fullest. ✪

●● RANK INSIGNIA OF A SENIOR LIEUTENANT

RULES THAT KILL

by Tom Carroll and Greg Dieckhaus

STAR FLEET BATTLES is a complex game involving a vast tome of rules. Knowledge of the rules is important in normal play, but even more so in competitive tournaments. The misunderstanding of one rule or the misapplication of another can often prove disastrous, costing you the game and perhaps the Fleet Captain's Hat. Some are overlooked more often than others, and they often are the most dangerous rules to overlook. Knowledge of these rules are mandatory to get anywhere in tournament play. Rated Aces know them; so do the Judges. If you wish to compete with the best and the brightest players, you must be an expert in the following troublesome rules.

ANNEX #2 Knowing the Sequence of Play is vital. If you launch your plasmas and then decide you should anchor the guy, it's too late. Does lab identification come before or after you can grab a drone with a tractor or shoot it with a phaser? If you don't know, you're going to be unpleasantly surprised.

(C3.43) When a unit starts moving from a speed of zero (or tactical maneuvers), its turn and sideslip mode is not satisfied. A ship or shuttle's first move must be 1 hex directly forward.

(C5.231) & **(C6.37)**. A unit may not make a TAC or an HET on the first impulse of of the turn. This fact determined the winner of the Fleet Captain's tournament in 1991.

(C5.53) After using emergency deceleration, there are delays before you can use tactical maneuvers.

(C6.22) The energy for HETs must be from warp engines. A lot of players forget this and use too much warp energy for movement and don't have enough left to HET. A ship with 30 warp, 1 impulse, and a movement cost of 1 can fly at a maximum speed of 26 and still be able to HET. Also note that such a ship could move faster than 26 during part of the turn, so long as it changed to a speed of 26 or less before actually making the HET.

(C6.38) Post-HET restrictions include not being able to launch a shuttle the impulse of an HET or for the four impulses after an HET. So if you make an HET to bring your weapons into arc, be aware that you can't use a weasel against those seeking weapons already approaching your ship during this interval. If you find yourself in this position, see (D21.4).

(C12.312). No mid-turn speed changes may be made within 8 impulses of another mid-turn speed change, though some ships can make such changes within 6 impulses.

(C12.313) No mid-turn speed changes are allowed before impulse 4 or after impulse 28.

(C12.32) Mid-turn decelerations are limited to dropping by half of your present speed (or as much as 4 movement points) in any single speed change. This often comes into play when a player wishes to drop down to a speed at which he can weasel.

(C12.33) Mid-turn accelerations are also limited. Most ships are limited to doubling current speed or an increase by 10. The key is that your maximum speed is based on your LOWEST speed over the previous 32 impulses. Going speed 4 for the first half of the previous turn will still limit you to speed 14 for half of the current turn even if you were going speed 10 for the second half of the previous turn. This is something often overlooked in the heat of battle. (For example, WYN Aux ships, and their tournament cruiser, must be particularly careful with speed changes as their acceleration limits are very restrictive.)

(D2.32) Klingon wing phasers. Klingon players always remember this rule when they need that extra bit of firing arc. They always forget about the fact that the phaser also loses some of its firing arc. Their opponents also need to know this.

(D3.41) Shield boundaries. The procedure to determine a shield boundary that is hit is determined by which ship moves next. Be aware of those times on the impulse chart when a ship moving slower than you will move and you don't.

(D3.42) Shield boundaries and firing arcs for ships in the same hex. Determine which ship entered the hex first [(C1.313) specifies the slower ship if both entered the hex on the same impulse]. Return the other ship to the hex which it had previously occupied, and judge firing arcs and shield boundaries from this position.

(D19.221) Self-guiding seeking weapons may be launched at targets farther than four hexes range even while under passive fire control restrictions. Remember this when approaching a plasma ship hiding under a WW for the EW benefits. He may launch plasma, then WW again, never giving you a clean shot at him.

(E1.50) Firing rates. No weapon may be fired twice within a period of one-fourth of a turn. Impulse 25, the "Impulse of Decision" is most critical.

(F2.123) Seeking weapons must move forward (or HET) on their first move. This often comes into play when you are near a ship launching seeking weapons. Knowing where the seeking weapon has to go can often help you avoid it.

(F2.5) Mutual impact. Suffice it to say players must learn this entire rule by heart, especially (F2.54). Anyone who has been hit by their own drones will never forget this rule.

(FD7.333) Scatter-pack minimum release range. Scatter-packs may not release their seeking weapons (at the primary target) if the primary target is less than 2 hexes away.

(FD7.3342) Even if a scatter-pack has been damaged to its release point (FD7.31-3), it will not release its seeking weapons if 1/4 turn has not passed since it was launched or if it is within two hexes of its primary target.

(G7.3222) Tractoring a ship increases your breakdown roll. HETing to bring more weapons to bear, even with a bonus, might not be a good idea if your ship has a 5-6 breakdown rating.

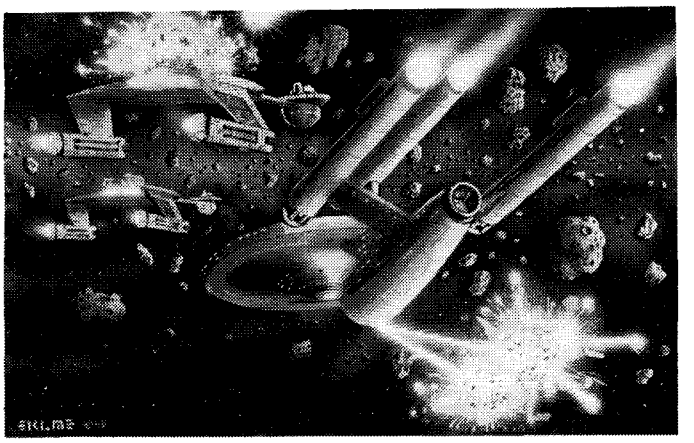
(G7.941) You can't weasel while being tractored. Everyone should know this rule and the infamous "Gorn Anchor," which utilizes it. Don't let it happen to you.

(J1.50) A given shuttle bay may launch or land a shuttle every other impulse. If you launch a suicide shuttle on impulse #1, you can't launch another shuttle until impulse #3, which could give your opponent enough time to kill you with seeking weapons before you can weasel.

(J1.502) Laying a T-bomb from your shuttle bay counts as a shuttle launch for purposes of bay operations. This means that you cannot lay such a bomb until the second subsequent impulse after a shuttle was launched/landed. It also means that you cannot launch/land a shuttle until the second subsequent impulse after a T-bomb was dropped from that bay.

(J4.52) Close Combat Maneuvering. Hydran fighters at range zero just became a little bit nastier. Now they can use CCM and fire through a "non-facing" down shield.

(S4.13) Only two shuttles may be prepared for special missions at WS-III. If you're going to come into battle with an SP and an SS prepared, you're not going to have any WWs, etc. Of course nothing is preventing you from readying more shuttles for special missions during the scenario, but for turn 1 you'll only have two special shuttles to use. ✪



WHO WROTE THE TACTICS MANUAL?

More than twenty authors had a hand in the original *TACTICS MANUAL* project. Each section of the *TACTICS MANUAL* was written by an individual acknowledged as an expert in the field. This individual is listed with the article as its author. Stephen V Cole edited each article, which was then sent to the Committee and to other acknowledged experts for their review and comments. Many of these comments were incorporated into each article.

In the 1992 revision, the entire manual was reviewed again by the current staff. Some of the original authors were still on staff, and many new faces had joined in the interim. Each article was reviewed by those staff officers most expert in that field, and many revisions and additions were made based on that review. Some articles were totally replaced or extensively re-written.

The result of this multitude of authors has been a multitude of styles. Some have given examples; others have confined themselves to principles. Some have included their own tactical tricks; others have refrained from including such tricks as their use is limited. There is (the designer not withstanding) no single person who knows every thing about every ship, weapon, and tactic. There is no single individual able to re-write every article until it conforms to the same style and pattern as the others while retaining the tactical flavor of the original.

Perhaps that isn't so bad. Players tend to gravitate toward ships and races that reflect their own way of thinking, so perhaps only a Klingon can explain things to other Klingons.

More than one author claims that the subject of his article is the "most versatile" or "most widely used" tactic, weapon, or system in the game universe. Perhaps that's because the article author understands that system better than anyone else.

Some of the articles published here originated as proposed Nexus articles (before the concept of a Tactics Manual had been created), while others are reprinted (and updated) from Nexus magazine. More than one author received notice that an article he had submitted years ago was finally to appear in print. All such articles were updated.

THE STAR FLEET STAFF

Several different organizations are involved in the development of the Star Fleet Universe. These organizations include:

THE COMMITTEE, a hand-picked staff of players expert in the game system. The Committee reviews all materials before publication and modifies them as necessary. In all but a few cases, the Committee is the final authority over the rules. Candidate Members carry a full Committee workload, but lack the privileges and voting rights of a full member. All full members serve at least a year, and often much longer, as candidate members. Not all candidate members become full members.

THE JOINT CHIEFS OF FLEETS, a panel composed of top experts in each of the races represented in *STAR FLEET BATTLES*. The JCF motto is "a voice, not a veto" and reflects their position in the universe. A JCF representative does not have the final authority over material concerning his race, but as the acknowledged authority in the field his opinions carry considerable weight. All rules, ships, scenarios, addenda, and other materials are reviewed by the JCF representatives of the races involved.

THE PLAYTESTERS, many of whom are included in other groups, primarily test new ships and scenarios.

TACTICAL OFFICERS, various individuals who have been recognized as able to present informed opinion in an organized manner. They provide advise on a wide variety of issues.

THE SENIOR STAFF includes all of the above groups. Those members of the Senior Staff who were involved in the preparation of the 1992 edition of the *TACTICS MANUAL* include:

STEPHEN V COLE, original and continuing designer of the SFB game system, Chairman of the Committee, Klingon representative on (and Chairman of) the JCF, a professional engineer, editor of the military intelligence newsletter *FOR YOUR EYES ONLY*, and editor of the *TACTICS MANUAL* (both editions)

STEVEN PETRICK, deputy commander of the entire Star Fleet Universe, ADB Chief of Staff, Scenario Czar, Tactics Director, Senior Tournament Judge, Rated Ace 87, Deputy Editor of 1992 edition of the *TACTICS MANUAL*.

RAY D OLESEN, senior Member of the Committee, Federation High Commissioner, responsible for indexes and special projects; a railroad executive. Revised his own articles for the 1992 edition, and helped revise many others.

FRANK CRULL, Member of the Committee; Gorn Commander, acting ISC advisor, and Attorney General on the JCF; Senior Tournament Judge; an attorney; head of a major playtest group, and one of the most prolific creators of new SFB material. Revised his own articles for the 1992 edition.

MARK SCHULTZ, the 1985 SFB National Champion, now serving as the Hydran Viceroy on the JCF; recognized as one of the finest tacticians and few intellectuals to ever fly a starship. An Engineer. Revised his own articles for the 1992 edition.

MARC SPENCER COCHERL, WYN Trade Representative on the JCF, a playtester, an intelligence analyst for the US Army, Gulf War veteran, Judge at SaddamCon-91.

BILL HEIM, tactical officer, member of Cocherl's playtest group, Air Force systems analyst, SFB statistical analyst, reputed to be such a ruthless Klingon commander that he marks crew unit casualties when the disruptors miss; 5th place in Origins 87 Patrol, 2nd Place Origins 90 Championships, Rated Ace.

BRUCE GRAW, Orion Crimelord, Rated Ace, 3rd place Origins 89 Patrol, 1st place GenCon 90 Patrol, 3rd place Origins 91 Championships; Air Force Captain, computer analyst. Revised Orion section for 1992 edition.

CHUCK STRONG, Federation Tactical Officer, Rated Ace, 2nd place Origins Patrol 91, Air Force Captain, Gulf War veteran.

GREGG DIECKHAUS, Lyran Commander, LDR Chairman, Rated Ace. Revised Lyran section for 1992 edition.

JOHN BERG, Klingon Deputy Commander, ADB certified Judge; High School Science Teacher. Revised Klingon section for 1992 edition.

JOHN HAMMER, Hydran Deputy Commander, Rated Ace 89, Senior Tournament Judge, runs many tournaments in the northeast, Astronomer. Helped revise Hydran section 1992.

JEFF LAIKIND, Gorn Tactical Officer, Race Ace 1991; Chemist. Worked on several sections of the 1992 edition.

KEITH VELLEUX, Andromedan Commander, ADB-certified judge; Engineer. Worked on several sections of the 1992 edition.

MARC MICHALIK, Romulan Deputy Commander, judged Denver conventions, works for Task Force Games. Revised the Romulan section for the 1992 edition.

PAUL PAELLA, Romulan Praetor, 1991 National Champion. Revised the Romulan section for the 1992 edition.

TOM CARROLL, Tholian Commander, 1990 National Champion, 1991 Rated Ace, Aerospace Engineer. Tom invented the concept that became the *Rules That Kill* article in this edition.

TONY ZBARASCHUK, Kzinti Commander, student. Revised drone section and wrote the new Kzinti section and the section on Commander's Options for the 1992 edition.

STEWART FRAZIER, Deputy Lyran Commander. Helped revise Lyran section for 1992 edition.

ROBERT PATTERSON, Gorn Deputy Commander, Rated Ace, 5th place Patrol 88, 3rd place Patrol 91.

BRIAN MOON, was not on staff but submitted such excellent reports on the revision that he was offered a staff position.

EVELIO PEREZ-ALBUERNE, retired Andromedan deputy commander, helped create 1990 rules revision, Overseas Champion in 1987.

SCOT McCONNACHIE, only the second person in history to comprehend the entire SFB game system, ADB-certified Judge; real estate consultant.

OWEN RILEY, head of Federation & Empire department, F&E Judge in 89, 90, 91; an attorney.

RETIRED STAFF FROM 1987 EDITION

These staff members participated in writing the original 1987 edition of the Tactics Manual but retired from the staff before 1991 and did not participate in the 1992 revision.

FELIX HACK, *enfant terrible* of the Star Fleet Universe, Member of the Committee, Inspector General on the JCF, ADB-certified judge; engineering graduate student, a certified genius with total recall, and (at the time of the original edition) the only human being who understands the entire SFB game system.

ANTHONY MEDICI, Andromedan Ambassador on the JCF, recognized as not only the expert on Andromedan technology but a fine tactician in many other areas, semi-finalist in the 1986-87-88 National Championships, winner of the 1986 Electronic Warfare tournament, and second in the 1986 Atlanticon Tournament.

ALAN M GOPIN, Member of the Committee, Kzinti Patriarch on the JCF, a software engineer, placed 3rd in the 1984 National Championships.

JEFF SMITH, Member of the Committee, Romulan Praetor on the JCF, a software analyst, 1983 National Champion.

GRAEME BAYLESS, Candidate Member of the Committee, Deputy Klingon Commander on the JCF, placed 2nd in the 1986 championships, 5th in 87 Patrol; a software consultant.

DAVID ZIMDARS, Candidate Member of the Committee, one of the better writers among the Senior Staff, finished in the top eight in the 1986 championships, rated ace in 1988.

MIKE WEST, Candidate Member of the Committee, acting Comptroller General on the JCF (in charge of BPVs).

LEONARD BYRD, a member of the group that helped Jim Curtis create the Lyrans, and now their acting Archduke on the JCF, a safety engineer.

STEVEN J KAY, the creator (under the name Kacarides) of Deth O'Kay, Orion Crimelord on the JCF, and a semi-finalist in the 1986 and 1987 national championships, Rated Ace 1989 and 1990.

STACY BARTLEY, acting Tholian Webmaster on the JCF, a graduate student in communications, a frequent writer of Nexus articles dealing with miniatures.

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MATT LEUTHOLD, tactical officer, finalist in 1986 and 1988 national championships.

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RANK INSIGNIA OF A FLEET CAPTAIN

WHAT KOSNETT DID WRONG: Kosnett made several mistakes, all of which can be blamed on a fiction author trying to make a point, a (ahem) tactical point:

- Using a wild weasel when other solutions to the incoming drone wave could have been made available. T-bombs are the most obvious solution, although tractors, maneuvering to turn another shield toward the drones, or holding some phasers out of the initial volley could also have been done.Obviously, Kosnett was aware of the political background and knew that Kagan would "walk away" and hence can be forgiven for surrendering the initiative to the enemy.
- Taking the initial Klingon volley on the #1 shield is never a good idea. Perhaps he thought that this was necessary in order to get far enough to the left to get out of the waist phaser arcs, but that was a trivial gain at the cost of the ship's most important shield.
- Thereis sharp debate over his decision to overload photons, since Kagan could have fired from 150,000kms and avoided most of the Federation return fire. It might be presumed that Kosnett was willing to accept this lesser amount of damage, but prepared to deal the Klingons a hard blow if they made a "serious" attack.

INSIGNIA OF A SERGEANT MAJOR OF THE STAR FLEET MARINES

FULL STOP! FIRE CONTROL OFF! LAUNCH WILD WEASEL!

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