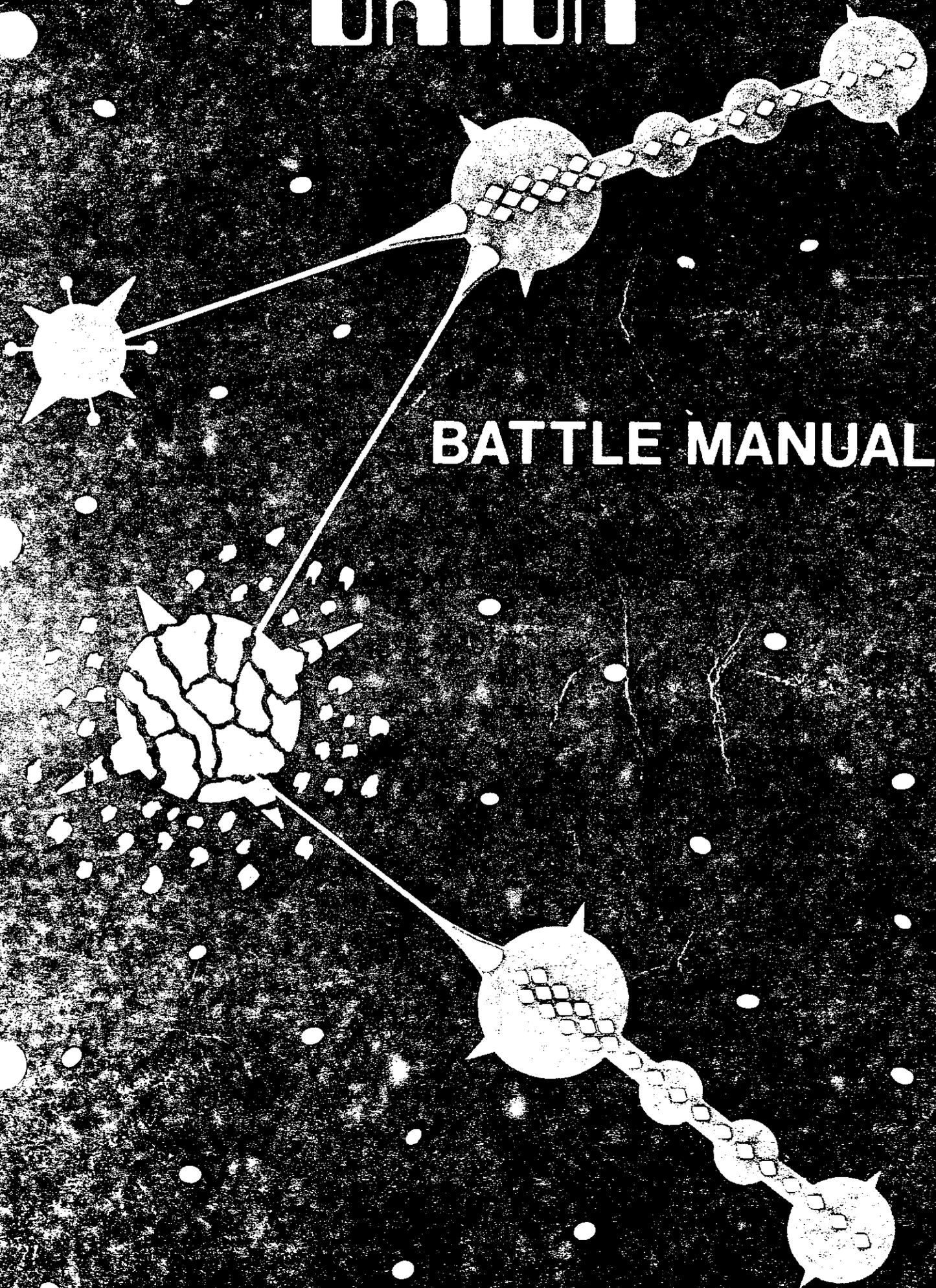


STARFLEET ORION

BATTLE MANUAL



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ORION**

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Credits

Game Design: J. W. Connelley, Jon Freeman
Programs: J. W. Connelley
Rules and Battle Manual: Jon Freeman
Playtesting: Joyce Lane, Michael Turley, Tony Sabado,
Liz Sabado, Joe Riekema, Becky Edinger
William T. Silent
Editor: Joyce Lane
Cover Design: Linda Fell
Typesetting: Karen Caudill
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SCENARIOS

For an explanation of the data presented in the twelve scenarios included herein, as well as instructions for entering the data for game use, see Section 3.0 of the Rule Book. Specifications for the standard ship types referred to in the scenario descriptions will be found in a table following the scenarios.

Note that, to accommodate the different computers for which STARFLEET ORION has been designed, there are, in some instances, two sets of X,Y coordinates for each ship: in such cases, the first pair of numbers is to be used on the PET and APPLE; the second set of figures (in parentheses) applies to the TRS-80. Except where later noted, all other specifications are the same for all versions.

HISTORICAL BACKGROUND

- Excerpted from "*The Causes of the Present Crisis*"

By *Darius K.B. Singh*

At this late date, it is obvious that the invention of the Tachyon Drive in the Twenty-First Century (Old Style) dwarfed even Pearson's immortality research in its impact upon the course of human development. If the significance of the device was lost to anyone outside the scientific community, it was inescapably dramatized five years later, when, on the eve of its launching, the tachyon-powered *Explorer* was stolen by a group of anarchists, misfits, dreamers, and renegade L-5ers. The fate of that first starship, renamed *Freedom*, is unknown, though reported encounters with it persist to this day. It is from this event, of course, that the Great Exodus is usually dated. . . .

The *Justice* was built during a carefully fueled public outcry for the forcible return of the *Explorer's* captors. . . . The inevitable attempt to duplicate the success of the earlier group was doomed by poor planning, infiltration by government agents at all levels, and the greatly increased security surrounding the second ship. . . (but) . . .it hardly mattered. . . . The Mormon Church was under no more pressure from the tax-hungry government than many another, but it had the leadership, the heritage, the means, and the determination to seize the opportunity. . . . Shortly thereafter, any corporation, church, government, group, or individual who could scrape up a few million dollars (not difficult in view of the currency values at that time) was building a starship. Restrictions imposed by the so-called "Great Powers" were ineffective due to the ease with which the multinational corporations could shift construction to any suitable minor country. . . .

Reliable (i.e., nongovernment) records of the period are impossible to obtain, but Seldon and Chiao (*The Great Exodus: Explanations and Effects*) estimate that as many as ten million people may have been involved in the first wave of emigration. More than 300 ships, heading for the great stars of Orion, remained to colonize the vast area between Rigel and Bellatrix. . . . For whatever reason, the ensuing century witnessed a veritable explosion of the human population in the Orion region.

The formation of the Interstellar Union of Civilized Peoples -- commonly known as the Stellar Union -- followed the unification of Earth in amazingly short order, as, in the manner of governments everywhere and everywhen, the Union struggled to put a recalcitrant Humpty Dumpty back together again. . . . By the hundredth year of the Era of the Exodus, the Stellar Union ruled over an oblate spheroid almost 400 light-years in diameter. By 147 E.E., it had grown to within twenty parsecs of Bellatrix, and the Union claimed dominion over all humankind. . . . "Controlled," like "ruled," is a relative term: the Union's control was ever tenuous at best, and even with enforced membership the majority of human settlements within its practical borders gave it no allegiance. In all probability, some significant fraction of those worlds was not even known to the Union bureaucracy. . . .

Records from the 1st Century B.E.E. indicate that many writers of the period found the idea of an interstellar empire (by whatever name) impractical and, therefore (apparently), denied that one could exist. This would be ludicrous were it not so tragic. Surely in an era of state-required identification, universal taxes, and atomic weaponry, the impracticality of large governments must have been obvious; yet, hundreds of them thrived at the expense of an acquiescent citizenry. . . .

What is important is that the Stellar Union exists and takes itself seriously. And it is perhaps the greatest characteristic of such large governments that they have the means and the inclination to build and maintain the machinery of war. . . .

Scenario One: INTRO

As Doris Thejah tucked a loose wisp of hair into the tight knot on the side of her head, her eyes were involuntarily drawn to the flash of gold in the mirror. "Too new, too new," she muttered, gazing at the crossed comets on the lapels of her tunic. They stared back at her, alive and alien, as they had at odd moments for the past week, ever since she'd been given command of the *Britomartis*. *You'll get used to it*, she told herself for the twentieth time. True, there was a big difference between a missile frigate and the freighters she was used to, but you had to start a navy somewhere!

The alarm in her cabin sang, the message echoed by speakers throughout the ship. "Alert! Alert! Commander to the bridge. Battle stations!"

The new Commander of the equally new *Britomartis* bit her lip briefly. *This was supposed to be a simple shakedown cruise*, she thought. *What are we doing on alert in the middle of nowhere?* But she was already on her way out the door.

On the bridge of the torpedo frigate *Leonidas*, Vice-Commander Wan Hang Lo was harboring similar thoughts. "'Spring?'" he repeated, when the other ship's identification-and-query reached them.

"Bellatrix V," supplied his executive officer promptly.

"Bellatrix? What are they doing out here?"

The exec shrugged minutely. "They're closer to home than we are."

Reading into that bland observation a reproach, Vice-Commander Wan glared but spoke instead to the now-frozen image on the com screen. "By what right do you question the presence of the Navy of the Interstellar Union?" Releasing the transmit button, Wan looked around intently, but if any of his subordinates found it strange to refer to a single small warship as "the Navy of the Interstellar Union," they were careful to give no sign of it.

"Well, what are they, Pulver?" he continued, after a moment.

The ensign looked up from the DataComp screen he'd been studying. "It appears to be a DE, sir, equivalent to our Warrior class -- about like us, but no torpedos. Must have been finished ahead of schedule, but according to this it's the only warship they could have."

"No torpedos, hmmm," Wan mused. "Gives us a distinct advantage at this distance." Then, louder: "Make ready the launch tubes."

"Are we going to attack them?"

Before Wan could respond to the incredulity in the other officer's voice, Ensign Karpov, glancing up from his own readouts, broke in. "They're jumping, Commander! Closing to missile range!"

Seconds later, someone fired.

Side One: Missiles: 10,4,15 Torpedos: 0,0 (none)

1. *Britomartis* - DE(M): BQ-5,X,Y-0,0*

Side Two: Missiles: 0,0,0 (none) Torpedos: 12,40

2. *Leonidas* - DE(T): BQ-5, X,Y-0,0

Special Rules: No Tractor Beams allowed.

Victory Conditions: Destruction of the opposing ship.

Playing Time: 1/2 hour.

Notes: The more experienced player (if there is one) should probably handle the *Britomartis*, since it is somewhat harder to use missiles correctly -- particularly defensively -- and the *Leonidas* may have an initial edge in range.

Scenario Two: BLOCKADE RUNNER

Well, I've smuggled Orcan rotgut
Down to port at Ulalume,
Where they put you into prison
Just for breathin' of the fumes;

And I've bought Thurb corn on one coast;
Sold it back again that day
To some others who were starving
Half to death across the bay.

And it's, Up ship! Hot jets! Clear space!
On my way.
"Free trade! Free space! Freedom!"
That I say.

Lots of planets license whiskey,
Like a world off Alkazar,
Where a man can get arrested
Drinkin' moonshine in a bar.

See, there's nothing in the Union --
Neither drink nor drugs nor plants --
That the government won't tax it,
If you give 'em half a chance.

So it's, "Free trade! Free space! Freedom!"
That I cry.
Free trade! Free space! Freedom!
Till I die.

*BQ is Beam Quality. See page 25 for descriptions of the standard ship type characteristics.

Yes, I've taken heartstone rubies
Off restricted worlds to sell;
Even given revolutions
Guns for money, truth to tell.

They all say I have no conscience,
No respect for any law,
But their fascist regulations
Can't help stickin' in my craw.

So it's, "Down the Stellar Union!"
That I say.
Free trade! Free space! Freedom!
All the way.

I've evaded import duties
From Altair to Bellatrix;
Never paid a bit of sales tax;
Filled the Customs House with tricks.

I suppose one day they'll get me
With a missile, in a raid,
But, until the day they do,
I'll keep plyin' at my trade,

Singing, "Free trade! Free space! Freedom!
That's my cry.
Free trade! Free space! Freedom!
Till I die.

-- Ballad of the Free Trader
(anonymous: c. 142-161 E.E.)

Side One: Missiles: 12,3,15 Torpedos: 0,0 (none)

1. *Assegai* - CV: BQ-3, X,Y-10,0 (15,0)
2. *Sarissa* - CV: BQ-3, X,Y-40,0 (53,0)

Side Two: Missiles: 12,4,15 Torpedos: 0,0 (none)

1. "*Bideawhile*" - planet: E-50,0; D-0,0; B-0,0; S-0,0; A-12; L-0,0; M-0,0; T-0,0; X,Y-32,10 (40,18)
2. *Demon Rum* - (special): E-4,0; D-4,0; B-0,0; S-0,0; A-2; L-2,1; M-16,12; T-0,0; BQ-0; X,Y-32,10 (40,18)

Special Rules: No Tractor Beams allowed.

Victory Conditions: The *Demon Rum* must exit off the lefthand side of the screen to win. The Stellar Union player (Side One) wins if he destroys the *Demon Rum* and if one of his ships survives (i.e., has a power plant still capable of producing *some* energy). Any other situation is a draw.

Playing Time: 1/2 hour.

Notes: Side Two is mechanically simpler but tactically more challenging; Side One has a *slight* advantage.

Scenario Three: STAR FOX

For good contemporary space opera, replete with vivid and well thought-out star-ship combat, it's hard to do better than Poul Anderson.

The Star Fox involves the carefully concealed conquest of a colonial world, New Europe, by a nonhuman race, the Aleriona, and the efforts of one man, Gunnar Heim, to induce a reluctant Terran government to take action against the invaders. When it becomes clear that diplomatic maneuvers alone will not suffice, Heim, a wealthy industrialist, acquires a freighter, converts it to a warship, and ships out as a privateer. Initially, he hopes to buy time for the resistance on New Europe, to draw their attention of Earth to the situation, and, by harassing their shipping, to make continued occupation of the planet prohibitively expensive for the Aleriona. He and the *Fox II* are ultimately so successful that by the time the Terran government acts, it is unneeded -- and unwanted -- on New Europe.

The climactic -- but undescribed -- battle in space pits the *Fox II* against the Alerionan heavy cruiser *Jubalcho*.

Side One: Missiles: 12,4,15 Torpedos: 15,40

1. *Fox II* - C: BQ-8; X,Y-0,0

Side Two: Missiles: 12,4,15 Torpedos: 15,40

2. *Jubalcho* - CA:BQ-5; X,Y-0,0

Special Rules: No Tractor Beams allowed.

Victory Conditions: Destruction of the opposing ship.

Playing Time: 1/2 hour.

Notes: This scenario is deliberately unbalanced to allow a newcomer to the game (handling the larger and more powerful heavy cruiser) to compete on fairly even terms against a more experienced player (and the *Fox II*). If you wish to alter the balance of the game and minimize Side Two's advantage, reduce the range of the *Jubalcho's* missiles from 15 to 12 (reflecting the edge given the *Fox II* in this department by the "missile sling" mentioned in the first chapter of Part Two of the book) and its Beam Quality (BQ) from 5 to 2.

Scenario Four: RELIC

It started on a research outpost on Gehenna maintained by the Stellar Union's Deep Shaft Mining and Processing Company, but Project Orpheus would never have gotten funded were it not for the legends -- tales of an alien race older than time who had ruled like gods until the ultimate product of their own genius, a weapon that could crush planets and smash suns, was turned against them. If by some small chance such a device ever existed -- if it still existed or could be reconstructed -- if it could be found and controlled, then the Interstellar Union of Civilized Peoples would have in fact the control over the planets of men it so grandly claimed.

For others, the trail led from the fragments of an overheard conversation on Trantor to an archaeologist on Illyria, from a miner's bar in Belion, on Whistlestop, to the scorched cinders of the asteroid belt that circled dying Betelgeuse.

If too small to be the weapon of legend, the blackened sphere found there -- which had survived longer than the human race -- could, when deciphered and understood, be map, diagram, record, or time capsule.

Unfortunately for Spring, Autarchia, Whistlestop, and the other worlds of Orion, *Gram* and its sibling ship, *Cortana*, were not alone in their discovery.

Side One: Missiles: 12,4,15 Torpedos: 15,40

1. *Paladin* - DD: BQ-5; X,Y-10,0 (15,0)
2. *Gram* - CV: BQ-5; X,Y-30,0 (49,0)
3. *Cortana* CV: BQ-5; X,Y-30,0 (49,0)

Side Two: Missiles: 0,0,0 (none) Torpedos: 0,0 (none)

1. The Relic: E-2,1; D-0,0; B-0,0; S-0,0; A-2; L-3,0; M-0,0; T-0,0; BQ-0; X,Y-20,0 (32,0)
2. Asteroid: E-50,50; D-0,0; B-0,0; S-0,0; A-50; L-50,50; M-0,0; T-0,0; BQ-0; X,Y-5,1 (5,1)
3. Asteroid: Same as # 2 except X,Y-5,20 (5,36)
4. Asteroid: Same as # 2 except X,Y-35,1 (59,1)
5. Asteroid: Same as # 2 except X,Y-35,20 (59,36)
6. Asteroid: E-12,10; D-0,0; B-0,0; S-0,0; A-3; L-0,0; M-0,0; T-0,0; BQ-0; X,Y-0,0
7. Asteroid: Same as 6
8. Asteroid: Same as 6
9. Asteroid: Same as 6

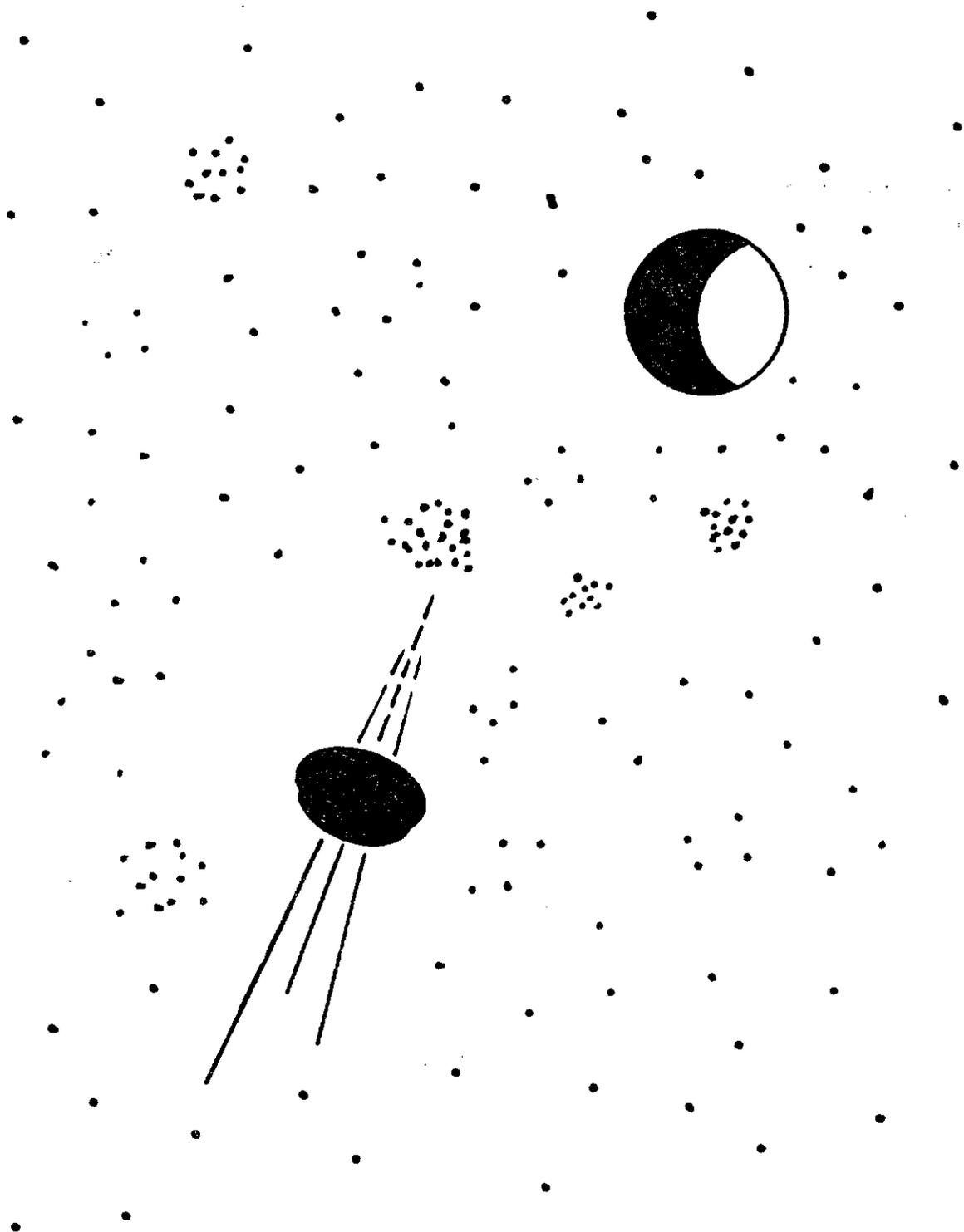
Special Rules: Tractor Beams are allowed (in fact, required). You *can* "fire on your own ships." No orders (including STATUS) can be entered for the objects listed on Side Two.

Victory Conditions: The game ends after any turn in which the Relic lies *outside* (not just "on the line") the rectangle defined by the four corner asteroids. Player One (*Paladin*) wins if, at the end of any turn, the Relic is to the left of the lefthand pair of asteroids (which you may think of as "goal posts") *and* the *Paladin* is still producing energy. Player Two (*Gram & Cortana*) wins if, at the end of any turn, the Relic is to the right of the righthand pair of asteroids *and* either *Gram* or *Cortana* is still producing energy. Any other condition -- including the destruction of the Relic -- results in a draw.

Playing Time: 1/2 hour

Notes: This simple scenario introduces two new concepts to the game: the use of Tractor/Pressor Beams to move other ships or objects, and the possibility of beaming your own ships by mistake. The latter hazard is necessitated by the presence of a third, "neutral" side (the objects on Side Two) in the scenario. The former device can be used in other scenarios to "launch" small craft great distances from large objects like planets, to pull ships in for close-range beaming, or to cause enemy missiles to miss by displacing the firing ship. Here, Tractor/Pressor Beams are used primarily to provide the motive power to move the Relic.

The destroyer's two advantages are its greater drive (and, therefore, Tractor Beam) and its torpedos, which are more potent weapons than anything possessed by the corvettes. However, great care must be used in firing a torpedo, as a slight miscalculation will result in the destruction of the Relic. The advantage of the smaller ships is that there are two of them; normally, the favored tactic is for one to move the Relic while the other holds off the *Paladin*.



Scenario Five: AMBUSH

After destroying the *Gram* with a lucky torpedo hit and crippling *Cortana*, the Stellar Union's *Paladin* succeeded in retrieving the artifact all three ships were seeking. It contained evidence of an almost unimaginably ancient civilization called the Alrashid Empire, but it took years for the men engaged in Project Orpheus to decipher that information.

In the meantime, "border clashes" such as the inconclusive action fought between *Leonidas* and *Britomartis* grew unpopular with the conservative faction of the Union's Supreme Council, who did not feel they were in keeping with the benevolent and peaceful image they were trying to maintain. As such incidents became increasingly difficult to justify -- particularly when they did not result in Stellar Union victories -- other alternatives were tried. Boycotts of Orion goods proved as ineffective as blockades: there were simply too many markets on too many worlds to monitor.

A happy solution presented itself: if pirates and raiders were to disrupt shipping among the worlds of Orion and destroy the few escorts and patrol ships, outraged merchants and disgruntled colonists might begin to see the advantages of Stellar Union protection. Admittedly, finding raiders willing to attack armed warships -- even small ones -- might require some small additional inducement, but the Supreme Council considered this money well spent.

-- Elihu Nivens: *Notes*

Side One: Missiles: 10,4,15 Torpedos: 12,40

1. *Narsil* - CV: BQ-8; X,Y-21,10 (40,18)
2. *Glamdring* - CV: BQ-8; X,Y-19,10 (35,18)

Side Two: Missiles: 8,3,15 Torpedos: 10,20

1. *Thunderbolt* - GB: BQ-5; X,Y-0,0
2. *Copperhead* - TB: BQ-0; X,Y-0,0
3. *Goblin* - MB: BQ-0; X,Y-0,0

Special Rules: Tractor Beams are optional.

Victory Conditions: Side One scores 4 points for each raider destroyed; Side Two scores 6 points for each corvette destroyed. The game ends when all the ships of one side have either been blown up or have gone off the edge of the screen.

Playing Time: 1 hour

Notes: This, the simplest of the intermediate level scenarios, is, like STAR FOX, somewhat unbalanced and, in that sense, can be considered a step up from Scenario Three. It may also be used by an experienced player to introduce a knowledgeable newcomer to STAR-FLEET ORION. Side One has a slight advantage and is easier to play. The more challenging task of coordinating the multiple attacks of the specialized ships on Side Two should be reserved for a veteran of previous scenarios.

Scenario Six: RED SUN

The second of four scenarios derived from outside sources, RED SUN is based on an obscure novel by William T. Silent, whose neofeudal galactic empire is as elaborate as Anderson's but less decadent. The complex plot of *Lord of the Red Sun* revolves around an attempt to usurp the office and title of the Viscount of Regalio by a madman whose kidnapping of a niece of the Emperor threatens a sector-wide war with the independent Kingdom of Talnar. The young viscount, Victor Malenkov, survives three assassination attempts and the abduction of his wife-to-be on Syrtax, the sector capital, but, because of the Talnar crisis, he is unable to get help from his overlord. Determined to rescue his fiancée and regain his position and afraid to wait for possible reinforcements, Malenkov returns to Regalio (and its planet, Bankoor) to take on the enemy. Accompanying him are a professional assassin originally hired to kill him and a friendly marquis (with two of his wives) from a neighboring sector.

The odds against them are not encouraging, even after they are joined by the planet's surviving destroyer: though larger than the viscount's yacht (the *Hand of Tyr*), the marquis's "credit-gobbling" *Patrick Henry* is no more than a modified corvette, and the usurper's force includes a light cruiser.

Side One: Missiles: 10,4,15 Torpedos: 12,40

1. *Hand of Tyr*: E-6,0; D-3,0; B-5,0; S-0,0; A-1; L-1,0; M-4,0; BQ-8; X,Y-5,9 (15,16)
2. *Patrick Henry*: E-8,0; D-4,0; B-5,0; S-1,0; A-2; L-2,0; M-8,0; BQ-5; X,Y-5,11 (15,20)
3. *Regalion* - DD: E-12,0; D-6,0; B-5,0; S-4,0; A-1; L-2,0; M-12,2; T-2,0; BQ-8; X,Y-15,0 (25,0)

Side Two: Missiles: 10,4,15 Torpedos: 12,40

1. "Bankoor" - planet: E-50,0; D-0,0; B-0,0; S-0,0; A-20; L-99,0; M-0,0; BQ-0; X,Y-30,10 (40,18)
2. *Necromancer* - CL: E-20,2; D-9,2; B-10,2; S-5,0; A-1; L-2,0; M-12,3; T-4,1; BQ-0; X,Y-30,10 (40,18)
3. *Mung* - DD: E-12,0; D-6,0; B-5,0; S-4,0; A-1; L-2,0; M-12,2; T-2,0; BQ-0; X,Y-30,10 (40,18)

Special Rules: Tractor Beams are optional. The two ships of Side Two must leave the planet on the first turn and may not return. A ship cannot land on the planet and fire any weapons on the same turn; nor may it remain on the planet and fight. A ship which has landed may, however, leave the planet again and engage in combat, but only if the player announces his intention to do so before his opponent enters his orders for the turn. Conversely, ships on the planet cannot be attacked (except, of course, for those ships leaving the planet that turn); nor may the planet itself be fired on. (Both sides want the world intact.)

Victory Conditions: Play continues until all of the ships of Side One are on the planet or destroyed or until the end of the 10th turn, whichever comes first. At game's end, Side Two gets 2 points for each ship on Side One that it has blown up; Side One gets 2 points for each of its ships on the planet, 3 points if it blows up the enemy destroyer.

(*Mung*), and 5 points for destroying the enemy light cruiser. Additionally, if at the end of 10 turns there is at least one ship from Side One still remaining in the system (i.e., on the screen) or on the planet, Side One gets 1 point for each undestroyed enemy ship in the system (they will be captured by arriving reinforcements).

Playing Time: 1½ hours

Notes: The scoring, which favors Side One, is designed both to reflect the situation detailed in the novel and to balance Side Two's material advantage. Despite the high rewards for destroying both enemy ships, trying to slug it out to an ultimate conclusion is a dangerous tactic for Side One; the safer course is to get as many ships to the planet as possible. While Side Two's primary aim must be the destruction of at least two ships, some caution is necessary: losing either of its own ships is dangerous, and getting the *Necromancer* blown up is fatal unless (a) the *Mung* survives and (b) all three ships on Side One are destroyed. Accordingly, if the tide has clearly turned against him (her), Player Two should minimize his losses (and the margin of defeat) by retreating his remaining ship(s) off the board before the 10th-turn deadline.

While Scenario Six is reasonably balanced, "fine tuning" to suit individual preferences or abilities is not difficult. Moving the planet (and the starting positions of the ships of Side Two) to the right a few spaces will make it slightly more difficult for Side One; moving it to the left makes it somewhat easier. Alternatively, to strengthen Side Two, increase the Beam Quality of the two ships from 0 to 2 or 3.

Scenario Seven: CONVOY

When his office door was thrown open without a warning knock, Christopher Marlowe Paxton looked up from his desk in automatic annoyance. Almost before it began, his equally automatic smile faded to concern at the trouble evident in his daughter's face. "What's the matter, Nola?"

"It's the convoy --"

He interrupted her softly but firmly. "The door." He nodded meaningfully.

She scowled but closed it.

"Now, what about the convoy?"

"It's a full day overdue, and there's been no word."

He nodded. "I know."

She hesitated a long moment before forcing out, "Is it raiders, do you think?"

"I don't know any more than you do," said the elder Paxton. Then, deciding his only child rated more honesty than that, he added reluctantly, "But if I had to guess, that would be it."

"But those are the two biggest escort ships we've got," she protested.

"Blame the Stellar Union," he said grimly. "Without Union credits to get them organized and motivated, there'd be damn few pirates willing to take on a pair of frigates, even for the biggest convoy we've ever put together."

"Can we afford the loss?" she asked, with a quick frown.

"If we have to. A better question might be, can we afford the insurance on whatever small piece of Sagittarius Spacelines they'll be willing to take, if we lose the convoy."

"What are their chances?"

He shrugged with elaborate casualness. "The *Valkyrie* is a good ship, and Jon Braun is the best pilot I've ever seen."

Her eyelids flickered. "Oh, J. Y. B. will survive. He always does. I was thinking about the transports."

"No doubt."

"What's that supposed to mean?" she demanded, but her tone was too defensive to be sincere.

Christopher Paxton did not bother to answer the meaningless question. He didn't know why his daughter often referred to the captain of the *Valkyrie* by his initials, but he was certain it did not indicate a lack of interest. -- Which made her frequently indifferent treatment of him all the more puzzling. "Scared, Nola?" he ventured quietly.

"Of a raider gunboat outfighting Jonny Braun?" She snorted. "When pigs have wings."

"That's not what I meant. How long are you going to keep him hanging?"

"I don't know what you mean," she said, but she did not meet his eyes.

Then, because she was his only daughter, and because her happiness was important to him, and, most of all, because he loved her, he said, "If he doesn't make it, it will be too late for both of you."

She stiffened and spun, hiding her expression from him with her brown hair.

He hesitated, torn, and then punched the intercom button viciously. When, a moment later, the face of his construction chief looked up from the telescreen, he demanded abruptly, "How are you coming on the *Camelot*?"

The other man glanced automatically in the direction of the yard where the freighter *Conestoga* was daily being converted into a pocket battleship. "Pretty well," he answered cautiously. "We're running about three weeks ahead of schedule."

Paxton shook his head. "Not good enough. I want it finished next month."

Helmut Reardon opened his mouth to speak but closed it again before nodding. "It can be done," he warned, "but meeting that deadline may make it the most expensive escort vessel ever built."

"I'm not building it as an escort."

Reardon cocked an eye upward. "You really think it will come to war?"

"It already has," said Paxton curtly. He touched the intercom button again, and the other man's face faded.

"Damn the Union," he muttered, hitting the top of the ironoak desk with the side of his fist. "Damn their interfering, trollish hides." And, he thought, looking at the still-rigid back across from him, *damn them for taking out my worries on my daughter.*

Side One: Missiles: 10,4,15 Torpedos: 12,40

1. *Amazon* - DE: BQ-5; X,Y-5,8 (20,16)

2. *Valkyrie* - DE: BQ-5; X,Y-5,12 (20,20)

3. Transport - TT: E-2,0; D-2,0; B-0,0; S-0,0; A-0; L-20,18; M-0,0; T-0,0; BQ-0; X,Y-1,5 (15,13)

4. Transport - TT: Same as # 3 except X,Y-1,7 (15,15)

5. Transport - TT: Same as # 3 except X,Y-1,9 (15,17)

6. Transport - TT: Same as # 3 except X,Y-1,11 (15,19)

7. Transport - TT: Same as # 3 except X,Y-1,13 (15,21)

8. Transport - TT: Same as # 3 except X,Y-1,15 (15,23)

Side Two: Missiles: 10,4,15 Torpedos: 12,25

1. *Strychnine* - GB: BQ-5; X,Y-25,0 (40,0)

2. *Fubar* - TB: BQ-0; X,Y-25,0 (40,0)

3. *Wasp* - TB: BQ-0; X,Y-25,0 (40,0)

4. *Eddore* - MB: BQ-0; X,Y-25,0 (40,0)

Special Rules: Tractor Beams are recommended.

Victory Conditions: Side Two gets 2 points for each ship of Side One destroyed. Side One gets 2 points for each *transport* that exits the righthand side of the screen and 1 point for each raider destroyed. The game ends after all the ships of either side have left the board or been blown up.

Playing Time: 2 hours

Notes: The two torpedo boats will obliterate the transports unless the two defending frigates concentrate on them and use their missiles to counter torpedo attacks. If you find that Side One wins too often, add a 2nd gunboat (GB) to Side Two; if Side Two usually comes out ahead, reduce the range of its torpedos from 25 to 20 or 15.

As an interesting option, add four or five asteroids (E-10,5; D-0,0; B-0,0; S-0,0; A-2; L-5,5; M-0,0; T-0,0; BQ-0; X,Y-0,0) to Side Two. These floating obstacles, which can be moved by either side's Tractor/Pressor Beams, can hide ships or block the path of torpedo fire and, therefore, probably yield a slight advantage to Side One. Asteroids such as these can also be used to add variety to many of the earlier scenarios (after you've played them "straight" a few times).

Scenario Eight: VIKING

In H. Beam Piper's *Space Viking*, Lucas Trask of Traskon leaves home and his former life on the sword-world Gram to hunt Andray Dunnan, the maniac who killed Trask's bride on their wedding day. The chase is a long one, but after several years Trask's *Nemesis* locates his enemy's flagship, the *Enterprise*, which, with a smaller ship, the *Yo-Yo*, has ambushed a Mardukan battlecruiser on patrol around Audhumla.

Side One: Missiles: 12,4,15 Torpedos: 15,40

1. *Nemesis* - BB: BQ-8; X,Y-1,10 (10,18)

2. *Victrix* - BC: E-34,17; D-13,5; B-20,9; S-10,5; A-1; L-2,0; M-16,10; T-4,2; BQ-2; X,Y-0,0

Side Two: Missiles: 12,4,15 Torpedos: 15,40

1. "Audhumla" - planet: E-250,200; D-0,0; B-0,0; S-0,0; A-5; L-0,0; M-0,0; T-0,0; BQ-0; X,Y-20,10 (32,18)

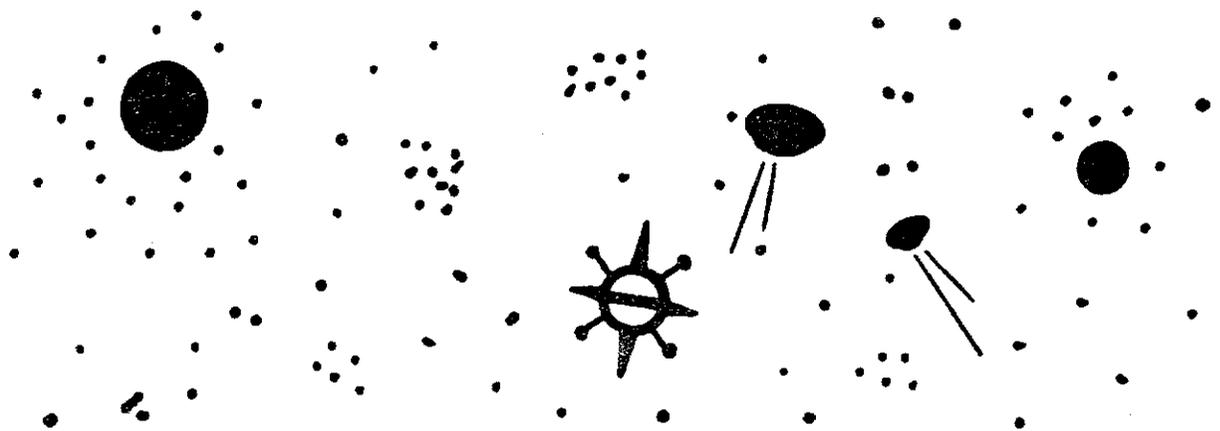
2. *Enterprise* - BB: E-38,2; D-12,1; B-20,2; S-11,0; A-3; L-3,0; M-16,6; T-6,3; BQ-5; X,Y-0,0
3. *Yo-Yo* - C: E-20,3; D-9,1; B-10,1; S-6,1; A-2; L-3,0; M-16,9; T-6,3; BQ-5; X,Y-0,0

Special Rules: Tractor Beams are optional.

Victory Conditions: Destruction of the enemy ships.

Playing Time: 2 hours

Notes: In keeping with the situation described in the book, the damaged *Victrix* is a fairly easy target. However, the *Nemesis's* superior Beam Quality and full supply of missiles and torpedos keep the scenario well balanced, and the outcome of individual games will turn on superior tactics and on the three ships' random initial placement. If, nonetheless, Side One loses too often for your taste, increase *Victrix's* Beam Quality from 2 to 5 and the power of that side's torpedos from 15 to 18.



Scenario Nine: DEATHSONG

The Dirge was old, old.

It was old when dust motes sailed the solar wind and only lizards raised stares unblinking toward what men would call the stars of Orion.

When young, it had sung the death of the Hive of Fang'aan, as was its purpose. A thousand years later, when a new litany of revolution was heard in the Alrashid Empire, the Dirge -- already old even by the standards of a race that ruled their corner of the cosmos for millenia, half-forgotten, rediscovered, altered not by time but desperate, vengeful purpose -- sang again. Once begun, the song could not be halted. In the end, revolution and empire, race and planet, were gone.

Without listeners, the Dirge drifted eons in silence until, at last, a ship of a new empire, touched by legend and led by an artifact from another time, would have directed the Dirge to its own ends.

But a song is not the singer, and a deathsong has only one purpose.

Without warning and almost without witness, the cruiser *Ozymandias* was annihilated. A single lifeboat shrieked, jumped, fled with a soprano wail. To its own slow beat, the ultimate weapon followed.

The song had begun again.

Side One: Missiles: 0,0,0 (none) Torpedos: 30,8

1. *Amra* - FF: BQ-5; X,Y-1,1 (10,5)
2. *Beowulf* - FF: BQ-5; X,Y-1,1 (10,5)
3. *Conan* - FF: BQ-5; X,Y-1,1 (10,5)
4. *Enkidu* - FF: BQ-5; X,Y-1,1 (10,5)
5. *Fafhrd* - FF: BQ-5; X,Y-1,1 (10,5)
6. *Gawain* - FF: BQ-5; X,Y-1,1 (10,5)
7. *Gilgamesh* - FF: BQ-5; X,Y-1,1 (10,5)
8. *Legolas* - FF: BQ-5; X,Y-1,1 (10,5)
9. *Malaclypse* - FF: BQ-5; X,Y-1,1 (10,5)

Side Two: Missiles: 10,3,12 Torpedos: 15,25

1. Fighter # 1 - F: BQ-5; X,Y-20,20 (32,26)
2. Fighter # 2 - F: BQ-5; X,Y-20,20 (32,26)
3. *The Dirge*: E-75,35; D-12,0; B-30,0; S-15,0; A-3; L-5,0; M-60,0; T-10,0; BQ-2; X,Y-20,20 (32,26)

Special Rules: Tractor Beams are allowed (and required).

Victory Conditions: Side Two wins if the Dirge exits off the lower edge of the screen (putting it in range of the planet Spring, which will then be destroyed); Side One wins if the Dirge is stopped (it need not be blown up, merely prevented from moving).

Playing Time: 1 hour

Notes: Despite its enormous armament and tough defenses, the Dirge's chief weapon may be its Tractor/Pressor Beams, which can be used to toss its attackers wildly about or launch its two escort fighters across the screen. This is, in fact, the only way to use the escorts effectively; if they try to traverse the distance between the Dirge and the attacking fighters under their own power, they'll both be blown apart before they get into effective range. The beams of the attacking fighters will penetrate the Dirge's armor only at extremely close range; at that, the short-range but powerful torpedos are the only real hope of stopping the juggernaut. Generally, this requires surrounding the Dirge at a distance of about 6 or 7 spaces and then making torpedo runs, one to three ships at a time, into point blank range.

If Side One wins too often, reduce the power of their torpedos from 30 to 25.

Scenario Ten: SPRING (The Battle of Bellatrix)

TransGalactic News Service reports that the planet Spring has suffered a massive attack from space. Spring, the fifth planet of Bellatrix, only recently escaped near-certain destruction from an ancient robot weapon legend called the Dirge. The attackers are believed to be warships of the Stellar Union, but this has not been confirmed. Devastation of

the planet is said to be almost total, and few of the world's twenty-three million inhabitants are thought to have survived.

Representatives of the Interstellar Union of Civilized Peoples were unavailable for comment.

Side One: Missiles: 12,4,12 Torpedos: 15,15

1. *Apocalypse* - BB: BQ-5; X,Y-10,12 (20,20)
2. *Armageddon* - BB: BQ-5; X,Y-10,8 (20,16)
3. *Salamis* - C(W): BQ-0; X,Y-10,10 (20,18)

Side Two: Missiles: 12,4,12 Torpedos: 15,15

1. "Spring" - planet: E-60,0; D-15,0; B-30,0; S-30,0; A-5; L-100,90; M-52,0; T-10,0; BQ-2; X,Y-30,10 (40,18)
2. *Garm* - CA: BQ-5; X,Y-30,10 (40,18)
3. *Cerberus* - CA: BQ-5; X,Y-30,10 (40,18)

Special Rules: Tractor Beams are allowed (and required).

Victory Conditions: Side One scores 1 point for each point of energy (starting from 60) removed from the planet and 5 points for each heavy cruiser destroyed. Side Two scores 1 point for each point of energy remaining on the planet at the end of the game; additionally, it gets 25 points for each battleship blown up and 15 points if the war cruiser is destroyed. The game ends when either (a) the ships of Side One have left the screen or been destroyed or (b) the planet is devoid of energy and the ships of Side Two have left the screen or been destroyed.

Playing Time: 4 hours

Notes: As the "historical" report suggests, Side Two is at a bit of a disadvantage here. Once the attacking ships zero in on it, the planet *must* use its Tractor/Pressor Beam to try to throw off the concentrated missile fire by moving the firing ship. Saving the planet -- or as much of it as possible -- is, obviously, a must for Side Two.

If, after trying SPRING a few times, you wish to alter the play balance in the scenario, try increasing the range of Side Two's missiles (from 12 to 15) and torpedos (from 15 to 20) and/or raising the planet's Beam Quality from 2 to 5. Either change should make a noticeable difference.

Scenario Eleven: FLANDRY

Ensign Flandry is -- in fictional chronology, though not in date of writing -- the earliest of the adventures of Poul Anderson's intrepid Imperial agent, Captain Sir Dominic Flandry. It's far from being the best of those books, but it boasts a dandy twenty-page battle in Chapter 17 that forms the basis for Scenario Eleven. It would be unkind to spoil the mystery involved, but for reasons eventually explained in the book the fate of a world

and, perhaps, the Empire itself hinges on the results of this encounter between Terran and Merseian squadrons near the F5 star Saxo.

The two largest Terran ships are outmoded and battle-worn; the Merseians are superior quantitatively and qualitatively but are divided. Thus, the action devolves into two separate encounters, as the Terrans attempt a defeat in detail. In the first, the Terran squadron destroys a Merseian battleship and heavy destroyer, but their two older craft sustain considerable damage. The second half of the battle, simulated here, pits the damaged Terran warships against a Merseian light cruiser and five destroyers.

Side One: Missiles: 12,4,15 Torpedos: 20,40

1. *Sabik* - B: E-28,10; D-10,5; B-15,6; S-10,3; A-3; L-3,1; M-24,8; T-6,2; BQ-0; X,Y-15,5 (35,15)
2. *Umbriel* - CL: E-20,5; D-9,2; B-10,2; S-5,1; A-1; L-3,0; M-12,6; T-0,0; BQ-0; X,Y-15,0 (35,0)
3. *New Brazil* - DD: E-12,1; D-6,1; B-6,0; S-4,0; A-1; L-2,0; M-12,6; BQ-8; X,Y-20,0 (40,0)
4. *Murdoch's Land* - DD: E-12,0; D-6,0; B-6,0; S-4,0; A-1; L-2,0; M-12,2; BQ-8; X,Y-20,0 (40,0)
5. *Antarctica* - DD: E-12,0; D-6,0; B-6,0; S-4,0; A-1; L-2,0; M-12,0; BQ-8; X,Y-10,0 (30,0)

Side Two: Missiles: 12,4,15 Torpedos: 0,0 (none)

1. Destroyer # 1: E-12,0; D-6,0; B-6,0; S-4,0; A-1; L-2,0; M-12,0; T-0,0; BQ-5; X,Y-40,20 (60,35)
2. Destroyer # 2: Same as Destroyer # 1
3. Destroyer # 3: Same as Destroyer # 1
4. Destroyer # 4: Same as Destroyer # 1
5. Destroyer # 5: Same as Destroyer # 1
6. Light Cruiser: E-20,0; D-9,0; B-10,0; S-5,0; A-1; L-3,0; M-12,0; T-0,0; BQ-5; X,Y-40,20 (60,35)

Special Rules: Tractor Beams are allowed.

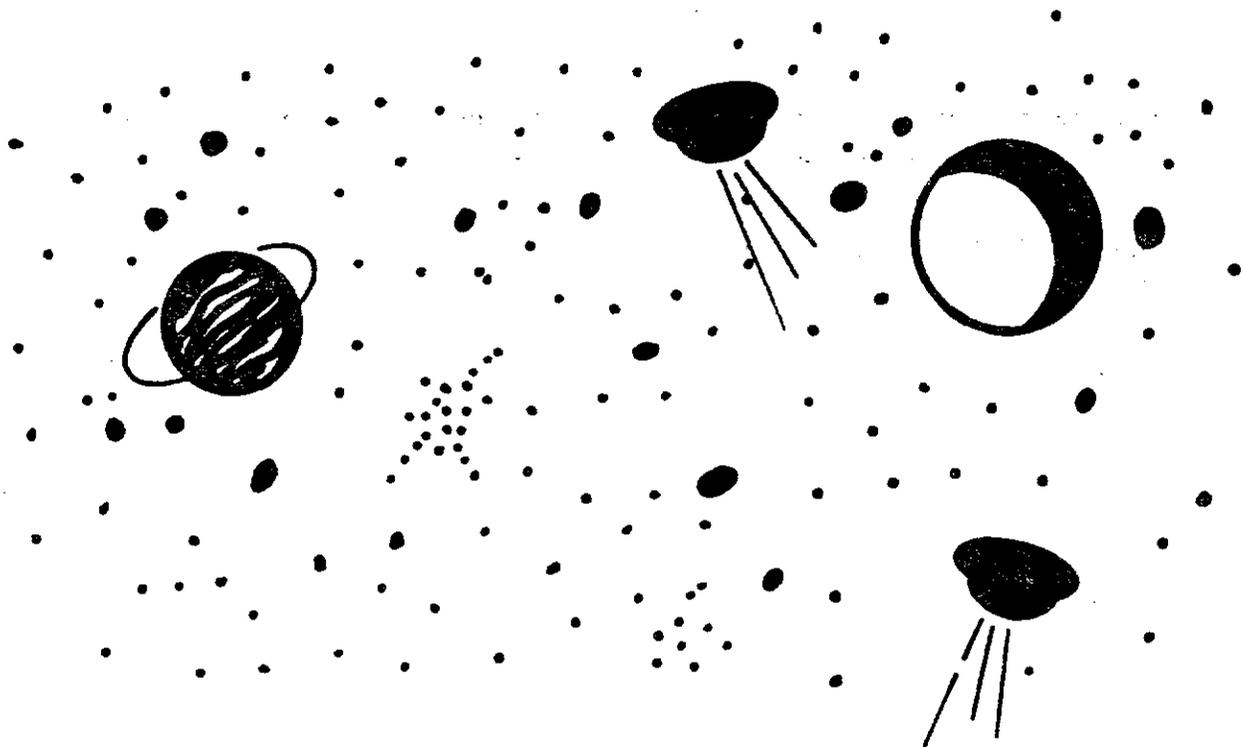
Victory Conditions: Destruction of the enemy ships. Alternatively, if a shorter game is preferred, you may set a time limit (at least 5 and no more than 10 turns) and assign a point value for ships destroyed, as follows: 2 points for a destroyer, 3 points for a light cruiser, and 4 points for the Terran pocket battleship. The side with a higher point value of enemy ships destroyed at the end of the time limit wins.

Playing Time: 6 hours

Notes: There is no mention of torpedos *per se* in *Ensign Flandry*, but Anderson does distinguish several sorts of missiles, including one very powerful variety, with its own hyperdrive, that only battleships carry and which corresponds closely enough for practical purposes. The absence of torpedos on the other ships required some adjustments in their design, so none of them are quite standard. While *Sabik* is referred to, once, as a "pocket battleship," it is quite unlike World War II's *Graf Spee* and, as described in the chapter,

appears to be less an analogue of the *Avalon* or *Camelot* of Scenario Twelve than a "light battleship" -- a category that does not exist among the standard roster of STARFLEET ORION. Consequently, it, too, is a custom design. None of the Merseian ships are named in the book; if you are so inclined, you can supply some suitably alien ones from your own imagination.

FLANDRY is reasonably balanced, but if you wish to make adjustments, moving Side One's ships to the right 5 spaces (or more) will give them a significant advantage, while moving them to the left will yield a somewhat lesser advantage to the other side. Alternatively, you can strengthen Side One by raising the Beam Quality of *Sabik* and *Umbriel* from 0 to 2 or weaken it by reducing the power of *Sabik's* torpedos from 20 to 15.



Scenario Twelve: ARMAGEDDON

Thunder smote his ears like the glowering bolts of Zeus or Thor's angry hammer, as five great warships left the surface of the planet together. While the Tachyon Drive was silent, the collapsing air, rushing in to fill the chunks of vacuum left by the ships' abrupt departure, shook the ground like the end of the world.

Which perhaps it was. It had been for Spring; it might be for Autarchia.

The man called Sudden Smith was under no illusions about his fate. The sole survivor of the attack on the *Dirge*, he knew the odds of living through another such battle weren't worth computing. He sat quietly, cradled in his pilot's harness and battle armor and waiting for his own launch, but while he could fool an outside observer, he couldn't deceive his stomach: his twisted guts had long since emptied themselves of anything but tension. His back ached; his shoulders were tight; and there was an uncomfortable kink in the material underneath his right thigh.

If that was normal, it was the only thing that was.

He watched the five blips on his screen spread out to meet the enemy. Two freighters converted into something like battlewagons, powerful but slow, and three real cruisers: the most powerful group of warships ever seen near the Promethean system – except for the Stellar Union fleet opposing them. They came from all over: the two pocket battleships from the same shipyard on Autarchia, one owned by the spacelines, the other by Intercontinental Insurance; the *Banth* from Whistlestop, which had a planetary government; Nueva California's *Wyvern*, from Cibola, which didn't; and the Mormon Church's *Griffin*, out of New Zion. Not long ago, even agreeing on some naming conventions was counted a miracle; now everyone was calling it Starfleet Orion, though it existed for only this day. It was life or death and, after the object lesson on Spring, everyone knew it.

The attacking ships split into thirds in a flanking maneuver; the defenders responded similarly. Tiny flares appeared on the screen as the first missiles were exchanged; there were a couple of near misses among the enemy and what looked like a direct hit on one of the Orion cruisers. That would do damage, even with a full shield up.

"Fighters prepare for launching," sounded in his helmet.

He called Jamaal Weinstein's untried *Tarzan*. "Ready, Jamaal?"

With his face plate up, the hawk-nosed, droopy-lidded, kinky-haired face stared from the com screen in obvious excitement. "Soon find out."

"Nervous?"

A quick grin. "Better believe it."

"Scared?"

A pause. "Would you believe I'm not sure?"

Smith nodded. "I know what you mean. Luck."

The young man nodded back. "Allah be with you."

Smith cut the circuit but hesitated before coding the familiar scarred shape on his other side: they'd been able to patch up the *Enkidu* but not his old battlemate Luciano. And the new pilot was no stranger. "How are you doing, Ameena?" he asked quietly, when her attractive oval face filled the screen.

Ameena Chung moved eyebrows, head, shoulders minutely. "All right, I guess. How long before we go?"

"Soon. But don't worry: you won't be first."

"You?"

"Jamaal. They'll save me for later."

"How do you know?"

"I know." He didn't care to explain, but Launch Control vindicated his judgment.

"Fighter *Tarzan*. Launch in ten. . . nine. . . eight. . ."

The first fighter out would have an easy shot at the enemy formation while it was still clustered fairly close together. If he was fast, he could launch before they knew he was there, but there'd be countermissiles awaiting his second torpedo and beams for him. Over in a moment. They'd launch Smith and *Gilgamesh* second, when the targets were harder but, because of the closing of the other warships, there was a chance for an experienced pilot to last long enough to use beams from close range. By the time Ameena was launched, the enemy ships would be so busy with bigger worries they might not have time for her. With luck, she might make it back.

If anyone did.

"Three. . . two. . . one. . . launch!"

A miniature thunderclap sounded as the fighter's drive lifted it high enough into space to be caught by the planet's enormous tachyon field and hurled in an instant across

the void. On the battle screen, a new blip appeared just behind the enemy crescent; a moment later, it gave birth to a tiny pip moving away from it. . . seeking a target. . . finding one. A battleship's blip shuddered.

"Good shooting, Jamaal," Smith murmured.

The second torpedo, launched at the same angle, vanished in the blaze of a missile warhead. As a pair of beams struck it from close range, the *Tarzan* flared and disappeared.

Ameena's eyes widened, and her nostrils flared. "He -- " she said, but that was all.

"I'm next," he said, checking his readouts for the fifth time and shifting his leg for at least the tenth. Then: "Remember when we were in training together, and working out at the same dojo?"

Cautiously, curiously: "Yeah?"

The battle screen was ablaze with explosions. Shields glowed as the ships came into effective beaming range. The cruiser that had been hit earlier was struck by another missile; it flashed, flickered, flared, and died.

He continued, one eye on her face and one eye on the developing pattern of battle, "And one day I accidentally nailed you in the side of the face with one of those fancy double kicks we were learning. I said I was sorry -- and I was, sorrier than you know -- but you never forgot it."

"But that was years ago," she said wonderingly. "You remember? And why bring it up now, here, in the middle of all this?"

"Fighter *Gilgamesh*," said the voice. "Launch in ten. . . nine. . ."

"I was afraid I might not have the chance to say it later," he said, checking the readouts, and her face, for the last time.

"Six. . . five. . ."

"Ameena. . . don't hold it against me anymore."

"Two. . . one. . . launch!"

Then he was gone, leaving behind a crashing in her ears and an unfamiliar feeling inside her.

Side One: Missiles: 15,5,15 Torpedos: 20,20

1. *Armageddon* - BB: BQ-5; X,Y-1,10 (10,18)
2. *Ragnarok* - BB: BQ-5; X,Y-1,10 (10,18)
3. *Gaugamela* - C(W): BQ-5; X,Y-1,10 (10,18)
4. *Thermopylae* - C(W): BQ-5; X,Y-1,10 (10,18)
5. *Starfire* - CA(B): BQ-5; X,Y-1,10 (10,18)
6. *Hellfire* - CA(B): BQ-5; X,Y-1,10 (10,18)
7. *Sunblaze* - CA(B): BQ-5; X,Y-1,10 (10,18)

Side Two: Missiles: 15,5,15 Torpedos: 20,20

1. "Autarchia" - planet: E-60,0; D-15,0; B-30,0; S-30,0; A-5; L-100,90; M-52,0; T-10,0; BQ-2; X,Y-30,10 (40,18)
2. *Avalon* - B: BQ-5; X,Y-30,10 (40,18)
3. *Camelot* - B: BQ-5; X,Y-30,10 (40,18)
4. *Banth* - C: BQ-5; X,Y-30,10 (40,18)
5. *Wyvern* - C: BQ-5; X,Y-30,10 (40,18)
6. *Griffin* - C: BQ-5; X,Y-30,10 (40,18)

7. *Tarzan* - FF: BQ-5; X,Y-30,10 (40,18)
8. *Gilgamesh* - FF: BQ-5; X,Y-30,10 (40,18)
9. *Enkidu* - FF: BQ-5; X,Y-30,10 (40,18)

Special Rules: Tractor Beams are allowed (and required).

Victory Conditions: Side Two scores 1 point for each point of energy remaining on Autarchia at the end of the game; Side One scores 1 point for each energy point (starting from a base of 60) removed from the planet. (This is the same as Scenario Ten. And note, again, that the planet *cannot* be blown up even when its energy is reduced below 0.) Additionally, for destroying each other's ships, Side One gets 15 points for each pocket battleship and 10 points for each cruiser (but none for the fighters); Side Two gets 20 points per battleship and 15 points per cruiser (of either type). The game ends when either (a) the ships of Side One have left the screen or been destroyed or (b) the planet is devoid of energy and the ships of Side Two have left the screen or been destroyed.

Playing Time: 6 hours

Notes: As was the case with Scenario Ten, the range of torpedos has been reduced to force Side One close enough to allow the stationary planet a reasonable counterattack. The *power* of missiles and torpedos was increased to speed up the game. The fighters can be very effective weapons for Side Two (which is otherwise outgunned) if used as described in the scenario introduction, but theirs is largely a suicide mission. (Hence the absence of points for their destruction.)

As usual, adjusting the scenario balance is not difficult: for Side Two, increase the range of their torpedos or raise the planet's Beam Quality from 2 to 5 (or more); conversely, to strengthen Side One, add another heavy beam cruiser.

Table of Standard Ship Types

When an entry in a scenario listing consists of only a name, ship type, Beam Quality (BQ), and location (X,Y) -- as in Scenario Twelve above -- the rest of the data needed for the computer's BUILDER program -- Energy (E), Drive (D), Beam (B), Shield (S), Armor (A), Launch Tubes (L), Missiles (M), and Torpedos (T) -- can be found in Table 1. Just look up the particular ship type and enter the appropriate data. The Mass and Value Points of these ships have been included for reference, but they do not get entered into the computer (it computes them automatically). Remember that, unless otherwise stated in the scenario listings, all of these values are entered with a 0 (zero) for HITS, since most scenarios assume no prior damage.

Table 1. Standard Ship Types

	ENERGY	DRIVE	BEAM	SHIELD	ARMOR	LAUNCH TUBES	MSSL	TORPS	MASS	VALUE POINTS
BB Battleship	38	12	20	11	3	3	16	6	3	95
B Pocket Battleship	27	10	15	10	3	2	16	4	2.33	74
BC Battlecruiser	34	13	20	10	1	2	16	4	2.5	86
CA Heavy Cruiser	23	10	12	8	2	3	16	6	2	65
C Cruiser	20	9	10	6	2	3	16	6	1.75	57
CL Light Cruiser	20	9	10	5	1	2	12	4	1.53	52
CA(W) Heavy War Cruiser	18	10	0	11	3	5	40	10	2	62
C(W) War Cruiser	16	9	0	10	2	5	40	10	1.75	57
CL(W) Light War Cruiser	14	9	0	8	2	4	32	8	1.5	49
CA(B) Heavy Beam Cruiser	28	10	15	10	2	0	0	0	2	65
DL Heavy Destroyer	15	7	7	4	2	2	12	2	1.25	41
DD Destroyer	12	6	5	4	1	2	12	2	.97	34
DE Frigate	10	5	5	2	1	2	8	2	.81	28
DE(T) Torpedo Frigate	10	5	5	2	1	2	0	6	.81	28
DE(M) Missile Frigate	10	5	5	2	1	2	12	0	.81	28
CV Corvette	7	4	5	0	2	2	8	0	.67	21
GB Gunboat	6	3	5	0	2	0	0	0	.47	15
TB Torpedo Boat	3	3	0	0	2	2	4	6	.42	13
MB Missile Boat	3	3	0	0	2	2	16	0	.42	13
FF Fighter	3	2	3	0	0	1	0	2	.28	10
F Interceptor	2	1	2	0	0	0	0	0	.14	5
TT Transport	2	2	0	0	0	20*	0	0	.67	6

*Note: Since the cargo capacity (represented here as Launch Tubes) of a transport does not reflect its ability to sustain damage, much of its bulk is "dead mass," and its Launch Tube entry is normally 20,18 (i.e., 18 hits).

Notes on Tactics

Although winning strategies will vary from scenario to scenario, it is possible to make some general comments regarding tactics. The central decision in STARFLEET ORION is really how to allocate your energy resources. You normally, for instance, cannot take your full move and use all of your offensive weapons systems, especially your beam. You may find yourself alternating fire and movement. Launching missiles and torpedos is often an energy-economical alternative to a beam attack.

Although you will not always be able to keep up a full shield, (and you cannot *win* by just shielding yourself), you must generally put some energy into the shield to soak up minor damage. Think about how likely your opponent is to hit you and how much damage he will do, then set your shield accordingly. Remember that once a ship starts to take damage, its demise comes quickly.

Much of the game hangs on outguessing what your opponent is going to do; at the same time you must capitalize on your strengths and minimize your weaknesses. Your three weapons systems must each be employed somewhat differently to have the best effect.

Destructor Beam

The beam is generally the main armament of your starcraft. What is more, it never runs out of ammunition. The problem with the beam is that its effectiveness falls off with range. The formula is:

$$\text{Damage} = \text{nominal strength} \times 10/(\text{range}+5)$$

Worse yet, without a really high beam quality, your chances of hitting anything decline sharply as the distance increases. Chances of hitting a target are:

$$\text{hit probability} = 10.9 \times \text{mass}^{2/3} / (\text{range} \times 3.2 \times (.9)^{\text{beam quality}+4})$$

Mass of the ship is as displayed during order entry. Figure 1 shows this function for three different targets and a beam quality of 5.

You have to hit your target and do enough damage to get past its shield and armor. The way to do that is to get close with more ships than your opponent has in the area - "*get thar' fust with the most.*"

Naturally, close means different things for different ships. It's a much shorter range for destroyers than it is for battleships. Because of armor, a bigger beam outclasses a smaller one by more than you might think. For instance, at a range of 10, a battleship's beam of 20 does 11 times as much damage against a target with an armor thickness of 2 as does a destroyer's beam of 5. At longer ranges, the ratio gets more lopsided in the battleship's favor. The destroyer *must* get in close.

Notice that one way to get a little target close enough for you to hit it, is to pull it in with your tractor beam. At zero range you can hit anything, all the time, no matter what your beam quality is.

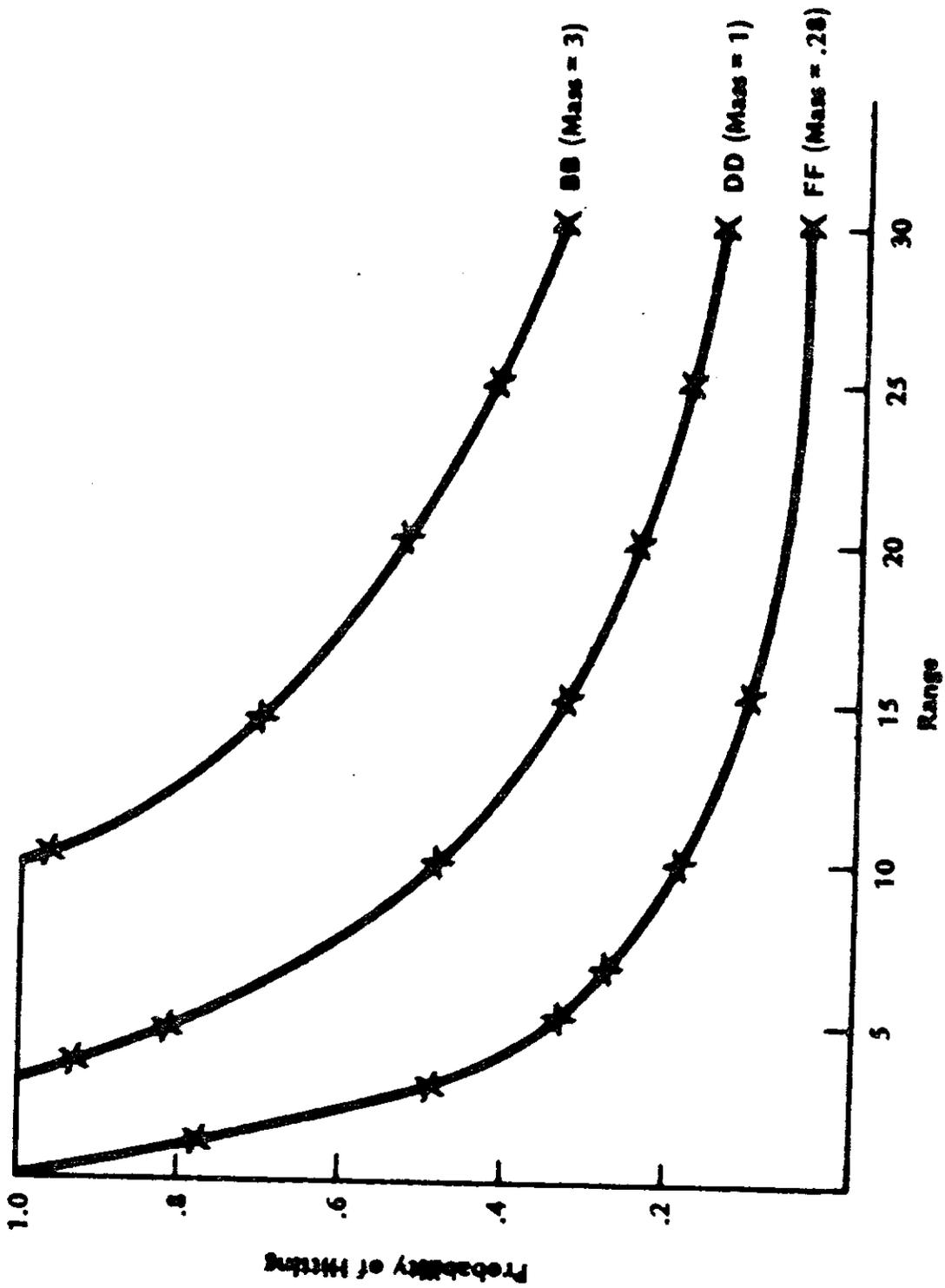


Figure 1. Probability of Hitting Various Targets

Missiles

Missiles are most effective against slow moving targets (like planets) that are clustered together. A planet or slow-moving ship's only defense against missiles is to tractor/pressor the firing ships so as to confuse the true distance from firer to target.

Although you are perhaps as likely to do damage firing a few missiles each turn, the psychological effect of a massive barrage on a single turn can be considerable. Missile tactics too, depend on the ships involved. It's enough to get a hit, or even a near miss, on a small ship. Missile attacks on heavy cruisers and battleships, however, should coincide with beam concentrations on that target in order to overwhelm the shield.

Just the threat of missiles will be enough to interfere with your opponent's movement and will make him expend extra energy maneuvering. Put your missiles where you think your opponent *wants* to go. Even if you fail to hit him, you'll make his life miserable because he can't get where he is going. He will spend time and energy dodging. This is particularly true in scenarios like *Blockade Runner* or *Red Sun*, where there is a definite positional objective.

Finally, missiles are invaluable defensively to parry enemy torpedos. As such, they are most effective in close to the target you want to screen (right next to it if its armor is thick enough). The closer the missiles are to you, the more directions you can cover with one missile. Notice though that a torpedo coming in along one line, as shown in figure 2, will "look through" the missiles and hit the starship if the missiles are right next to the screened ship.

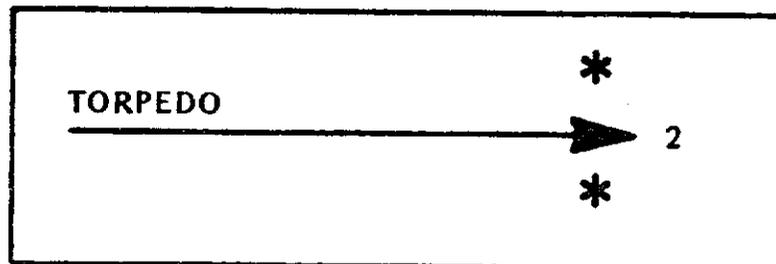


Figure 2. Torpedo "Look Through" Penetration of Missile Defenses

Torpedos

In most scenarios, torpedos are the real long-range weapon. They are also good at seeking out small targets you would never hit with your beam. However, their usefulness depends a lot on the position.

You will notice that the ships in multi-ship scenarios will tend to form up into lines. One reason for this is torpedo defense. If you can encircle someone, or even just get a fighter behind him, he will find it next to impossible to guard everywhere against your torpedo attacks. This is particularly true if the new presence is a surprise. Tactical surprise of this sort can most often be achieved through judicious use of pressor beams.

Since a torpedo can only hit a single target, you can hide from it. If you are in the same spot as a planet or another ship, the torpedo can hit only one of you. It will always hit the "top" ship, i.e., the higher numbered ship or the planet.

As in the case of missiles, when you are attacking big ships, take advantage of torpedo hits by concentrating beams on your target(s).

Fleet Operations

In STARFLEET ORION as ever, the principles of war form the basis of sound tactics. These are particularly important in multi-ship operations. Fleets must execute coordinated, cooperative maneuvers to be most effective. In such maneuvers it is useful to keep the following in mind:

Exterior Lines. The fleet in the middle, because of its high density, presents a lucrative target for missile attack, and will be vulnerable to torpedos from all directions at once.

Maintenance of the Offensive. The *only* defense is a good offense. You must attack to destroy the enemy's weapons before he can use them on you. Passive defenses show little success. However, it is sometimes effective to let the enemy move to you since this occupies part of his energy, rendering his weapons less effective and his ships more vulnerable.

Economy of Force. Your resources are strictly limited. You have a fixed number of missiles and torpedos, and, on any given turn, only a limited amount of energy to expend. You must concentrate your attacks, but you should select the minimum force necessary to do the task.

Creating Your Own Scenarios

STARFLEET ORION was designed to be open-ended. Sooner or later you'll probably want to try making up your own scenarios using our "standard" ships or starcraft of different proportions and capabilities. Several of the ship types in the table above (e.g., heavy destroyers) are not used in any of the twelve scenarios; others appear only in damaged or modified form. Like the scenarios themselves, they are intended in part to guide and in part to inspire -- to suggest some of the possibilities of STARFLEET ORION and to give some sense of the scale around which the game was planned. It's easy enough, for instance, to construct immense dreadnoughts of planetary mass, but anything that size will *always* get hit by enemy beams -- which takes some of the chance and excitement out of the game. You can't have more than nine ships on a side, either, but any number of these "ships" can be planets, moons, or asteroids, although the special display and other "built-in" qualities will apply only to something entered as "Ship # 1" of Side Two and designated a planet.

If you're going to design your own warships, you should know how to determine their mass. In STARFLEET ORION, each point given to Energy, Drive, Beam, Shield, and Launch Tube capacity counts as a mass point. *Four* missiles or *two* torpedos also count as one mass point. Calculating the mass cost of armor is more involved, since it is proportional to the $2/3$ power of the mass without the armor and is, consequently, figured as something of a "surcharge." One inch of armor on a ship of approximately destroyer size costs 3 mass points. Dividing the resultant total of mass points by 36 yields the relative MASS on which all movement costs are based.

Perhaps the chief concern in creating a scenario is balance. (Even if you wish an unbalanced set-up to compensate for differences in skills or experience, you want the handicap to be correct.) The most obvious way to make an even contest is to use the same ships on both sides, but this tends to be far less interesting than using warships of differing sizes and capabilities. You can use masses or value points (an arbitrary scale based largely on ship masses) to roughly equalize forces, but this is not as accurate a guide when ships of greatly varying sizes are involved. (Generally, except for very small ships, a single warship is more than a match for two vessels half its size.) In the notes, a number of ways have been suggested to adjust play balance; varying the Beam Quality or the size and range of missiles and/or torpedos allows considerable adjustment. It should be pointed out here that altering the Beam Quality *upwards* (from a normal base value of 5) is not as dramatic an adjustment as *lowering* it. Essentially, improving the Beam Quality allows a ship to hit from farther away, but at long range the power of its beam is so small that this is not a significant advantage unless the beam is *very* powerful.

It's fairly obvious that a scenario with small, specialized ships can be played fairly rapidly, because the number of decisions (and the time spent making them) is small, and the little craft are easily destroyed. Conversely, more and larger ships take more time. The farther apart the opposing forces begin, the longer it will take to get the game going. Finally, Beam Quality and power and range of missiles and torpedos also significantly affect the length of a scenario, since the more damage that is being done per round, the fewer turns it will take to destroy a ship and the shorter the game will be. You may, of course, adjust these factors to suit your taste, but two rules of thumb are suggested: torpedos should

always have an edge in power and range over missiles, and the "near-miss" factor for missiles should normally be at least one point larger than the thickest armor present on an enemy ship.

Other than these few considerations (and all the suggestions embodied in our twelve scenarios), you're on your own. Have fun!

Automated Simulations
P.O. Box 4232
Mountain View, Ca. 94040

