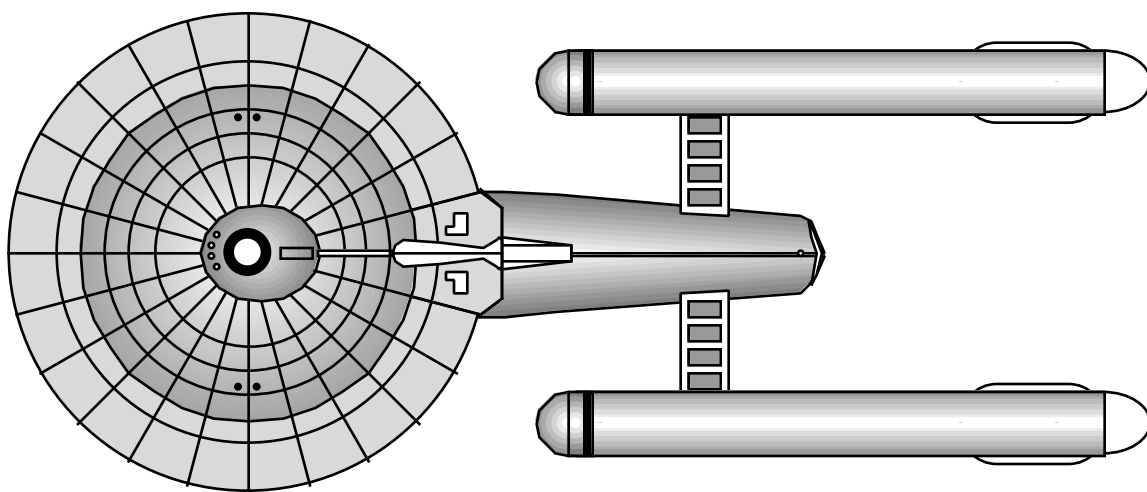# STAR FLEET BATTLES

CADET TRAINING HANDBOOK

Part 1 — Rules & Charts

WELCOME, FUTURE STARSHIP COMMANDER!

The product you have in your hands is more than mere words on paper. It is a device that will place you in the command chair of the Federation Starship *Constellation* and transport you across the galaxy. Visualize now the challenge that awaits you: locked in warp-speed combat with a deadly enemy, perhaps a Klingon battlecruiser or the devastating Planet Killer. But you must learn much before you can face such challenges.

This product is a complete game in itself. You can play the battles within it with the rules it includes, and you will probably find this quite enjoyable. This product includes more than enough material for several dozen hours of playing.

However, Cadet Training Handbook is also the gateway to a vast universe of games with hundreds of ships and battles and extensive rules to cover challenges and opportunities you cannot yet imagine. However, whether this game is the only one you ever play, or whether it becomes the first of many such games, one thing is true:

YOU *WILL* COMMAND A STARSHIP!

Within a few minutes from now (an hour at the most), you will be in the command chair, maneuvering a starship and firing its weapons. Command of such a powerful vessel is not granted lightly. It is the most complex and important job in the galaxy, and it must be learned, then earned. Starship commanders are not born, they are trained, and the training program begins *now*.

WHERE DO I FIT IN?

You are probably in one of the following groups:

1. An experienced player of *Star Fleet Battles* (SFB). In your case, Cadet Training Handbook can be used to train your friends as new players so that they can compete with you. This game will make an excellent gift for anyone you want to introduce to SFB.

2. An experienced game player, but one who has never played *Star Fleet Battles.* You will find Cadet Training Handbook to be an excellent sampler of what the SFB game series has in store for you. You can skim over the Glossary of Gaming Terms and proceed directly to page 3.

3. Someone who once tried to learn *Star Fleet Battles* but could not grasp the more complicated features of the game. Cadet Training Handbook will put you on the right path; thanks for trying again to learn the game. We suggest, however, that you put your SFB Basic Set game back in the box and ignore it until you finish all of the scenarios from Cadet Training Handbook.

4. A science-fiction fan unfamiliar with simulation games. We have a special section for you (see "HAVE YOU PLAYED..." in the next column). We think you will find that commanding a starship is considerably more fun than reading about one.

Regardless of your group, after playing Cadet Training Handbook you'll be ready to meet experienced SFB players on nearly equal terms.

WELCOME, LADIES

There is no reason whatsoever why women cannot command starships. (Don't let anyone tell you otherwise!) While women make up only a few percent of the people playing games of this type, they can hold their own against any mere male (and probably beat him). Your only limitations are how well you know the rules and your skill at applying them.

HAVE YOU PLAYED SIMULATION GAMES BEFORE?

Games such as Poker (or most card games) are purely abstract. The basic principles are based on probability and mathematics that have no particular relation to the real world.

Then there are the "pure skill" games such as darts or horseshoes, and there are competitive skill games (such as baseball) where you must not only out-think your opponent but also out-play him. None of these games have any particular relationship to anything outside of themselves.

Some games are based loosely on real events. But even such classic games as Chess, Monopoly, or Stratego are so abstract that their relationship to reality is largely cosmetic.

Finally, there are the "simulation" games, which are intended to reproduce, to various levels of accuracy, events in the real world, or in a realistically defined universe. Probably, no Earth-descended humans have commanded starships before, but we can (through engineering, science, and physics) define what such a vessel could do. This is used as the basis of this game. Everything in *Star Fleet Battles* is based on what a real starship (as we are able to define it) could actually do. If such a ship were to move a distance of 500,000 miles and, during the time that this movement took, could fire its weapons three times, then the game rules will reflect this.

If you have played "simulation" games (sometimes called "wargames" or the commercial derivative "adventure games") before, you are probably familiar with terms such as "hex," "counter," "combat results table," and so on. If this is the case, skim the general section on page 2 and start with Star Fleet Terms on page 3. If you are not familiar with these terms, we have prepared a brief introduction for you on the next page.

GLOSSARY OF BASIC GAMING TERMS

CHARTS: This term is often used interchangeably with "tables." Either term indicates a set of information placed in a grid for easier access. See Cross-Index below.

CAPTAIN'S EDITION: The complete SFB game system, including several boxed products and other modules; a term often used to mean only the Captain's Basic Set.

COUNTER: This is the name of each 1/2-inch square playing piece. Counters include "units" (starships, monsters, shuttlecraft, drones, and plasma torpedoes) and "markers" (turn, step, impulse, planet, cloak). Counters are provided in graphic format. Store your counters in a ziplock bag.

CROSS-INDEX: The act of obtaining information from a chart or table. Each chart has a series of names, titles, or numbers along the top and the left edge. To cross-index a chart, you determine which item on the top applies, and then move straight down that column until you reach the row determined by the appropriate item on the left. Look at the chart below:

	Ants	Cats	Birds	Fish
Tails	no	yes	yes	yes
Feathers	no	no	yes	no
Legs/Feet	6	4	2	0

To determine now many feet cats have, first find "cats" in the top row, then look down that column until you reach the row dealing with "feet" (you just cross-indexed), and there you find the answer (of course, four).

FORMS: The only form associated with this game is the Energy Allocation Form, which is used (after the first scenarios) to determine how much energy your ship has and how you are using it. Two versions of this form are provided, one for scenarios 4–6 and the other for scenarios 7–12. Do not mark on these, but use them to make photocopies. When you play the game, write on the photocopies, not the originals. Some players prefer to enclose the forms in plastic page protectors and use grease pencils to record their game, erasing and reusing it each time.

HEX: This is short for HEXAGON. Look briefly at the playing maps printed in the centerfold. You will note that a playing grid is printed on the maps, dividing them into several hundred hexagonal areas, each of which is called a hex. These are much like the squares on a chess/checkerboard. The basic purpose is to define exactly where a particular spaceship is at any given moment. (Carefully remove the maps from the book.)

On each map, each hex has a number (assigned in a grid pattern) identifying it as different from every other hex. This allows the instructions for each battle to say where each ship starts. Ships are placed inside the hexes; see page 4 (C1.1).

Note that the maps are blank (except for the hexes). They can represent any area of space. (For that matter, they could represent ocean for a naval game or sky for an airplane game.) If there is a planet in a particular scenario, we'll add it to a map by using a counter to show where it is. Each hex represents an area 10,000 kilometers or a bit more than 6,000 miles across.

SCENARIO: Literally a "scene" (as in a play) or a plan, in game usage this refers to a particular battle or tactical challenge. Scenarios can be "historical" (the exact units that were actually there) or "generic" (representing a type of battle rather than any specific incident, often with a choice of units). There are also "variations" or "variants" in which different units are put in the given situation (for example, what if British troops had invaded Grenada instead of the US?) or in which the situation is changed (what if the 700 Cuban construction workers on Grenada had been combat troops, or if they had been Russian Marines?).

These are often called "what if?" scenarios. The point is that with a paragraph of additional info you can use the same playing pieces and rules to play another battle. The 12 scenarios included in this Handbook can produce several hundred different battles simply by changing what ships are included.

SPEED: A speed of one hex per turn equals the speed of light. A speed of eight hexes per turn equals Warp 2 (8 times the speed of light). A speed of 27 hexes per turn equals Warp 3 (27 times the speed of light). Starships do not fight at faster speeds due to the high power requirements.

TABLE: See Chart.

TURN: Specifically game turn (as opposed to change in direction). Each scenario is played as a series of game turns. Some scenarios have a pre-set number of game turns. Other scenarios have no limit, and the battle can continue until it is resolved. Each game turn represents a few minutes of subjective time, but will take a bit longer in real time to play (since you don't have a crew of 430 people to help you). Each turn is divided into impulses, and each impulse is divided into steps, much as days (scenarios) are divided into hours (turns) which are made up of minutes (impulses) that are divided into seconds (steps).

The important point here is that there is no "my turn, then your turn" in *Star Fleet Battles.* Both players move and fire simultaneously, going through the steps, impulses, and turns at the same time.

A WORD ABOUT DICE AND PROBABILITY

A pair of dice is necessary and required to play this game. Due to the packaging, it was impossible to include dice. We assume that you have a pair you can borrow from some other game. If not, they are available for a nominal charge from your hobby or game store. You can make do without dice by taking a pack of playing cards, setting aside everything except the 1 (Ace), 2, 3, 4, 5, and 6 of each suit, and then shuffling the pack of 24 remaining cards. To be strictly accurate, you should reshuffle after turning up each card, but in practice you can turn up about three or four cards without affecting the probabilities too much.

Dice are used in simulation games to generate random numbers. They have nothing to do with moving the playing pieces. (How far a starship moves in a given turn is based on how powerful its engines are and on how much of that power is being used for movement.) Also, the dice (as used in this game) have nothing to do with gambling but only with probability. In most cases, only one die is required for any given function.

According to "Games Theory," simulation games are based on an analysis of actual (or projected) events. In theory, we have analyzed records of several thousand times that phasers were fired and have resolved this analysis (of how much damage each shot did) into probability groups. Each group has been assigned one or more numbers. When the number for that group is produced (by rolling a die), then the event associated with that number is assumed to have happened.

For example, let's play an imaginary game about the weather. You have consulted the records for February over the last 20 years and determined that (during February) 17% of the time it was snowing, 33% it was raining, and 50% of the time it was sunny. With a 6-sided die, there is a 16-2/3 chance of each number appearing. We will assign the "1" to snow, the "2" and "3" to rain, and the other three numbers to sunny weather. So, in our game, we can determine what the weather was on 14 February by rolling a die and seeing which number came up.

Whenever we need to know something that we cannot control (within the imaginary game universe), or which has not already happened, we will use a "table" and a die roll to determine which of several possible events has actually taken place.

GLOSSARY OF STAR FLEET TERMS

DIRECT-FIRE WEAPONS: Weapons which strike the target when they are fired, such as phasers, disruptors, and photon torpedoes. In modern terms, a police officer's pistol is a direct-fire weapon while his attack dog is a seeking weapon.

IMPULSE: This is a fraction of a turn. All game turns in *Star Fleet Battles* are divided into a number of impulses. The turns in the first three scenarios are divided into 8 impulses; the turns in scenarios four–six are divided into 16 impulses; and in the final scenarios, the turns are divided into 32 impulses.

The term impulse also refers to the ship's sublight ion (impulse) engines. It will always be possible to tell, from the context in which the word is used, which is meant.

POINTS: A method of counting. There are energy points, movement points, and damage points. The warp engines of most full-size starships produce 30 units of energy, which are termed "energy points." Some of these may be spent to purchase "movement points," each of which will move the ship one hex. Weapons (most of which use "energy points") produce "damage points," each of which cause one box on the SSD (Ship Systems Display) to be marked as destroyed.

PROPORTIONAL MOVEMENT: In *SFB,* all units move constantly during the turn. The proportional movement system directs some units to move during each impulse of a turn; faster units move more often, that is, proportionately faster.

RACE: This refers to a political entity or "power" in the galaxy. The terms "Empire," "country," and "side" are synonymous. Races include the Federation, Klingon Empire, Romulan Star Empire, Orion Pirates, Gorn Confederation, Kzinti Hegemony, Hydran Kingdom, Lyran Star Empire, and Interstellar Concordium. Some of these are, indeed, distinct biological races (the Romulans and Gorns, for example) while others are empires (the Klingons and Romulans, for example).

Note that the counters are color coded, with Federation ships shown as black on blue counters, Orions white on blue, Klingons as white on black, Romulans as black on red, and Gorns as red on white. Other races colors are defined in their rules.

RULE NUMBERS: Each rule in Cadet Training Handbook and in the Captain's Edition is assigned a rule number. For example, rule (C1.2) deals with which direction your ship is facing at any given time. These rule numbers are assigned in a specific pattern. The pattern is read from left to right, with each succeeding number defining more closely the specific point. The rule number consists of three elements, the letter at the first, the number or numbers to the left of the decimal (1 in our example above), and the number or numbers to the right of the decimal.

The letter defines the specific topic. A and B cover general rules, C covers movement, D covers combat, E covers direct-fire weapons, F covers seeking weapons (FD drones, FP plasma torpedoes), G covers general systems, H covers power, J covers shuttlecraft, P covers planets, R covers ships, S covers scenarios. The designation SC means "Scenario, Cadet."

The numbers define specific items. For example, (E2.0) deals with phasers, (E2.1) says that there are several kinds of phasers, and (E2.13) deals with the kind of phasers that are installed on shuttlecraft.

SEEKING WEAPONS: These weapons are represented by counters. They are launched by a ship and follow their target, eventually hitting it and causing damage (or running out of fuel or being destroyed by defensive weapons). There are two types of seeking weapons: drones (missiles) and plasma torpedoes.

SHIP: A ship is a large manned space vessel. The term is not applied to shuttlecraft or seeking weapons.

SSD: Ship Systems Display, a representation of your starship. Each box on the SSD represents a particular piece of equipment which can be used. If enemy weapons destroy the system, an " X " (or checkmark, or slash, or whatever you prefer) is marked in the box indicating that the system can no longer be used. Note that each box on the SSD is separate; a single warp engine hit destroys one box from the warp engine, not the entire engine. Note that many obvious abbreviations are used, and that not all systems of a given type are located together.

The SSD sheets, while not tabular forms, are also used to record game information. Do not mark on the original SSDs; use them to make photocopies. When you play the game, write on the photocopies, not the original. Some players prefer to enclose the forms in plastic page protectors and use grease pencils.

UNIT: A man-made object of some type represented by a counter. This includes ships, seeking weapons, and shuttlecraft (the small spacecraft used to move between larger spacecraft or down to the surface of a planet).

A WORD ABOUT THE BACKGROUND

As anyone can tell by a brief examination, the background for this game relates to classic Star Trek. Amarillo Design Bureau (which designed these games) is licensed to use this background by Franz Joseph Designs, the company which produced the STAR TREK * STAR FLEET TECHNICAL HANDBOOK. We have only the greatest of respect and gratitude for the hard work of the creator (Gene Roddenberry) and those who have added to his work in both the literary, theatrical, and gaming fields.

TRAINING PROGRAM CONCEPT

Welcome to STAR FLEET ACADEMY. Here you will learn the skills you need to become a successful starship captain. The training program is divided into two sections. The first six scenarios comprise the "Cadet Game" (as in West Point Cadet, not Space Cadet). The next four scenarios comprise an introduction into the "Standard Game" using an abridged version of the Standard Rules from *Star Fleet Battles.* Finally there is a Graduate Training section which introduces the rules for three other races.

The rules for Cadet Training Handbook are presented in a system known as "programmed instruction." You will learn the rules in a series of "scenarios," each providing a different challenge. Before each scenario begins, you will be provided with the rules necessary to play that scenario. You will read these rules, then use them to play the scenario, thereby learning their applications. Learning how to fire a phaser is easy; learning when and at what to fire a phaser is the skill you must master.

Each scenario builds on the rules from the previous scenarios. In each case, read the rules, then play the scenario (usually several times), before going on to the next scenario.

The most basic principles of starship combat are firepower and maneuver (often referred to as the ability to "shoot and move"). In fact, these are the *only* principles of starship combat. Every rule in the game boils down to another way to shoot or move, or something to improve your own use (or restrict the enemy's use) of those two principles.

You are, of course, anxious to get started with your first scenario. There is, however, a lot involved in moving a starship and firing its weapons. We'll begin with the most basic concepts. It is suggested that you read these rules carefully both before and after playing scenario #1.

Before you start, however, let us introduce you to your most important officer, the Chief Engineer. For the first three scenarios, he will make sure that there is enough energy to move the ship and fire your weapons. After you reach the fourth scenario, you have to give the orders for this yourself.

Ready? Then go to the next page and take command!

RULES FOR SCENARIO #1

The objective of this scenario is to learn how to maneuver (turn) your ship, the mechanics of firing its weapons, and the tactics of knowing where to move and when to shoot.

(B2.0) SEQUENCE OF PLAY

The game is played in a succession of turns. As noted, each turn consists of a number of impulses, which are repeated for each turn. Each impulse consists of a number of steps, which are repeated for each impulse.

The steps are defined on the Basic Impulse Procedure Chart. (Find this chart now and read it.) These steps must be performed in their exact order. You cannot go back to a previous step, although that step will happen again in the next impulse.

To play a turn of the first scenario (the procedure for later scenarios is the same, possibly with different charts), find page 30 that has the Basic Impulse Procedure Chart, Turn Record Track, and 8-Impulse Movement Chart. Cut out the counter (marker) marked "TURN" and place it in the "1" box on the Turn Record Track, the counter marked "IMPULSE" and put it in the "1" box on the 8-Impulse Movement Chart, and the counter marked "STEP" and put it in the first box of the Impulse Procedure Chart. These positions indicate that you are in the MOVE SHIPS Step of the first impulse of the first turn.

Note particularly that all players will do each step at the same time. During the MOVE SHIPS Step, all players will move their ships (as called for in the rules). During the FIRE WEAPONS Step, all players who wish to do so (and are allowed to by the rules) may fire some or all of their weapons.

After moving all ships (there is only one "ship" in scenario #1), move the STEP counter down to the next box, showing Move Seeking Weapons, and perform that function. (That is, move each of the drone counters forward one hex.)

In the first scenario, the next two steps are skipped, so move the counter down to the Fire Direct-Fire Weapons Step, and (if any player wishes to fire weapons and is allowed to do so by the rules) make a note of which weapons are being fired at which targets.

Then move the STEP counter down to the next step (Resolve Direct-Fire Weapons), and resolve the effects of that weapons fire by the rules in section E below.

Finally, move the STEP counter to the final box. This signifies the end of the impulse. It's a good time to look at the situation and decide what you will do next.

To start the next impulse, move the STEP counter back to the first box and move the IMPULSE counter down to the "2" box. Each time the STEP counter reaches the end of the Impulse Procedure Chart, you move the IMPULSE counter down one box and return the STEP counter to the top box. Each time the IMPULSE counter reaches the bottom box, you move the TURN counter to the next box and return the IMPULSE counter to the "1" box.
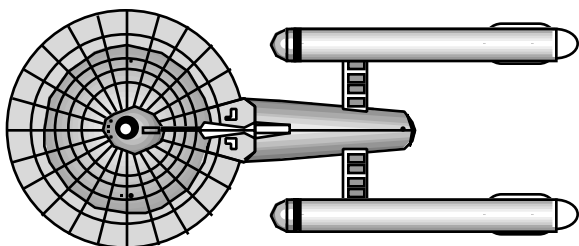
(C1.0) GENERAL MOVEMENT RULES

Starships move across the map by impulse power and warp engine power. The speed of most ships in the game varies from turn to turn, depending on the amount of power which is allocated on any given turn for movement. (During the first few scenarios, your efficient Chief Engineer will keep the ship moving at a constant speed so that you can concentrate on other things.) Remember that the die has nothing to do with movement. Each hex moved into during the course of a given turn equals one times the speed of light.

(C1.1) PROCEDURE

Ships move from hex to adjacent hex on the map. Every time that a ship moves, it will enter an adjacent hex. A moving ship (or other unit) cannot skip hexes. A ship moves no more than one hex per impulse and (after the first couple of scenarios) will probably not move during every impulse of the turn.

Each ship must always be within a single hex and must always be "faced" directly toward one of the six adjacent hexes.

CORRECT   INCORRECT

(C1.2) FACING

A ship may be faced in any one of six different directions. These directions are designated by the letters "A" through "F." Note hex 2603 in the top right corner of the sector B map. Arranged around this hex are these six letters. Ships moving in "direction A" move in the direction they would move in IF they were in hex 2603 and were facing toward hex 2602 (the hex with the "A" written in it.) Thus a ship in hex 0608 facing in direction A faces hex 0607, while a ship in hex 2210 facing in direction C faces hex 2311.

Note the six numbers around hex 0314. These are used in some advanced rules to provide for random movement (where a die roll determines direction).

(C1.3) ORDER OF MOVEMENT

The scenarios in Cadet Training Handbook use a movement system known as "free movement." Under this system, whenever the Impulse Movement Chart calls for a given ship to move, the owning player may move it in any direction he wishes, within the limits of the ship's turn mode (which tells you how often the ship can turn) and other rules.

If two or more units are to move in the same impulse, they are moved in this order: Monsters (Scenario #11), ships, shuttles, seeking weapons, tactical maneuvers (Scenario #10). In each category, slower units move before faster ones. If two units are to move at the same time, the owning players write down the intended movement (secretly), then reveal these written orders and move the units as stated.

(C1.4) PERFORMING MOVEMENT

Each ship will move one hex, and only one hex, during each impulse in which movement is called for by the Impulse Movement Chart. (In the first scenarios, the ship will move in every impulse.) The specific impulses are determined by the IMPULSE CHART. The actual movement and firing of weapons is done during the Impulse Procedure. During our first few scenarios, each turn is divided into 8 impulses. Later, we will use turns divided into 16 and (eventually) 32 impulses.

(C3.0) TURNING AND TURN MODES

Each ship in the game must maneuver within the limits of its turn mode. A ship's turn mode is the number of hexes it must move straight ahead before it is allowed to turn.

(C3.1) TURNING

A ship's turn mode regulates how often a 60° turn can be made (that is, how far it must move in a straight line before it can turn 60° to one side).

The actual act of turning the unit by 60° is done at the start of a given impulse in which the IMPULSE CHART calls for that unit to move (immediately before moving into the next hex) and NOT at the end of the impulse (after entering a given hex). Ships only turn on impulses when they are scheduled to move and turn before conducting the movement.
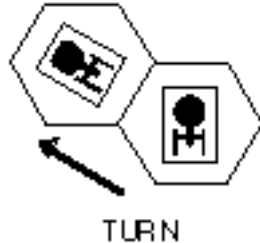
TURN

To reverse direction, the ship would make three consecutive right (or left) turns. If the ship's turn mode was "2," this would involve a half-circle some five hexes across.

POINT OF TURN MARKERS: The file includes "POINT OF TURN" markers, one for each race. These can be used as a play-aid to keep track of turn modes. Whenever a ship turns and enters a new hex, move its POINT OF TURN marker into the hex it just left (that is, the hex it turned in). This will make it obvious when the ship has fulfilled its turn mode and can turn again.

STACKING: Unlike some games, there are no "stacking limits" in *Star Fleet Battles.* Any number of units can be in the same hex. Weapons fired into a hex will damage only the unit they are fired at, not every unit in that hex. Weapons fired through a hex at a target in a more distant hex will not damage units in the intervening hex. This represents the enormous expanse of space which each hex represents.

(C3.2) DEFINITION OF TURN MODE

A turn mode is the number of hexes which the ship must move in a straight line (straight ahead) before it can turn 60° (to face an adjacent hex side) right or left. After each 60° turn, the ship must again move the stated number of hexes straight ahead before it can turn again. A ship is never required to turn and can continue moving straight ahead if the owner wishes. Remember, however, that every time the ship turns the count must be started over. Moving straight ahead for several hexes will not allow a ship to make several turns in rapid succession later.

Turn modes increase with speed; also, less-maneuverable ships have higher turn modes and cannot turn as rapidly.

(C3.3) ASSIGNMENT OF TURN MODES

Each ship is assigned a turn mode depending on the details of its construction. This is shown as a Turn Mode Chart on the SSD of each ship. determine the turn mode of each ship at its current speed, look under the column for that ship's turn mode rating for the speed bracket that includes the current speed. Then, look across on that line to find the turn mode (the number of hexes the ship must move in a straight line between each turn). For example, if the Federation Cadet cruiser is moving at a speed of 8, it has a turn mode of 2 because the second line of the turn mode chart says 7–16 = 2.

(C3.4) RESTRICTIONS OF TURN MODES

The hex entered on the impulse the turn was made counts as the first hex of straight line movement for turn mode purposes.

(C3.41) The turn mode count carries over from turn to turn. For example, a ship with a turn mode of 4 that moves (on the first turn) seven hexes in direction A and then one hex in direction B has already fulfilled one hex of its four-hex turn mode requirement. It must move three hexes in direction B (not four) on the second turn before making a turn to C or A (assuming it did not slow down and change to a lower turn mode).

(C3.42) Hexes moved in a straight line at the end of a previous turn may be counted toward fulfillment of a ship's turn mode on the current turn.

(C3.43) Unless otherwise specified, all ships have fulfilled their turn modes before the start of each scenario and can turn immediately when called on to move at their current speed.

HAVE YOU PILOTED A SHIP OUT OF STARDOCK?

Well, you might as well do this now. The ship must move to the correct starting position for the first scenario.

Get the counter for the *Constellation* and the playing map of sectors A and B. Spread the map out flat on a table. Place the counter representing the *Constellation* in hex 0517 facing in direction F. (Hex 0517 is next to the large "3" in the lower left corner of the map. The ship will be facing the "3.") You have one turn to get the ship into the starting position (hex 0111). During this turn the ship will move at a speed of 8, that is, it will move eight hexes. Your turn mode is 2, that is, you must move two hexes in the same direction before you can turn.

You could move directly to hex 0115 (direction F, through hexes 0416, 0316, and 0215), turning right (direction A) to enter hex 0114 (leaving the Point of Turn marker in 0115), then move forward three hexes to 0111. Alternatively, you could get a bit fancy and move 0416, 0316, turn right (A) to 0315 and 0314, turn left (F) to 0213 and 0113, the turn right (A) to 0112 and 0111. There are other possible ways to get there. It is important, however, to end in 0111 facing in direction A and with your turn mode satisfied (that is, having already moved two hexes in direction A) so that you can turn immediately upon beginning the scenario.

(D1.0) GENERAL COMBAT RULES

Combat takes place during the various impulses of each turn. Combat consists of firing weapons at the units (ships, shuttlecraft, seeking weapons) of the opposing player(s) with the intention of damaging or destroying those units.

A philosophical note: All military leaders are taught that combat is the *last* alternative (because it is expensive and dangerous). *Star Fleet Battles,* in general, depicts those cases in which there is no viable alternative to combat.

(D1.1) PURPOSE OF COMBAT

The actions of combat are a means to an end, not an end in themselves. Combat is used to gain or maintain control of territory, or to destroy or reduce enemy forces as a means to that end. Combat involves causing damage to enemy units to such an extent as to destroy them or force them to go elsewhere.

(D1.2) OPERATION OF COMBAT

Within the game, players will use weapons to cause damage to enemy ships. The impact of each weapon results in a number of "damage points" as determined by the rules on that weapon. These damage points are then allocated to cause damage to specific equipment on board the ship, thereby reducing its capabilities, and ultimately destroying or capturing it, or forcing it to disengage (i.e., flee the area).

(D1.3) WEAPONS TYPES

Weapons are divided into two types: "seeking" and "direct fire." Direct-fire weapons include, for example, phasers, disruptor bolts, and photon torpedoes. Seeking weapons include drones, plasma torpedoes, and, in some cases, shuttlecraft.

Direct-fire weapons are those which are aimed and fired at targets; their effects are resolved immediately. A seeking weapon is "launched" during a specific part of the turn and is represented by a counter that moves on the map and follows its target.

(D1.4) RANGE

To determine the range to the target, count the number of hexes from the hex occupied by the firing unit to the hex occupied by the target unit along the shortest possible route without skipping hexes. Count the hex occupied by the target, but not the hex occupied by the firing unit. If both are in the same hex, the range is zero. This is the "true range." The "effective range" (which may be different from the true range due to sensors, scanners, cloaking devices, and other effects that you will find in later scenarios) is the range used on the weapons tables. For the first few scenarios, true range is effective range.

(D2.0) FIRING ARCS

All ships with weapons have these designated as to which direction they can fire. This is done in terms of "firing arcs." The area around the ship is divided into six equal areas, each representing 60° or 1/6 of a circle. Each weapon is designated as to which of these arcs it can fire into. For example, a weapon on the left side of the ship could fire into some (not necessarily all) of the arcs to the left of the ship.

(D2.1) FIRING ARC DESIGNATIONS

Note the diagram with six arrows on this page. This diagram is used to designate firing arcs for all ships in the game. It is repeated on each SSD. The area around each ship is divided into six "firing arcs," each of which is designated by code letters:

LF - left forward, RF - right forward, R - right, L - left, RR - right rear, LR - left rear.

Note particularly that all firing arcs are relative to the ship, not to the map. (For example, some weapons might fire on the left side of the ship, but this is not related to the left side of the map unless, by coincidence, the ship faces in direction A.)

Each weapon on the SSD (except for drones, which can be fired in any direction) is marked with one or more of these designations. For example, the left rear phasers on the Klingon Cadet battlecruiser are marked: LR-L. This indicates that they can fire in the left and left rear firing arcs. Note that when several weapons are shown as a group of adjoining boxes (such as the two forward phasers on the Klingon ship), all of them can fire in all of the arcs shown.

Each firing arc is a 60° section of the map bounded by two straight rows of hexes.

For example, a ship in hex 0915 which is facing hex 1015 (direction C) would have a left forward (LF) firing arc bounded by the row of hexes from 0915 to 1417 and beyond (directly forward) and the row from 0915 to 1910 (and beyond). All hexes on these rows (which extend to infinity) are within the LF firing arc and can be fired at by any weapon capable of firing in the LF arc (examples: 1114, 1315, 1612, 2017, and 2817). Hexes outside of this arc (examples: 0701, 2604, 0301) cannot be fired at by a weapon with only the RF designation.

Note that each firing arc overlaps the adjacent arcs on each side by a single row of hexes. For example, all three phasers on the Federation Cadet cruiser can fire straight down the row of hexes extending directly ahead of the ship. Maneuvering to put a target into that hex row is known as "centerlining" the target.
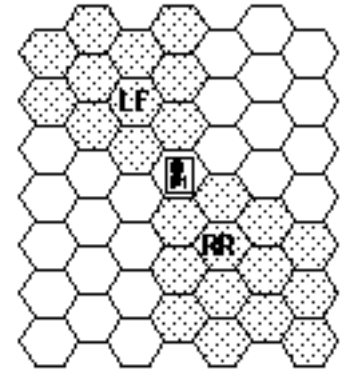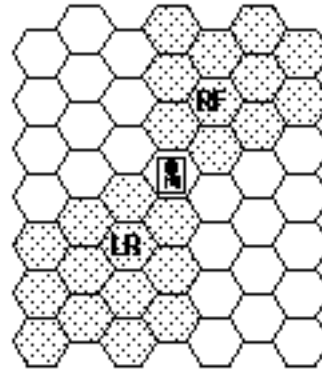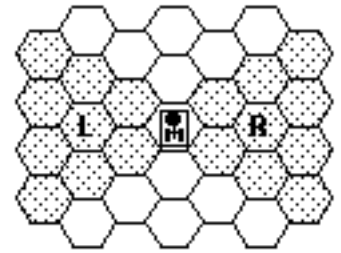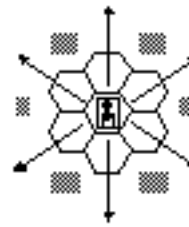
(D2.2) COMBINED FIRING ARCS

For simplicity, some firing arc designations are combined into a shorthand version. Combined designations include:

FA = LF + RF	FX = L + LF + RF + R
RA = LR + RR	RX = L + LR + RR + R
LS = LF + L + LR	RS = RF + R + RR

(E1.0) DIRECT-FIRE WEAPONS: GENERAL RULES

Direct-fire weapons are fired during the "Fire Direct-Fire Weapons" Step in the Impulse Procedure of any impulse. Their effects are determined and recorded in the Resolve Direct-Fire Weapons Step immediately after firing. Two ships firing at each other during the same impulse are presumed to fire simultaneously. The fire of both ships is calculated and the number of damage points determined before that damage is applied to either ship. Thus, it is possible for a weapon to be destroyed by enemy fire at the same time that it fires and hits the enemy ship.

(E1.1) PROCEDURE

A player simply indicates his ship and the target and says (for example): "I am firing my two forward phasers at your ship." The effect is resolved by a chart and die roll (explained below). A separate die is rolled for each weapon fired.

In the Direct-Fire Weapons Step, all players have the option to fire. Technically, each player must make his decision on which weapons (if any) to fire and at what targets without knowing if the other player(s) is(are) also firing. This can be accomplished by writing down the orders and exposing them simultaneously. While learning the game, or in "friendly" games, many players use an informal system of one player declaring his intentions and the other then saying whether or not he will also fire. This is known as "me too firing" and gives an advantage to the second player to speak, since he can make a more informed decision.

(E1.2) REQUIREMENTS

Direct-fire weapons require energy to fire. During the first three scenarios, your Chief Engineer will make sure that the weapons are always recharged when you need them. After that, you will have to tell him when you want the weapons charged.

Each direct-fire weapon may be fired only ONCE per turn, and then only if each has satisfied its requirements for energy

(see the specific rules for each weapons type). All direct-fire weapons have a definite field of fire (firing arc) which is shown on their SSD (as designations of which of the six arcs it can fire into) and cannot fire at targets outside of their field of fire.

(E1.3) EFFECTS

The effects of each direct-fire weapon are shown on the various weapons tables. The number of damage points scored by a given phaser on a given firing depends on the type of phaser, the range, and a die roll. Photon torpedoes and disruptor bolts either hit or miss their targets. The damage caused by each hit varies with range in the case of disruptor bolts, but is constant at all ranges in the case of photon torpedoes.

Note that you can fire through a hex containing a unit which is not your target without causing any damage to that intervening unit (it is a tiny point in a very large area). Also note that one weapon cannot damage two targets with the same shot.

(E1.4) FINALITY OF EFFECT

There is no means of diverting a direct-fire weapon, although shields can absorb some of their effect. While clever maneuvers will restrict your opponent's ability to get in a decisive shot, and your shields will reduce the damage he causes, there is nothing that can be done directly against the fire of the weapon. Seeking weapons, on the other hand, can be damaged and possibly destroyed before they reach the target.

(E1.5) FIRING RATES

Each weapon can be fired once (only once) during each turn; exceptions phaser-Gs and plasmatic pulsar devices. When firing a weapon twice on two consecutive turns (once on each turn), the weapon cannot be fired twice within a period of one-fourth of a turn. For example, if the forward phaser was fired during the last impulse of one turn, it could not be fired again before the second impulse of the next turn (in a turn with 8 impulses). This rule is NOT to be interpreted as meaning that a weapon can be fired more than once per turn. It is intended to eliminate the unrealistic tactic of firing a "full broadside" on the last impulse of one turn and then repeating it on the first impulse of the next.

(E2.0) PHASERS

The phaser is the primary weapon of most starships in the game. It is a phased-energy beam which, when striking the target, does physical damage due to its kinetic force and also creates an electrical discharge that can burn out various systems. There are four basic types of phasers used within Cadet Training Handbook, most of which uses a different table when fired at an enemy ship or other target. The phaser-G is found in Graduate Training and uses the phaser-III table.

(E2.1) TYPES OF PHASERS
(E2.11) TYPE I - OFFENSIVE PHASER: This is the most powerful type of phaser, causing considerable damage out to as many as eight hexes. This is the phaser used by the Federation ship (the one you will use in Scenario #1). It is also used by all of the ships in Cadet Training Handbook except the Klingon. It is often written as simply phaser-1 or ph-1.
(E2.12) TYPE II - OFFENSIVE-DEFENSIVE PHASER: These are shorter-ranged than phaser-1s due to less accurate fire control. The Klingons use phaser-2s on their ships.
(E2.13) TYPE III - POINT DEFENSE PHASER: This type of phaser is the least powerful of all, having an effective range of only one or two hexes. They were designed to be used only against drones. In practice they are used against other ships in close combat but are, of course, less effective. The phasers carried by administrative shuttles use the phaser-3 table (which is

why this table is on the Commander's SSD sheets used in Scenarios #7–#12). One other ship in Cadet Training Handbook (used in Scenario #8) uses this weapon.

(E2.2) RESTRICTIONS AND CONDITIONS

(E2.21) A given ship may fire any number of its phasers in a given impulse, assuming that energy has been allocated for this purpose, the ship has fields of fire that permit such firing, and other rules (e.g., frequency of operation) are obeyed.
(E2.22) In later scenarios, players must allocate energy in the Energy Allocation Phase to be able to fire their phasers. For now, your Chief Engineer is taking care of this. After a few scenarios, you will be given rules and expected to take care of it yourself.
(E2.23) During each turn, each phaser on the ship, except phaser-Gs, may be fired no more than one time. Note that all phasers have a specific field of fire, and that a ship may not have targets for all of its phasers on any given turn. Possible fields of fire for the ensuing turn should be considered when planning how much energy to allocate to phasers.
(E2.24) Each box on the SSD represents one phaser and can be destroyed by a single damage point. Each phaser operates independently. Even if two or more phasers are shown connected, they can fire at different times and at different targets; one can be destroyed without affecting the other.

(E2.3) ENERGIZING PHASERS

Your Chief Engineer has energized the phasers.

(E2.4) FIRING PHASERS

When firing phasers, first determine the range to the target by using rule (D1.4). Then roll one die, and cross-index the result with the range on the appropriate phaser chart to yield the number of damage points scored.

Example #1: Look at the Klingon Cadet battlecruiser SSD. Note the phaser-2 table. A phaser-2 is being fired at a target three hexes away. The die roll is "2" which means that four points of damage have been scored.

Example #2: Look at the Federation Cadet cruiser SSD. Note the phaser-1 table. A phaser-1 is being fired at a ship one hex away. The die is rolled and the result is a "1," which means eight damage points.

CADET SCENARIO #1: BATTLE DRILL

This scenario is a training exercise. You, as commander of the starship *Constellation*, are assigned to track down and destroy a series of five target drones. The exercise is intended to give you experience in controlling your ship and firing its weapons. A few minutes ago you moved your ship into the starting position. This scenario can be played several times with slight variations. You'll be told more about that later.

PLAYERS: This is a scenario for one player only.

REQUIRED MATERIALS: You will need the Federation Cadet cruiser SSD, the 8-Impulse Movement Chart, the Basic Impulse Procedure Chart, the map with sectors A and B, the counter for the Federation cruiser (representing the *Constellation*), five of the Klingon drone counters, one six-sided die, a pencil, and some scratch paper. The Cadet Sequence of Play will be used in Scenarios #1–#6. Put all other materials aside for the time being.

NOTE: As the ship cannot be damaged, there will be no need to mark on the SSD. It is used only to remind you of the firing arcs of your phasers. In later scenarios, when the ship can

be damaged, you will need to make photocopies of the SSDs before playing. Be sure to never mark on your original SSD sheets as you will need these to make copies for future games.

SCENARIO SET UP: This scenario takes place entirely within Area "A" on the map (as defined by the straight white line). Any drone which leaves this area has escaped and cannot be fired at. If the ship leaves the area, the scenario is over.

You have already placed the ship in hex 0111 facing in direction A (toward hex 0110). The ship will move at a speed of 8 hexes per turn during the entire scenario. The player can turn the ship as allowed by its turn mode (which is 2 at a speed of 8). You have already satisfied your turn mode and can turn on the first impulse if you desire.

Place the counter for drone A in hex 0101 facing in direction C, drone B in hex 0207 facing in direction B, drone C in hex 0705 facing in direction D, drone D in hex 0810 facing in direction F, and drone E in hex 0801 facing in direction D. Each drone moves straight ahead at a speed of 8 hexes per turn. Each drone is destroyed (removed from play) by four damage points (total, scored as part of one or more volleys). Keep track of each drone (and the damage points scored on it) on your scratch paper.

OBJECTIVE: To successfully complete this training mission, you must destroy all five target drones (before they can leave the map) within two turns. Due to the mathematical percentages, even the most perfect maneuvers give you only an 83% chance of destroying all five targets and only 99% chance of destroying four of them. Do not worry too much about "winning" or "losing" this scenario; the object here is "learning." If you scored three or more points of damage on every target (whether you destroyed it or not), you did your job successfully.

THE FIRST TURN: For purposes of example, we'll talk you through the first turn. Note that this is only one of several ways that the first turn could be played. You aren't required to move this way and may choose other courses when you play the scenario yourself. We will track the three closest drones, but you should move all of them so that you can see if you did it correctly. (We'll tell you where they should be at the end of this turn.)

First impulse: The *Constellation* turns right and moves to 0210. The three drones move to 0307 (drone B), 0706 (drone C), and 0710 (drone D). The closest drones are four hexes away. At that range, you cannot be guaranteed a kill with a single phaser, so you decide to hold your fire. Place the Point Of Turn marker in hex 0111.

Second impulse: The ship moves to 0310. The drones move to 0406 (drone B), 0707 (drone C), and 0609 (drone D). At this point, drone D in 0609 is at a range of 3. Even at that range, however, a die roll of 6 would score only 3 damage points, not enough to destroy it. Since it is getting closer, there is no hurry and you decide to wait.

Third impulse: The ship moves to 0409. The drones move to 0506 (drone B), 0708 (drone C), and 0509 (drone D). At this point, drone D in 0509 is one hex away. You fire the forward phaser-1. Roll the die and determine how many damage points you have scored. As this cannot be less than four at a range of 1, the drone will be destroyed.

Before you can start the fourth impulse, you have to make a decision about which way to move. Look at drone C in 0708. It is three hexes away. You also note that this drone will escape (by leaving Area A) in four impulses, so it requires immediate attention. Let's look at your options:

A – Move straight ahead. If you do this, you will be in 0509 and drone C will be in 0709. This will be a range-2 shot with the right phaser, with 5 chances out of 6 of scoring a kill (four or more damage points). This is a pretty good risk. However, if you

miss, you will have to turn the ship to enter hex 0615 on the next impulse to use your left phaser to destroy the drone. Moving in this direction will take you farther away from other targets and require a more round-about maneuver to reach them.

B – Turn immediately to 0510. This isn't a very good idea. It puts the target out of the firing arc of your right side phaser and takes the *Constellation* out of range of other targets. More importantly, it doesn't improve the firing possibilities until another impulse, when the ship reaches 0610.

Of these two options, A is obviously superior. There is another option, however, which is to go back to the third impulse and use the left side phaser to kill drone D. This leaves the forward phaser to be fired on the fourth impulse from 0509 toward drone C in 0709. If you don't score a kill (only a 17% chance of that), the right side phaser can destroy the drone on impulse #5. (Note that going back and doing it over is not allowed in the game. The point of this exercise is to make you think about why and where you will use your weapons, not just how.) Having resolved these alternatives, we proceed.

Fourth impulse: The *Constellation* moves to 0509. The drones move to 0605 (drone B) and to 0709 (drone C). You fire the forward phaser at drone C in 0709, with an 83% chance of scoring four or more damage points and destroying it. Roll the die now, and determine if you destroyed it or not.

Fifth impulse: The *Constellation* moves to 0608. Drone B moves to 0705, and (if it survived) drone C moves to 0710. If drone C survived, use your right phaser to destroy it now.

Sixth impulse: The *Constellation* moves to 0708.

Seventh impulse: The *Constellation* moves to 0807.

Eighth and final impulse: The *Constellation* turns left and enters hex 0806 (facing 0805). The surviving drones will be in 0809 (drone E), 0905 (drone A), and 1003 (drone B). Move the Point of Turn marker to 0807.

If you did not have to use the right side phaser on drone D, you can use it now on any of the three drones. Which would be best? Well, as drone E is moving away from you, it can't wait for the next turn (when the phasers can fire again) and probably should have been shot on impulse #7. Drone B will be the most trouble (since you can't get closer to it and will possibly need two shots to destroy it). Drone A would probably be the best choice.

Now play the second turn, and see if you can destroy all of the remaining target drones. Then go back and play the entire scenario, experimenting with your own ideas for the first turn.

INSTANT REPLAY: Without learning any further rules, you can play this scenario again several times. You can modify the scenario by moving some of the drones to different starting positions. An alternative starting arrangement is 0102-C (that is, in hex 0102 facing in direction C), 0104-C, 1101-D, 0717-A, and 0112-C. Another is ship in 0717-A, drones in 0117-A, 1317-A, 0701-D, 0105-C, 1402-E.

After playing this scenario at least twice with the Federation Cadet cruiser, play the scenario once or twice with the Klingon Cadet battlecruiser (which is named *Destruction*). Note that while the Klingon ship has four phasers (rather than three), they are less effective and cannot guarantee four damage points at any range beyond zero (i.e., in the same hex). scenario can also be played with the other cadet ships, but as the Romulan Cadet cruiser (named *Eagle*), but as that ship has only two phasers, you should only use three or four target drones.

NOTE: The second scenario cannot be played without photocopies of the Cadet SSDs. You may wish to play the first scenario several times before completing your first session with this game, then obtain several photocopies before starting the second scenario. (Four to six will be enough for Scenarios #2 and #3. Simply copy the entire page with all three Cadet ships, then cut them into separate sheets and save them for later use.)

RULES FOR SCENARIO #2

We hope you enjoyed the first scenario. Every starship commander deserves one free ride, and Scenario #1 was the only one you will get. From now on, the targets shoot back and can damage your ship. While it is impossible to accomplish most missions without taking some damage, too much damage will render your ship out of commission (or destroy it).

The second scenario is similar to the first, except that the drones will move toward your ship and (if they hit it) can cause considerable damage. There will be more drones in the second scenario and a larger playing area. Also, you will be able to use the photon torpedo launchers on your ship.

To play Scenario #2, you must learn three things. First, how shields work and how they are damaged. Second, how photon torpedoes are fired. Third, how seeking weapons (drones in this case) move and follow (seek) their target.

(D3.0) SHIELDS

Shields are the primary defense of starships in this game. Shields will absorb tremendous amounts of punishment, protecting the ship from damage (up to a point).

(D3.1) DESIGNATIONS OF SHIELDS
(D3.11) Each ship is surrounded by six shields. These are numbered 1 through 6, and each shield faces one of the six surrounding hexes. (For example, if a given starship was in hex 0202 and facing hex 0201, the #1 shield would be facing hex 0201, #2 would be facing 0302, and #5 would be facing 0103.)
(D3.12) The shields are fixed in position and cannot be rotated or moved. If a given shield is down, no other shield can be shifted into its position or expanded to cover a double arc. For example, the #1 shield will always be to the front of the starship.

(D3.2) SHIELD OPERATION
The shields are represented on the SSDs by the rectangular groups of boxes surrounding the ship. These are marked "Shield #1," etc.
(D3.21) Each damage point on a shield checks off one box. When all boxes on a given shield are checked off, the shield is "down." Damage points scored on a shield that is "down" penetrate to the interior and destroy systems within the ship. These are called "internal hits" or "internal damage" or simply "internals."
NOTE: The drones in Scenario #2 will explode when they hit your ship (enter the same hex that your ship is in), causing six damage points. Look at the SSD for the Federation Cadet cruiser *(Constellation).* The #1 shield has 16 boxes; it will still have four boxes left if it is hit by two drones. The #2 shield has 12 boxes. While two drone hits (impacts, not damage points) will knock the shield down, they will not damage your ship. Shield #3 has only 10 boxes; a second drone impact there would score internal damage on the ship. Note, however, that damage scored on (or which penetrates through) one shield will have no effect on any other shield. If your #2 shield is down and a drone is approaching from that direction (and for whatever reason you cannot stop that drone), one option is to turn the ship and allow the drone to hit another shield. One of the more difficult choices in combat is to allow something to hit one of your shields when you could prevent it (perhaps by using a phaser on the drone) because you would rather use that phaser on a more important target. A ship that has no shield damage after combat may not have been used to its fullest potential.

(D3.3) ENERGY COST OF SHIELDS
For the second scenario (and the third) your Chief Engineer will make sure that adequate power is available to operate your shields.

(D3.4) DETERMINING WHICH SHIELD WAS HIT BY ENEMY FIRE
It is important to determine which shield has been struck by incoming fire. In the case of seeking weapons, this is the shield facing the hex that the weapon approached from.

Note in the Sequence of Play that ships move first, then seeking weapons. If, for example, the *Constellation* was in hex 0708 (facing A), a drone was in hex 0806 (facing E), and the *Constellation* moved next into hex 0707, the drone would then move (on the same impulse) into hex 0707 and strike the ship. Now, which shield would the drone hit?

The drone struck the #2 shield, the one facing the hex that the drone came from. If that shield had been down, you might have turned right (assuming your turn mode had been satisfied) into hex 0807, in which case the drone would have gone into 0807 and struck a different shield. Which one? Did you answer #6? That is correct. Turning stronger shields toward the enemy is a key tactic.

As the second scenario includes only seeking weapons for the "enemy," you will learn how shields work against direct-fire weapons in the third scenario.

(D4.0) DAMAGE ALLOCATION

In Scenario #5 we will introduce a Damage Allocation Chart that will tell you where you must score each internal damage point on your ship. For the purposes of Scenarios #2, #3, and #4, however, you can mark this damage on any system, with the provision that each drone or group of drones that strike the same shield on the same impulse (or volley from direct-fire weapons in later scenarios) which scores internal damage must destroy one weapon. This can be any weapon (phaser, photon, disruptor, drone rack, or plasma torpedo) on the ship (including one that has already fired this turn). The other five damage points (or fewer if some were used to destroy shield boxes) can be scored on other systems (possibly including weapons), including the "Excess Damage" ("EX DAM") boxes which are on the SSD outside the ship outline. Note that destroyed systems can no longer be used. Certain systems cannot be destroyed. These include the four boxes labeled "DRONE RACK #1" on the Klingon SSD, shields other than the one shield hit by that volley, and (for Scenarios #2–#4 only) the Bridge and Security boxes. The ship is destroyed when all internal boxes (except Bridge and Security) and all excess damage boxes are marked destroyed.
EXAMPLE: Three drones strike the forward shield. As three drones have a total of 18 damage points, and the shield has 16 boxes, two damage points penetrate to become internal damage. The player (you) scores one of these on the left phaser and the other on one of the hull boxes. Later, another drone strikes the (down) forward shield. The player (you) scores one damage point on photon torpedo B, one on the lab, one on a hull box, and three on the Excess Damage boxes. (This is only one of several possible ways the player could distribute the damage.)

(E4.0) PHOTON TORPEDOES

Photon torpedoes are carried by Federation ships and certain others. They are considered to be the heavy weapons of the ship, but because they must be armed in advance and cost a considerable amount of energy to hold in the launch tubes if they are not fired immediately, their use is restricted to heavy combat

situations. A Federation ship does not normally keep photon torpedoes armed because of the energy requirement to simply hold them in the tubes and for safety purposes.

(E4.1) FIRING PHOTON TORPEDOES

Each "PHOTON" (or "PHOT") box on a Federation ship's SSD represents one photon torpedo launch tube. Each tube is kept track of separately. The Cadet cruiser *Constellation* has two photon torpedo launchers.

(E4.11) Photon torpedoes are direct-fire weapons fired in the Direct Fire Step of the Impulse Procedure, and whether they hit or miss is determined immediately by die roll. There are no counters for photon torpedoes.

(E4.12) To determine if a photon torpedo has hit the target, roll a single die. If the result is between the listed hit numbers (inclusive), the torpedo has hit its target. For example, let's say you are firing a photon torpedo at a target six hexes away. You roll a 3. Look at the Photon Torpedo Table on the Federation Cadet cruiser SSD. A range of 6 is within the 5–8 range bracket, so we will use that column. Under it, the "Hit" row says 1–3. Thus, a die roll of 1, or 2, or 3 would be a hit, while a die roll of 4, or 5, or 6 would be a miss. In this case, you hit. Now, what would be the result of a die roll of 4 at a range of 11? See below.∗

(E4.13) Regardless of range, a photon torpedo does eight points of damage if it hits. The maximum range is 30 hexes.

(E4.14) Because of their terrible power, photon torpedoes cannot be fired at a target that is in the same hex as the ship or adjacent to it. They have a minimum range of two hexes.

(E4.2) RELOADING PHOTON TORPEDOES

Photon torpedoes require more time to arm than a phaser. Your Chief Engineer will reload the torpedoes as fast as he can, but it takes two turns to arm them. For this reason, you cannot fire the torpedoes on the first turn. You can fire either or both torpedoes on the second turn (or you can wait until the third or fourth turn if you wish). However, when you fire a torpedo, you won't be able to fire another one from the same launcher until the second turn later (rather than on the next turn, like a phaser).

The two torpedo boxes are completely independent. They can be fired at the same time or at different times, at the same or different targets. A single damage point will destroy one tube and leave the other undamaged.

EXAMPLE: You fire torpedo "A" on turn 2, but do not fire torpedo "B" on that turn. You could fire torpedo "B" on turn 3; let's assume that you do. You cannot fire torpedo "A" on turn 3 because it was fired on turn 2 and takes two turns to reload, so you could fire it on turn 4. Torpedo B will be ready on turn 5.

NOTE: For game purposes, the exact point during the turn has no importance. You could fire torpedo A during the last part of turn 2 and then again during the early part of turn 4.

(F1.0) SEEKING WEAPONS

Seeking weapons, unlike direct-fire weapons, are represented by a counter on the map and move toward their targets at a given speed. Normally, a seeking weapon will hit (or miss) its target several impulses (or even several turns) after it is fired. The primary characteristic of seeking weapons is that the target ship has an opportunity to outrun, evade, and fire at the weapon. There are two types of seeking weapons: drones (basically radar-homing missiles) and plasma torpedoes (charged balls of energy). This scenario deals only with drones. Plasma torpedoes, which are much more dangerous, will be introduced later. Suicide shuttles (Scenario #9) use the drone rules.

∗ Range 11, Die Roll 4, the torpedo missed the target.

(F2.0) SEEKING WEAPON MOVEMENT

Seeking weapons move with a fixed speed (specified in the scenario) and a turn mode of 1 at all speeds. They "home in" on their target, moving in each of their impulses toward the target in any manner (at the weapon-owning player's option) so long as they move closer to their target if it is possible. If it is not possible to get closer to the target, they must move in such a way as to get no farther away from their target (if possible).

EXAMPLE: The *Constellation* has just entered hex 0808. There are drones in hexes 1109 (facing E) and 1206 (facing F).

The drone in 1109 could enter 1008 or 1009 as either of these hexes are closer to the ship than the drone currently is. The drone could (within its turn mode) turn and enter 1110, but as this hex is not closer to the ship and a closer hex is available, it is not permitted to enter 1110.

The drone in 1206 could turn right and enter hex 1205, but this is not allowed because that hex would be farther from the target. It could move straight ahead to 1106, but that is not allowed because it is possible for the drone to turn left and enter 1107, which is closer to the target than 1106. Note that this drone could not enter 1207, 1307, or 1306 because of turn mode limitations AND because they are further from the target.

SPECIAL RULE: As there is no Klingon player to control the drones in Scenario #2, apply this rule. The drone will move directly forward without turning UNLESS by turning 60° to the right or left it can move into a hex that is closer to the target than the hex it would enter if it did not turn.

EXAMPLE: The *Constellation* has just entered hex 0808. There are drones in hexes 1109 (facing E) and 1206 (facing F).

The drone in 1206 will turn and enter 1107 because this will be closer than moving straight ahead to 1106. The drone in 1109 will not turn to enter 1008, but will move directly ahead to hex 1009 since both hexes are the same distance to the target.

You can replay the scenario with a live opponent controlling the Klingon drones. It will be more challenging.

(F2.1) SIMULTANEOUS MOVEMENT: If a seeking weapon and its target are moving on the same impulse, the drone homes in on the hex the target is entering, not the one it is leaving. If the target enters the weapon's hex, the weapon does not move but strikes the target during the Resolve Seeking Weapons Step on the shield that faced the drone when the ship entered the hex.

(F2.2) EXPLOSION: Seeking weapons explode when entering the hex of their target. (They are considered to have hit their targets at this point.) The effect of this explosion is resolved during the Resolve Seeking Weapons Step of the impulse (see the Impulse Chart). As a seeking weapon explodes immediately upon entering the target's hex, the target may not fire on it at a range of "0." Note that if a seeking weapon targeted on one ship passes through the hex occupied by another ship, the ship being "passed" could fire at it at a range of "0" since the weapon did not explode when entering that hex (since it hasn't reached its target).

(F2.3) LAUNCHING: In Scenario #3, the Klingon ship will be able to launch drones. If the seeking weapon is launched in the same hex as its target, the Impulse Chart governs the result. Since the launch of seeking weapons takes place after seeking weapons move but before direct-fire weapons are fired, the target ship will have the opportunity to fire direct-fire weapons at the seeking weapon (range 0) before it can hit. Which weapons are eligible to fire and which shield is facing the weapon is determined by the relative facing of the ship that fired the weapon. (Temporarily back the launching ship up into the hex directly to its rear, then judge the firing arcs from that position,

then restore the launching ship to its proper place.) If the weapon moves first (in a later impulse), it will hit the target (unless destroyed); if the ship moves first, the weapon will follow it.

(F2.4) MULTIPLE SHIPS IN A HEX: Even if more than one ship is in the same hex as the target, only the target is damaged by a seeking weapon.

(F2.5) DRONE vs. DRONE: Drones can be targeted on drones; a drone will destroy another drone on impact.

CADET SCENARIO #2: UNDER ATTACK

Your starship, the *Constellation*, has been assigned by Star Fleet to patrol a given area as a show of force and determination during treaty negotiations at a nearby planet. The Klingons want your ship to leave the area (so that the planet will see the Federation is weak and sell their products to the Klingons), but are not willing to engage you directly in combat. To force you to retreat, they have launched drones into your patrol area.

This scenario can be played several times with slight variations. You'll hear about that later; see INSTANT REPLAY.

PLAYERS: This is a scenario for one player only. Use the SPECIAL RULE in (F2.0) for moving seeking weapons when there is no player controlling them. If there is a second player available, have that player move the drones using rule (F2.0).

REQUIRED MATERIALS: You will need the Federation Cadet cruiser SSD, the 8-Impulse Movement Chart, the Basic Impulse Procedure Chart (ignore LAUNCH SEEKING WEAPONS for this scenario), the map of sectors A and B, the counter for the *Constellation*, all eight Klingon drone counters, a die, a pencil, and some scratch paper.
    NOTE: As the ship can be damaged if hit by the drones, you will need a copy of the SSD. If you do not have a photocopy of it, secure one before trying to play this scenario. NEVER mark on the original SSD as you will need it to make copies.

If you simply cannot wait to begin playing, you will have to keep track on scratch paper (not on the SSD) of the damage done to the ship. To do this, use one line for each shield. Write the original strength of that shield on the line, and subtract six from it whenever a drone hits it. Below this, keep track of which system boxes in the hull have been destroyed.

SCENARIO SET UP: This scenario uses the entire A+B map. The ship cannot leave the map, or the Klingons will have succeeded in forcing you to withdraw.

Place the ship in hex 0913 facing direction A (toward hex 0912). The ship will move at a speed of eight hexes per turn during the entire scenario. The player can turn the ship as allowed by its turn mode (which is 2 at that speed).

Place drone A in hex 0109-C (facing C), drone B in hex 0301-D, drone C in hex 1101-D, drone D in hex 1701-E, drone E in hex 2501-E, drone F in hex 2803-E, drone G in hex 2808-E, and drone H in hex 2815-F. Each drone moves at a speed of eight hexes per turn; these are seeking weapons targeted on the ship. If a drone hits the ship, it causes six damage points. Each drone is destroyed by four damage points. Keep track of the damage you score on each drone on your scratch paper. When a drone is destroyed, remove the counter from the board.

OBJECTIVE: If you leave the area, or if your ship receives internal damage, you will fail in your mission and the neutral planet will sign a treaty with the Klingons. If you succeed in destroying the drones before they can damage your ship (and do not leave your assigned area), you will have fulfilled your

mission. Satisfied that the Federation can protect them from the Klingons, the neutral planet will sign a trade agreement with you.

ADVICE: We won't talk you through the first turn this time, but we will offer this advice. Moving generally left will increase the distance between you and the drones in area B. The area around hex 0308 would be a good place to go on the first turn. You should be able to destroy the first two drones easily; if you have a phaser left, use it on the third drone. On the second turn, carefully plan your movement so that the remaining five or six drones won't all arrive at the same time. Use your phasers on the drones that come close to you, and fire your photons on those drones farther away (but don't waste them on drones too far away). By turn 4 you will be facing the last few drones and can fire your photons at short range. Avoid getting yourself into a corner (of the map) as turning around will take space and the drones will arrive before you complete the turn.

INSTANT REPLAY: The scenario can be played several times with slight variations. Try it with the ship starting in 0415 or in 1510. You can play this scenario with the Klingon or Kzinti ships after reading the sections on Disruptors and Drones in Scenario #3. You could play this with the Lyran, Hydran, or ISC ships after reading the rules for those races in the Graduate Training Section. (The Romulan ship is not recommended; it has too few phasers.)

You can play this scenario again (with either ship) after reading the section on Speeds and Impulses in Scenario #3.

RULES FOR SCENARIO #3

Having completed Scenario #2, you are now a combat veteran. Scenario #3 gives you a chance to shoot at something a bit bigger than a drone. However, as this is only your third battle, we aren't going to ask you to fight another starship. Instead, you are going to take command of the Klingon Cadet battlecruiser *Destruction* and try to destroy a convoy of freighters. While this is something akin to shooting fish in a barrel, these fish can shoot back. In fact, the four freighters combined have almost as much firepower as your battlecruiser, so it isn't going to be a picnic. (It might take you two or three tries to win.)

Before playing this scenario, you will learn some new rules. These include: how to launch drones, how to fire disruptors, how to handle ships that are not moving at the same speed (the freighters are much slower than the cruiser), and how direct-fire weapons damage shields.

(C1.4) PERFORMING MOVEMENT
Each unit will move one hex, and only one hex, during each impulse in which movement is called for by the IMPULSE CHART.

(C1.41) GENERAL: Each turn is divided into a number of impulses. The first three scenarios have 8 impulses per turn, the next three have 16 impulses per turn, and the final six scenarios (and those in the Captain's Edition) have 32 impulses per turn.

(C1.42) MAXIMUM SPEED: In scenarios with 8 impulses, drones and plasma torpedoes will move at speed 8 while ships will move at any speed (depending on the power used to move) between 0 and 8. In scenarios with 16 impulses, drones and plasma torpedoes will move at speed 16 while ships will move at a speed between 0 and 16. In scenarios with 32 impulses, drones and plasma torpedoes will move at speed 32 while ships will move at a speed of no more than 31 hexes per turn.

Ships can change their speed each turn; seeking weapons travel at a constant speed.

(C1.43) MOVEMENT PROCEDURE: During the Impulse Procedure, the various units on the map (including shuttles, drones, and plasma torpedoes) are moved by a proportional movement system. In simple terms, this means that if the Klingon ship (in Scenario #3) is moving at eight hexes per turn, and the freighters (in Scenario #3) are moving at four hexes per turn, and the turn is divided into a number of impulses, then the Klingon ship will move during twice as many of those impulses as the freighters and will, of course, move twice as far in the same time.

(C1.44) THE IMPULSE CHART: Previously you have used the 8-IMPULSE MOVEMENT CHART simply to keep track of the number of impulses in a turn and which impulse you were performing. Now, we will use this chart to keep track of when each ship moves. At the start of the scenario, lay the 8-IMPULSE MOVEMENT CHART out flat and place the "Impulse" counter (playing piece) in the "1" box. When starting the first turn, you will work your way down the IMPULSE PROCEDURE CHART one row at a time, as before. However, when the "Move Ships" Step appears, do not move every ship. Instead, look at the 8-IMPULSE MOVEMENT CHART. The counter marks the current impulse. Each column represents one possible speed for units moving in that scenario. Note the speed of each moving unit. A unit moves only if there is a number in the box at the intersection of the current impulse and its speed. The number in question indicates the specific movement point that the ship will move.

    NOTE: For keeping records of time, such as the 1/4-turn delay in firing a weapon or the endurance of a drone, count only to the impulses of the turn, not to the number of hexes actually moved. Let us assume, for purposes of illustration, that in turn 3 of Scenario #3, there is a drone moving at speed 8, a Klingon ship moving at speed 5, a freighter moving at speed 4, and a damaged freighter moving at speed 3. Thus, we will deal with the 8, 5, 4, and 3 columns, ignoring the 1, 2, 6, and 7 columns.

    Look at the 8-IMPULSE MOVEMENT CHART. On the row for the first impulse, only the 8 column (the speed of the drone) has a number. So only the drone will move in the first impulse, and it will move its first hex of movement.

    On the second impulse, there are numbers in the 8, 5, and 4 columns, indicating that the drone, the Klingon ship, and the undamaged freighter all move.

    Impulse #3: there are numbers only in the 8 and 3 columns, so only the drone (speed 8) and the damaged freighter (3) move.

    Now, which units will move during the fourth impulse? Answer: The moving units are the undamaged freighter (speed 4), the Klingon ship (speed 5), and the drone (speed 8).

    Proceeding quickly through the remaining impulses:
        Impulse 5 – drone and Klingon move.
        Impulse 6 – drone and both freighters move.
        Impulse 7 – drone and Klingon move.
        Impulse 8 – all four units move.

    No impulses are skipped, even if no unit is to move. Units may still fire and launch weapons and perform other functions on impulses in which they do not move. In reality, the units are moving, but haven't "crossed the border" into the next hex yet.

(D3.0) SHIELDS AND DIRECT-FIRE WEAPONS

(D3.4) DETERMINING WHICH SHIELD WAS HIT BY ENEMY DIRECT FIRE
    It is important to determine which shield has been damaged by enemy action. For direct-fire weapons, the line of fire must be determined. To do this, simply draw an imaginary line from the center of the target ship's hex to the center of the firing ship's hex, and determine which shield is crossed. For example, the *Constellation* is in hex 0202 (facing A) and is attacked by the *Destruction* in hex 0305. A line from hex 0202 to hex 0305

crosses the hex side separating hex 0202 from hex 0203; therefore, it is the rear shield (#4) which takes the damage.

(D3.41) SHIELD BOUNDARIES: In the event that the line from the firing to target hex travels exactly along a hex side (for example, if the Klingon ship in the above example was in hex 0304), then the shield actually hit is resolved by arbitrarily assigning odd numbers to one shield and even numbers to the other, then rolling a die to determine which shield is hit. (In Scenario #10, you will find more elaborate procedures for this situation.)

(D3.42) SHIPS IN THE SAME HEX: If two ships are in the same hex, firing directions are judged (for both shields and weapons purposes) from the positions occupied the impulse before the impulse on which the ships occupied the same hex. The range is still zero, and the ships are still in that hex.

NOTE FOR THOSE IN A HURRY: It is possible to play Scenario #3 without reading the rules on the disruptors and drone racks. However, to do this you will have to use the Federation Cadet cruiser instead of the Klingon Cadet battlecruiser (since you have learned the Federation weapons). If you are slightly confused by the Impulse Rules above, you might want to play the scenario with the Federation ship before adding the additional burden of learning the disruptor and drone rules. You will, however, need to read the rules on freighters below.

(E3.0) DISRUPTOR BOLTS

    Disruptor bolts are carried by Klingon ships (and certain others). Disruptors operate on the principle of an energy discharge. They are less effective than photon torpedoes, but can be fired more often. The total effect over several turns is nearly identical, but a dynamic situation is created. Disruptors cannot wreck a ship in one shot like photons can, so the Klingon must maneuver for a second shot. The arming cycle of the Federation photons force the ship to operate in a rhythm of alternating fire/reload turns.

(E3.1) DESIGNATION
    Each "DISR" box on the SSD represents one disruptor bolt firing point. Each is recorded and fired separately.

(E3.2) ARMING PROCEDURE
    Disruptors can be fired every turn (like phasers). They are direct-fire weapons and are fired during the Direct-Fire Weapons Step of any impulse. Each disruptor can be fired once per turn. For Scenario #3 we will continue to assume that the Chief Engineer will make sure that power is available to fire these weapons. Be advised, however, that in Scenario #4 you will learn how to arm them for yourself.

(E3.3) FIRING PROCEDURE
    The number of damage points scored by the disruptor is determined by the range and a die roll. Refer to the DISRUPTOR BOLT CHART on the Klingon SSD. Using the range, look on the chart to determine the hit probability. Roll a single die. If the result is within the range of probabilities listed, the weapon has hit, scoring damage points as shown on the bottom of the chart.
(E3.31) When the effective range of a disruptor bolt is different from the true range (i.e., the target is cloaked), use the effective range to determine the probability of a hit and the true range to determine the number of damage points scored (if a hit is made).
(E3.32) The maximum range of disruptors is different with each ship class that carries them. Most ships armed with disruptors in Cadet Training Handbook have a maximum range of 30 hexes. Note that disruptors cannot be fired at a range of zero.

(FD1.0) DRONES: GENERAL RULES

Drones are small unmanned missiles with warp-speed capability. Klingon and other ships carry these devices as auxiliary weapons. Drones are similar to 20th Century radar-homing missiles. They home in on (i.e., follow) the target.

(FD1.1) DRONE LAUNCHERS

Drones are carried in drone racks which carry four drones and can launch one of them each turn (not within 1/4-turn of a launch by that specific rack on the previous turn).

Notice, for example, on the Klingon Cadet battlecruiser a row of four boxes (below the ship) marked "Drone Rack #1." This is the "ammunition track" which records the number of drones loaded on the launch rack shown on the ship itself. If that launcher is destroyed in combat, any drones still on the launcher are also destroyed. This track cannot be used to score internal damage. As each drone is fired, check off one box on the track.

(FD1.2) LAUNCHING DRONES

Drones can be launched during the appropriate step of each impulse during each turn. When launched, the drone is placed on top of the launching ship, facing any direction at the option of the owning player so long as the target is in the drone's FA arc. The target for each drone must be announced in this phase. (Players can experiment with the more advanced rules in which drone targets are a secret.) It requires no energy to launch a drone. Whenever a drone is launched, mark one box on the ammunition track for that drone rack. Note that while a drone can be launched in any direction, it must move one hex in that direction (to satisfy its turn mode) before it can turn.

(FD1.3) DRONE TARGETS

A drone may be targeted on anything (including another drone or a shuttle) except a plasma torpedo. The target of a drone is set at the time of launch and can never be changed.

(FD1.4) DRONE RANGE

All drones are assigned an endurance expressed in turns. In Cadet Training Handbook, this is three turns for all drones. If the drone has not been destroyed or has not hit its target when this endurance is exhausted, it is removed from play. Drones cannot be recovered (i.e., cannot be picked up).

Note that if a drone is fired during a given impulse of a turn, it will reach the end of its endurance during the same impulse of a later turn. For example, a drone launched on impulse #4 of turn #3 will be removed if it has not hit its target or been destroyed by the end of impulse #4 of turn #6.

(FD1.5) FIRING AT DRONES

Any type of weapon can be fired at drones, but some (because of their nature) are penalized when doing so.

(FD1.51) Phasers, plasma torpedoes, and other drones can all be fired at drones without penalty.

(FD1.52) When firing photon torpedoes, disruptors, fusion beams, or plasmatic pulsar devices, add 2 to the die roll when firing at drones, thus making it harder to hit them. (You were allowed to ignore this penalty in Scenario #2, but never again. From this point on, space gets dangerous.)

(FD1.53) Other weapons, not in Cadet Training Handbook, have different effects. You will see them in this rule in the Basic Set.

(FD1.54) A drone is destroyed if it receives damage points equal to its destruction rating, which is four points for all drones used in Cadet Training Handbook.

(FD1.55) If several drones are in the same hex and one is destroyed, the others are not affected.

(FD1.6) DRONE COMBAT

When a drone is in the hex of its target during the Resolve Seeking Weapons Step, it explodes and scores a number of damage points on the facing shield of the target equal to its warhead rating (as in Scenario #2). This is six damage points when using Cadet ships (twelve damage points when using the regular ships in Scenarios #7–#12). Damage points are scored against the shield facing the direction of approach (assuming that shield is still functioning). Damage points in excess of the shield's strength are scored as internal damage.

(R1.6) FREIGHTERS

In the Captain's Edition, freighters are handled in considerably more detail than in Cadet Training Handbook. In the scenarios here, however, freighters are used only as abstract targets. For Scenario #3, the following rules are used:

1. Each freighter's shields will be considered to be down after five damage points are scored on that freighter from any direction or combination of directions; after that point, all damage is considered to be internal damage. (This is an abstraction of the normal freighter shield rules. After playing this scenario, INSTANT REPLAY will provide an alternative system.)

2. Each freighter is armed with a phaser-2 that can fire in any direction. The weapon will cease to function immediately when the freighter has received five points of internal damage.

3. Each freighter will move at a speed of four hexes per turn. After receiving 10 points of internal damage, the speed is reduced to three hexes per turn. After receiving 15 points of internal damage, the speed is reduced to two hexes per turn. These speed reductions take effect at the start of the next turn after that damage is scored.

4. After receiving 20 points of internal damage, the freighter is destroyed. Damage on each freighter is resolved and recorded separately. Note that a total of 25 damage points is required to destroy a freighter, 5 for the shields and 20 for the ship itself.

FOR FURTHER TRAINING

If you feel you need further training with the disruptors, return to Scenario #2 and play it with the Klingon ship. Ignore the penalty in (FD1.52) for purposes of that scenario ONLY.

CADET SCENARIO #3: CONVOY RAID

The neutral planet of Iridima has refused to sell its iridium to the Klingon Empire, preferring instead to sell it to the Federation. This metal is vitally important to starship construction, and while the supply from Iridima represents only a fraction of that available to the Federation or the Empire, it could make an important difference. A convoy of four freighters is now headed toward the Federation border. Your battlecruiser, the Imperial Klingon Vessel *Destruction*, is assigned to pursue and destroy this convoy, preventing it from reaching Federation territory. This will teach the Iridimans that they will sell their iridium to the Empire or to no one at all. This scenario can be replayed with minor variations; see the section on INSTANT REPLAY below.

PLAYERS: This scenario can be played with one or two players. If two players are available, one commands the Klingon ship while the other commands the four freighters. In this case, the Iridima (freighter) player can fire the phasers at his discretion (within the rules) and can turn one or more freighters 60° right or left at the start of each turn (before any ships are moved).

If only one player is available, he commands the Klingon ship. The freighters move directly ahead without turning until they reach hex row 15xx, at which point each freighter will turn to

heading C. They will fire their phasers as follows: Freighter A will fire its phaser (at the Klingon or at a drone targeted on itself) on impulse #2 of every turn. Freighter B will fire on impulse #4, freighter C on impulse #6, freighter D on impulse #8. Approaching drones have priority over the Klingon ship as a target.

REQUIRED MATERIALS: You will need the 8-Impulse Movement Chart, the Basic Impulse Procedure Chart, Basic Sequence of Play, the map of sectors A and B, the counter for the Klingon D6 battlecruiser *Destruction*, four of the Klingon drone counters, the four freighter counters (note that they are labeled F for freighter and A though D), one die, a pencil, scratch paper (to keep track of damage to freighters and drones), and a copy (not the original) of the Klingon Cadet battlecruiser SSD.

SCENARIO SET UP: This scenario uses the entire A+B map. The freighters will try to leave the map from the top edge. The Klingon ship can leave the map from the other three edges. Any ship which leaves the map cannot return.

Place the Klingon ship in hex 0104 facing in direction C.

Place freighter A in hex 0112, freighter B in hex 0110, freighter C in hex 0309, and freighter D in hex 0311. All freighters are facing in direction B.

LENGTH: The scenario is over when all of the freighters are destroyed or have left the map.

SPEED: The freighters will move at a rate of four hexes per turn; this may be reduced by damage. The Klingon player can select any speed (from zero to eight hexes per turn) at the start of each turn. He can change speed every turn if he wishes or keep the same speed for two or more turns. The drones launched by the Klingon ship have a speed of eight.

OBJECTIVE: The freighters are trying to escape by moving off the map at the east (28xx) edge. (For example, freighter A would reach hex 2811, then expend another movement point and move off the map.) The east (right) edge of the map is the Federation border, and any freighter which crosses it (leaves the map) is safe and cannot be fired on.

For the Klingon player to win the scenario, he must destroy all four freighters before they can leave the map.

ADVICE: This scenario can be played "by the numbers" or in certain logical steps. The first step is to score at least 10 damage points on each freighter, eliminating its weapon and preventing further damage to your ship. This must be accomplished in the first four turns, preferably less.

The method of accomplishing this is to move within three hexes (or closer) of a freighter and fire your disruptors and for-ward phasers. Then turn to one side, allowing the phaser on that side to fire. Then (if possible) pull out of range of the next freighter scheduled to fire (four hexes away will be adequate). Try to maneuver in such a way that all four of your phasers can fire every turn. This may require flying through the convoy; don't do that, however, until you have eliminated their weapons.

In the meantime, you have to minimize damage to your ship by keeping the freighters from penetrating your shields. Keep track of when each freighter will fire, and turn a shield that is strong enough to resist the blast toward that freighter.

There are ways to eliminate the weapons in less than four turns. For one thing, you have drones. Launch one drone each turn; launch the first two drones at different freighters. If possible (do some counting), pick a target close enough that the drone will get there before that freighter is scheduled to fire its weapon. Then with a bit of luck and one of your side phasers, you will have scored 10 damage points and eliminated its phaser. With a lot of luck, you will have silenced all four phasers in two turns (two by disruptors and phasers, two by drones and phasers).

The next step is to slow the freighters down so that they can't reach the border as quickly. Doing this requires scoring more damage, but only a small amount on each freighter. Slow all of the freighters down before you start finishing them off.

Just a note for future reference. If a Federation cruiser could be expected to come out and meet the convoy, you may have to settle for destroying only one or two freighters. In that case, hit one or two of them hard enough to silence their weapons and slow them down. They will fall behind the convoy, and you can pick them off, allowing the other two (or three) to escape.
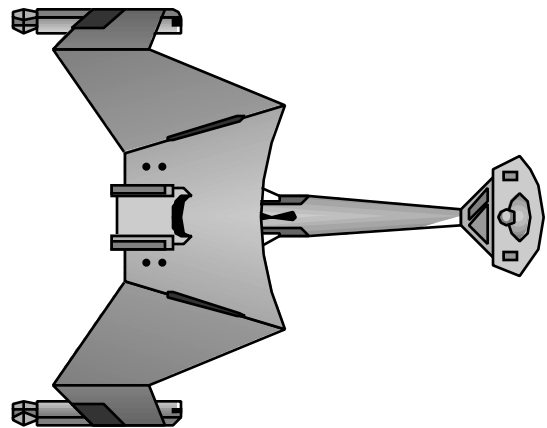
INCREASING DIFFICULTY: After two or three playings (or perhaps only one), you will find it very easy to win this scenario. If this happens, and if you feel that you are not ready to move on to Scenario #4, then move the freighters forward six hexes and play the scenario again. (Or increase their speed to six hexes per turn, or both.) If you still win, move them forward six (or fewer) more hexes and play again. See how close the freighters can be to the border while you can still catch them all.

Another way to make the scenario more challenging is to give each freighter six five-box shields (one in each direction, like

the Cadet ships). This will require the attacking ship to stay on the same side of the target or to knock down another shield.

Another way is to place the freighters in hexes 0110, 0111, 0209, and 0210 so that their firepower is more concentrated.

INSTANT REPLAY: This scenario can be played with the Federation Cadet ship, although you would have to assume that the freighters were from a Klingon planet since the Federation does not fire on neutral vessels. After reading the rules on plasma torpedoes in Scenario #6, you could use the Romulan Cadet ships in this scenario. After reading the rules for the races in Graduate Training, you can use their cadet ships in this scenario to become familiar with how they work.

FOR LATER USE: After completing Scenarios #4 and #5, you can return and replay this scenario with a significant change. Use two players. On the first impulse of turn 4, place a Federation cruiser in hex 2801 facing in direction E. The Klingon wins if he can destroy three freighters and escape off the map before being destroyed. Use the 16-Impulse Movement Chart and assign a speed of 4 to the freighters and speed 16 to the drones. Obviously, any of the available starships could be used.

AND EVEN LATER: After playing Scenario #8, you can return and play this scenario with the full-size ships and rules. In this case, use the 32-Impulse Movement Chart, assign the freighters a speed of 8, double all damage and shield values for the freighters, and use a drone (or plasma) speed of 32.

RULES FOR SCENARIO #4

Having played three scenarios, you are now ready for two major steps. The first is playing against a ship as powerful as your own. This ship (possibly more than one) will be played by a set of automatic rules titled "The Robot Opponent" below. After you can beat this robot, you will be ready to fight a live opponent.

The greatest challenge of this scenario is to learn the energy allocation rules. This is the heart of the game and the most important concept you must grasp. Each turn you must determine the energy produced by your engines, and then spend (allocate) this power to perform various functions. Until now, your Chief Engineer has done this for you. Now you must do it for yourself.

SCENARIO PREVIEW: You could skip these rules and simply play Scenario #4 with the rules you already know. You could use a live opponent or the robot. However, you cannot go on to Scenario #5 without mastering these rules. Whether you play Scenario #4 once (with the rules) or twice (once with, once without) is up to you. If you choose to play without reading the rules, continue using 8 impulses per turn, rather than the 16 impulses the scenario calls for. Set the robot ship's speed at 8.

(B3.0) ENERGY ALLOCATION (Cadet Version)

In the energy allocation rules, players must determine how much power (energy) is available and how to use it most wisely. Like your budget, there will never be enough money (energy) to do everything that you want to do. Unlike the Federal Government's Budget, deficit spending is not allowed. You cannot spend energy that you do not have. You can, as we shall see, use batteries to save some energy for later use.

Energy is calculated and allocated on an Energy Allocation Form. There are two of these included with the game. One is the Cadet Energy Allocation Form, which will be used in Scenarios #4, #5, and #6 (which comprise the "Cadet Game" mentioned below). You will need about a dozen copies of this form to play those scenarios. The other form is the standard Energy Allocation Form. As you can see, it is somewhat more elaborate, with several additional lines. You will need to make several

copies of this form to play Scenarios #7 though #12. You will need one or two copies each time you play.

Each turn during the Energy Allocation Phase, each player, for every starship he controls, must fill out the next column of his Energy Allocation Form. To save forms, you can begin the next game on the leftover areas of the first form. If you win (or lose) after only four turns, then you can use the remaining columns to play another scenario or to play the first scenario over again.

Specific instructions for filling out the form are given on a line by line basis, as follows:

1. WARP ENGINES: This is the amount of warp power available. Simply count the undestroyed warp engine boxes on the ship's SSD. In the Cadet Game, this will be 16 for the Federation and Klingon ships in Scenarios #4 and #5 and 16 for the Romulan ship in Scenario #6. Some ships have 15.

2. IMPULSE POWER: This is the amount of power available from the impulse engines. Simply count the number of undestroyed boxes. (The Cadet cruisers each have two.)

3. REACTOR POWER: This is the amount of power from nuclear reactors. Most Cadet cruisers have two reactor boxes (marked APR for Auxiliary Power Reactor) on their SSD for example. The Romulan and Orion Cadet cruisers have none.

4. TOTAL POWER: This is the total amount of power available from all sources other than batteries. At the start of a scenario, an undamaged Federation Cadet cruiser or Klingon Cadet battlecruiser will have 20 units of power, and a Romulan cadet cruiser only 18. Assuming that the ship has not been damaged, line 4 will have the same number each turn.

5. BATTERIES AVAILABLE: This is the number of batteries holding power available for use. All Cadet ships have two batteries. These are "charged" at the start of the scenario.

6. BATTERIES DISCHARGED: This is the number of batteries previously used. The total of lines 5 and 6 will always equal the number of undestroyed battery boxes on the SSD. At the beginning of a scenario, the batteries will all be charged. Careful players save their batteries until the ship is heavily damaged and use them to fill in, temporarily, for destroyed engines. Skillful players, however, use their batteries constantly for that one additional unit of power that can be critical. Batteries destroyed in combat are presumed to have been those previously discharged, if any such batteries are available.

7. LIFE SUPPORT: In the Cadet Game, your Chief Engineer has allocated power for this function (outside of the 20 points you will have to work with), so you need not worry about it.

8. FIRE CONTROL SCANNERS: As with Life Support, this is ignored in the Cadet Game.

9. PHASERS: Energy for phasers is explained below.

10. TORPEDOES: This line is used for photon torpedoes, plasma torpedoes, disruptor bolts, (and other heavy weapons). The allocation of energy for each weapon (system box) is recorded separately on one line here. The specific method of allocation for each weapon type is covered within the rules on that weapon type (below).

11. SHIELDS: Shields require energy, but your Chief Engineer has already taken care of that.

12. GENERAL SHIELD REINFORCEMENT: Not used in the Cadet Game.

13. REINFORCE SHIELDS: Not used in Cadet Game.

14. MOVEMENT: Energy is required to move the ship. This energy can come from either warp or impulse engines. No more than one unit of power can come from impulse engines, and it will provide one movement point regardless of the size of the ship. Warp energy provides movement at a rate (for the three Cadet ships) of one point of energy to one hex of movement.

For example, to move at a speed of 8 would require one point of impulse power and seven points of warp power or eight points of warp power.

There is a limitation on changing speed. You cannot (in Scenarios #4 through #6) increase your speed by more than eight points between one turn and another. (This assumes that you have power available to accelerate by that much). You can slow down between turns as much as you like. For example, the *Constellation* moves at speed 5 on the first turn. On the second turn, it could select any speed between 13 (5+8=13) and 0.

There is no requirement in the rules that a ship has to move at its top speed every turn. Note also that at higher speeds it is more difficult to change directions. Most importantly, note that power for movement must be paid EVERY turn.

15. DAMAGE CONTROL: Not used in the Cadet Game.

16. RECHARGE BATTERIES: Energy allocated on this line will recharge previously discharged batteries.

For example, on turn 1 you want to use 22 points of power, so you use the 20 from the engines and reactors and 2 points from the batteries. On turn 2, you can use no more than 20 points of power (as the batteries are empty); you might spend two of those points on this line to recharge the empty batteries.

17., 18., 19. These lines are not used in the Cadet Game.

20. TOTAL POWER USED: This line is used as a final mathematical check to make sure that you have allocated the correct amount of power. This number cannot be more than the total of line 4 (Total Power) and line 5 (Batteries Available). It also serves to determine if you have discharged any batteries. A ship is never required to expend all of its energy, but any unused energy on a given turn cannot be used later. (It was never generated; your engineer reduced the output of the engines.)

21. BATTERIES DISCHARGED: This is a record of the number of batteries which were discharged on the current turn. It is used to adjust lines 5 and 6 on the next turn. This number will be the difference between lines 20 and 4, if line 20 is larger. If line 20 is smaller than or equal to line 4, this number will be zero. Keep in mind that each battery holds one point of power.

NOTE: Except when specifically stated to do so, energy does NOT "carry over" from turn to turn.

EXAMPLE: If power was allocated to movement on a given turn, this power could not be used to move the ship on a later turn. If five units of power were allocated to a ship on turn 5 and none on turn 6, the ship would move five hexes on turn 5 and would not move at all on turn 6. If energy was allocated to disruptors on turn 5, and not used, this power is lost and cannot be used to operate the disruptors (or anything else) on any later turn. ONLY in the case of phasers is power carried over from one turn to a later turn (due to the capacitors). In some cases (e.g., photon torpedoes) energy must be expended over a period of two or more turns. The energy expended on each of those turns comes from power generated during each specific turn.

POWER REQUIREMENT RULES FROM PREVIOUSLY LEARNED RULES SECTIONS

(E2.1) ENERGY FOR PHASERS

It costs one point of power to fire a phaser-1, or phaser-2 (or the phaser-G in Graduate Training). The phaser–3 costs one-half point of power for a ship to fire a phaser-3. Shuttlecraft do not use energy allocation; they can fire their phaser-3 once each turn, fighters can fire all the shots of their phaser-G each turn.

(H6.0) PHASER CAPACITORS

All ships have a "phaser capacitor." This is a special storage battery that is equal in capacity to the total amount of power required to fire each of the ship's phasers one time. For example, the Federation Cadet cruiser, with three phaser-1s, has a phaser capacitor rating of 3.

(H6.1) Energy can be held in the phaser capacitor from one turn to the next and can be withdrawn during any impulse to fire the ship's phasers. It can never be withdrawn for any other purpose. This energy can be withdrawn for any phaser. It could be used over a period of three turns to fire the same phaser three times.

(H6.2) Energy can be added to the phaser capacitor during the Energy Allocation Phase, but note that the total energy in the capacitor cannot exceed the capacity of that capacitor.

(H6.3) If a phaser is destroyed, an equivalent portion of the phaser capacitor is also destroyed. Naturally, players may consider the uncharged elements to be destroyed first.

EXAMPLE: The Federation Cadet cruiser has a capacitor of 3. The player allocates three units of power to the capacitor at the start of the first turn. During that turn, two phasers are fired, so there is still one unit of power in the capacitors. On turn 2, only two units can be added to the capacitor as it can only hold three and already has one. During turn 2, only one phaser is fired. On turn 3, the player allocates no energy to the phasers, but could still fire two of them because there are two points remaining in the capacitors. If a phaser is destroyed, the "empty" capacitor is destroyed with it.

(E3.2) ENERGY FOR DISRUPTOR BOLTS

Disruptor bolts are fired as follows. Two units of energy are allocated for each bolt which is to be fired. The bolts are an energy discharge and as such cannot be held from one turn to the next. Any bolts for which energy has been allocated, but which have not been fired by the end of the turn, are lost.

(E3.21) Energy to fire disruptors can be from any power source.

(E3.22) Disruptors are fired during the Fire Direct-Fire Weapons Step of any impulse. There is no counter for a disruptor bolt; their effect is determined by die roll and recorded immediately.

(E3.23) A given disruptor may not fire more than once per turn.

(E4.21) ARMING PHOTON TORPEDOES: To arm a photon torpedo, two points of warp energy must be allocated to a specific photon torpedo tube on each of two consecutive turns. The second turn may be the turn of firing. The Federation Cadet cruiser, which has two photon tubes, would have to expend four units of warp energy on each of two consecutive turns to fire a full spread of two torpedoes. Note that since APR power cannot be used for movement, and since only one unit of impulse power can be used for movement, a Federation ship arming photon torpedoes would be limited to a maximum speed of 13 because 4 of its 16 points of warp power are going to the torpedoes. The remaining 12 points, plus 1 point of impulse power, give a top speed of 13.

(E4.22) HOLDING ARMED PHOTON TORPEDOES: If the arming of a photon torpedo has been completed on a given turn, and the torpedo is not fired on that turn, then the ship must allocate one unit of energy for that tube for each turn until the torpedo is fired. If this "holding energy" is not paid, the torpedo crew will eject the torpedo harmlessly into space. The holding energy can be from any source (on your own ship).

EXAMPLE: On turn 5, two units of energy are allocated to photon tube A. On turn 6, two more units are allocated, and torpedo A is armed. If two units of energy had NOT been allocated on turn 6, the incomplete torpedo would have been expended automatically, and arming would have to begin again later. Assuming that arming was completed on turn 6, the torpedo could have been fired on any impulse of turn 6. If not, then on turn 7 the ship must either expend one unit of energy to hold the torpedo in the tube or eject the torpedo harmlessly into space. If

not fired on turn 7, another unit of energy must be allocated on turn 8 to hold the torpedo in the tube, or again the torpedo would have to be ejected. An armed torpedo can be held indefinitely (well, perhaps not forever, but longer than any one scenario would last), assuming that the power cost is paid each turn.

(E4.23) ENERGY REQUIREMENT: The 4 points of energy to arm a photon torpedo MUST all come from the warp engines. The one unit of power to hold it may come from any source.

COMMENT: At this point you have learned only the basic principles of firing weapons and moving the ship. Later in Cadet Training Handbook, and afterwards in the Captain's Edition, you will find many more things to do with energy, including tractor beams, transporters, reinforcing shields, jamming enemy scanners, and so on. Do not worry about these things now, but by learning good energy management in the next few scenarios, you will be establishing the basis for a successful command later.

DAMAGE ALLOCATION; SCENARIO #4

Count all damage that penetrates a single shield on one step of a single impulse as one volley. Note that damage from drones (and/or plasma torpedoes) and damage from direct-fire weapons is resolved separately because it happens at different points in the impulse. Each time internal damage is scored, the first point must be scored on a weapon (if one is left), the second point must be scored on a warp engine box (if one is left), and the remaining points can be scored on any internal boxes (not other shield boxes and not the drone rack ammunition track). The bridge cannot be destroyed. When there are no boxes (including Excess Damage boxes) remaining except the bridge, the ship is destroyed by one more damage point.

For a robot ship, do not score the "extra" damage on warp engines or weapons unless there are no other boxes remaining. Then score them on warp engine boxes first. Each damage point scored on a warp engine reduces the speed of the ship by one point for the rest of the scenario beginning at the start of the next turn; 12 damage points scored on warp engines will bring the ship to a halt. (This approximates the energy allocation process. It is a little too generous for the robot ship, but this offsets some of the limited aspects of the robot ship system.)

RULES FROM PREVIOUS SCENARIOS

Scenarios #4 to #6 use the movement, turning, combat, and phaser rules from Scenario #1; the shield, seeking weapon, and photon torpedo rules from Scenario #2; the impulse, shield, drone, and disruptor rules from Scenario #3; and the rules for this scenario given above.

Do not use the damage allocation rules from Scenario #2.

THE ROBOT OPPONENT

Star Fleet Battles was designed and intended as a two-player game. The Cadet Training Handbook includes some scenarios that require only one player. (You have just played three of them. The other is #11.) In the Captain's Edition there are scenarios for 1, 2, 3, and more players, although most are intended for two players. To get the most out of *Star Fleet Battles,* you will need to find one or more regular opponents. For those times that you do not have an opponent available (or simply don't feel like company), we have provided a "robot" opponent. He isn't very smart, but he's always available. (Anyway, who would want to be beaten by a robot?) This robot player is used in Scenario #4.

To use the robot, have him take the role of your opponent. Assign him to play one of the ships (or one side) in the scenario. You will move his ship and fire his weapons for him, but YOU MUST DO SO EXACTLY AS THESE RULES DIRECT YOU.

1. The robot ship moves at a speed of 12 every turn. The robot ship will try to fire every weapon every turn. The robot ship will obey the rule prohibiting the firing of a single given weapon twice on two consecutive turns within 1/4-turn (4 impulses on a 16-impulse system).

2. The robot ship will follow your ship (as a seeking weapon) until the first impulse of the turn in which the robot ship is within four hexes of your ship. At that point, the robot ship will fire every weapon that will bear on (can be pointed at) your ship. This is known as the Primary Fire Point and will (theoretically) happen once every turn. If this point has not been reached by the end of the turn, the robot ship will fire all weapons that can bear on the last impulse of the turn.

3. After the Primary Fire Point, the robot ship will cease following your ship and will turn 60° (as soon as his turn mode allows) toward a direction that will allow him to fire any weapons which have not fired yet on that turn. Additional requirements:

　If there are no unfired weapons, do not turn the ship. See 4A below.

　If there are unfired weapons available in both directions, or if a ship could turn either way to bring a given weapon to bear, turn in the direction of the larger number of weapons.

　If there are an equal number of unfired weapons in both directions (or the same distance to a single weapon), toss a coin to decide.

During this part of each turn, the robot ship will fire every unfired weapon as soon as it can be pointed at your ship. (For example, if the only unfired weapons are on the right side and your ship is to the left, the robot will turn left until that weapon can fire.) These are known as Secondary Fire Points.

Regardless of any instructions, the robot ship will not leave the map and will not turn to a course that would take it off the map before it can turn again.

Regardless of any instructions, if the non-robot ship is in a map edge hex and MUST leave the map on the next impulse, the robot ship will fire all weapons which can be fired at the target (within the various rules on firing rates and firing arcs).

4. Instruction #3 will be repeated every time the robot ship fires, until one of two things happens:

　　A. If the robot ship has no more weapons that have not fired, it will continue moving in the same direction until the end of the turn.

　　B. If the end of the turn arrives and there are still unfired weapons available, they do not fire.

5. If the robot ship is armed with drones, it will launch one of them targeted on your ship on the first impulse of every turn.

6. At the end of each turn, all weapons on the robot ship (except drones) are reloaded and the robot ship will repeat instruction #2 through #5. These instructions are repeated every turn until the scenario is over.

7. If the Federation ship is used as a robot ship, it will fire one (and only one) photon torpedo each turn (since they require two turns to arm).

8. If the Romulan KR (see Scenario #6) is used as a robot ship, it will launch its torpedo A on the first impulse (that the target is in the acceptable arc) of the 1st, 4th, 7th, (etc.) turns.

9. After you complete the first six scenarios and leave the Cadet ships for the standard ships, the robot ship rules can be adapted for those standard ships. For example, the Federation heavy cruiser has four photon torpedoes, so two would fire every turn.

CADET SCENARIO #4:
THE *DAKOTA* INCIDENT

Patrolling the Neutral Zone the Federation cruiser *Constellation* receives a distress message from the freighter *SS Dakota*. The freighter has lost engine power and has drifted out of the Neutral Zone into Klingon territory. Announcing its intentions to enter Klingon territory "for humanitarian purposes," the *Constellation* moves in to rescue the freighter's crew. Klingon warships appear and begin firing on the *Constellation*.

PLAYERS: This scenario is designed for one player and the Robot Opponent rules. It can be played with two players, but in that case you should use only one Klingon ship.

REQUIRED MATERIALS: You will need the 16-Impulse Movement Chart; the Basic Impulse Procedure Chart; the map of sectors A and B; the counters for the Klingon D6 battlecruisers *War, Fire,* and *Death;* all eight of the Klingon drone counters; the counter for the Federation cruiser *Constellation*; the counter for Freighter A; one die; some scratch paper (to keep track of damage to the drones); a copy of the SSD for the Federation Cadet cruiser; and two (or three) copies of the SSD for the Klingon Cadet battlecruiser. You should mark each Klingon SSD as to which ship it represents.

MAP: Use the entire A+B map. The Klingon ships cannot leave the map. The Federation ship is immediately destroyed if it tries to leave the map except from the right edge (i.e., from hexes that begin with 28).

SCENARIO SET UP

Freighter *SS Dakota* in hex 1405 (stopped).
Federation cruiser *Constellation* in hex 2817 facing F.
Klingon battlecruiser *War* in hex 0117 facing B.
Klingon battlecruiser *Fire* in hex 0116 facing B.
Klingon battlecruiser *Death* in hex 0115 facing B.
(The use of the third ship is optional; few players can win this scenario against three Klingon battlecruisers, even flown by robots. Indeed, you should play the scenario the first time with only one Klingon ship.)

The Klingon ships are controlled by the Robot Opponent rules. (If you have a human opponent, he uses only one Klingon ship, the *War*.)

For purposes of the acceleration limits, all ships are presumed to have been moving at a speed of 10 on the turn before the scenario begins.

LENGTH: The scenario continues until the *Constellation* has been destroyed or has left the map.

SPEED: The speed of each ship will be determined by the Energy Allocation Procedure at the start of each turn. The drones move at a speed of 16.

SPECIAL RULE: The freighter cannot move or fire weapons. The Klingon ships will not fire at the freighter.

OBJECTIVE: The Federation ship is trying to rescue the crew of the freighter. To accomplish this, the *Constellation* must move through a hex adjacent to the *SS Dakota.* If the *Constellation* does this AND escapes off the map (through a hex beginning with 28), the Federation player wins. Otherwise, the Federation player loses.

ADVICE: It is difficult (if not impossible) to win this scenario without crippling at least one Klingon ship. Try to hit their rear shields, which are much weaker than their front shields.

This scenario becomes dramatically easier with later rules (Instant Replay); for more challenge add more Klingons.

THE NEUTRAL ZONE: On the Federation-Klingon border, the Neutral Zone is an area some 750 parsecs (or 2,400 light years) wide running the length of the border. Both powers may colonize planets in this area and may operate a limited number of armed ships in this area. Bases may be established in the Neutral Zone but may be used by either party. It is important to remember that while the Klingon Empire and United Federation of Planets are not exactly on friendly terms, they are not technically at war. Some trade takes place between the powers, and warships from both powers make port calls at the other's bases. Great efforts are made to "show force" (without actually using it) in order to influence neutral planets in the zone.

Penetrating the Neutral Zone into foreign territory (without the permission of the other side) is a violation (though not a formal act of war) that may be resolved to the satisfaction of the violated party (assuming he detects the violation and that his border patrols can reach the point of that violation in time to do anything about it). In the *Dakota* Incident, the Federation acted within the treaty to perform a humanitarian rescue. As per the treaty, the *Constellation* notified the Klingons where it was going and for what reason. Within the treaty, the Klingons were not required to believe the Federation statement. The local Klingon commander may have suspected a Federation trick (which is not unknown) or may have staged the operation himself in an attempt to embarrass the Federation.

Combat within the Neutral Zone is limited because both participants must endeavor to make it look like the other party's fault. Similarly, both sides want any border violations to appear as the other party's fault.

INSTANT REPLAY: Several variations of this scenario can be played. Play the standard version first. You are not required to play these variations, but may enjoy (and learn from) doing so.

1. Use the third Klingon ship, but have it attack (and pursue) the freighter. Use the freighter rules and weapons from Scenario #3, but the freighter will not move. The *Constellation* must rescue the crew before the freighter is destroyed.

2. This scenario can be played with the other Cadet ships, and (with adjustments in speed and number of impulses) with the standard ships after you have played Scenario #7.

3. Read the transporter rules from Scenario #8, and use them in this scenario. Assume that the freighter crew can be transported by a single transporter operation.

RULES FOR SCENARIO #5

At this point you have learned most of the basic concepts of the game. You have fired at targets, been shot at and damaged (and possibly been destroyed once or twice), and engaged another starship in classic combat.

Now you are ready to play against a live opponent. (If one isn't available, you can proceed with the Robot Opponent rules, but eventually you'll want to find an opponent to play against. The most important thing you will learn in *Star Fleet Battles* is how to have fun while dealing rationally and calmly with someone who is trying his level best to kill you.)

Before you play this scenario, however, you have one final concept to master, that of Damage Allocation. Up to this point, you have scored damage on the ship anywhere you liked, within certain restrictions. In future, you will use a special chart. How you read and use that chart is explained here.

(D4.0) DAMAGE ALLOCATION

When damage is scored on a ship, the effect of that damage must be determined. This is done by allocating this damage to certain areas and systems of the ship by means of a chart.

(D4.1) DETERMINING INTERNAL HITS
Any damage points which penetrate the shields are distributed among the interior systems of the ship by the Damage Allocation Procedure (D4.2) which uses the Cadet Damage Allocation Chart.

The damage records on the SSD are not secret. Any player may examine the SSD of any ship at any time. This is unlike the Energy Allocation Forms, which ARE secret.

(D4.2) DAMAGE ALLOCATION PROCEDURE
This procedure is used to distribute any damage points which have penetrated the shields to the interior of the ship. The points are distributed by the Damage Allocation Chart.

(D4.21) CADET DAMAGE ALLOCATION CHART (DAC): The chart below is used in the Cadet Level game. A more elaborate chart is used in the Standard Level. This chart is required in Cadet Scenarios #5 and #6.

Die Roll	SYSTEM DESTROYED				
	A	**B**	**C**	**D**	**E**
1	Hull	Engine	Other	WPN	Excess Damage
2	Hull	Other	WPN	Engine	Excess Damage
3	Engine	Hull	Other	WPN	Excess Damage
4	Other	Engine	WPN	Hull	Excess Damage
5	WPN	Hull	Other	Engine	Excess Damage
6	Other	WPN	Engine	Hull	Excess Damage

(D4.22) PROCEDURE: First determine the number of damage points which have penetrated the shield. Each damage point must be distributed individually. All damage points scored against a given shield in a given impulse must be resolved together and are collectively known as a "volley."
(D4.221) For each damage point of the volley, roll one die and find the resulting number in the "die roll" column of the Cadet Damage Allocation Chart (D4.21).
(D4.222) Look across (to the right) of the die roll result, and note the system listed in column "A." Normally, the damage point in question is scored against one box of that type. (Remember that each damage point destroys one box.) Players must allocate EACH damage point of a given volley by this procedure. However, if there are no remaining boxes of that type on the target ship's SSD (or never were any), move one column to the right and score the damage point against the system listed in column "B." If there are no remaining boxes of the system type listed in column "B," move on to column "C" and so on. The last column is Excess Damage, that is, damage which destroys the physical structure of the ship. These damage points eventually destroy the ship; see (D4.4).
(D4.223) When a particular system is determined to have been hit, the player owning the target ship MUST mark one of the boxes on his ship identified as being that type of system as destroyed. Thereafter, that box does not exist and cannot be used. Exactly which box is up to the player. On the Cadet Damage Allocation Chart, where many systems are grouped into four categories, the player can select a box from any system within that category.

(D4.3) EXPLANATION OF THE CADET DAMAGE ALLOCATION CHART RESULTS
HULL: This includes the hull boxes on the SSDs.
ENGINE: This can be scored on impulse or warp engines.
WEAPON (WPN): This can be scored on phasers (PH-1/2/3/G), photon torpedoes (PHOT), plasma torpedoes (PL-S/R/F), disruptors (DISR), fusion beams (FUS), plasmatic pulsar devices (PPD), expanding sphere generators (ESG), or drone racks (DRN).
OTHER: This can be scored on transporters (TRAN), laboratories (LAB), auxiliary power reactors (APR), batteries (BTTY), or shuttles (SHTL).
EXCESS DAMAGE: On the Excess Damage Track.
  NOTE: The bridge and security boxes cannot be destroyed in the Cadet Game.

(D4.4) HOW SHIPS ARE DESTROYED
When there are no "Excess Damage" boxes remaining, and one additional excess damage hit is score, the ship is destroyed.
(D4.41) At the instant of destruction, the ship is removed from the game, all personnel on board are assumed to have perished, all drones on the map guided by that ship lose their tracking guidance and are removed, and the ship is considered destroyed for victory purposes.
(D4.42) Self-guiding weapons (plasma torpedoes) are not affected by the destruction of the ship that launched them. They continue to follow their targets without external guidance. This is known as "Romulan Revenge."

(D4.5) EXAMPLE OF SHIELD OPERATION AND DAMAGE ALLOCATION
During the second impulse of the second turn, the Klingon D6 battlecruiser *Destruction* is struck on its #2 shield with two damage points of long-range phaser fire. These points reduce that shield from 12 boxes to 10. During the fourth impulse, a photon torpedo scores a hit on the #1 shield. As photon torpedoes cause eight damage points, this reduces the front shield from 16 boxes to 8 boxes.

Finally, during the eighth impulse, a second Federation cruiser has closed to three hexes away and directly ahead. Both photon torpedoes are fired, but only one hits (eight damage points), and the three phasers score an additional 13 damage points. These 21 damage points are scored as follows:

The first 8 damage points are scored on the forward shield, destroying it. The remaining 13 are scored on interior systems (determined by the Damage Allocation Chart, D4.21) as follows:

Hit #	Die Roll	System Destroyed
1	2	Hull (one of the forward boxes)
2	6	Other (the lab)
3	5	Weapon (the right rear phaser)
4	3	Engine (one impulse box)
5	4	Other (shuttle bay)
6	2	Hull (the second forward box)
7	5	Weapon (the drone rack)
8	1	Hull (one of the rear boxes)
9	3	Engine (the second impulse box)
10	1	Hull (the second rear box)
11	3	Engine (one box from left engine)
12	1	Hull (As there is no more hull, move to the right, which says "Engine." The hit is scored on the right warp engine.)
13	3	Engine (second box from right warp engine)

CADET SCENARIO #5: ENCOUNTER

Starships have many duties, one of which is controlling space by destroying (or threatening to destroy) anything that shouldn't be there. (This is the same principle employed by wet navy ships on Earth for about 30 centuries.) More often than not, two major powers claim the same territory. When that happens, both send a starship to enforce their claim, and the result is the classic single ship duel which is shown in this scenario.

PLAYERS: This scenario is designed for two players, but can be played by one player against the robot ship in Scenario #4.

REQUIRED MATERIALS: You will need the 16-Impulse Movement Chart, the Basic Impulse Procedure Chart, the Basic Sequence of Play, the Cadet Damage Allocation Chart the map of sectors A and B, the counter for the Klingon D6 *Destruction*, four of the Klingon drone counters, the counter for the Federation cruiser *Constellation*, one die, some scratch paper (to keep track of damage to the drones), and copies of the SSD for the Federation Cadet cruiser and the Klingon Cadet battlecruiser.

MAP: Use the entire A+B map. Any ship that leaves the map has "disengaged" (i.e., gone home). It cannot be damaged further, but cannot return to the scenario.

SCENARIO SET UP
Place the Klingon ship in hex 0216 facing B.
Place the Federation ship in hex 2801 facing E.
For purposes of the acceleration limits, both ships were moving at speed 16 on the turn before the scenario begins.

SCENARIO LENGTH: The scenario continues until one ship has been destroyed or has voluntarily left the map. Since the robot ship cannot retreat, you will have to destroy it.

SPEED: The speed of each ship will be determined by the Energy Allocation Procedure at the start of each turn.

OBJECTIVE: The objective of each player is to destroy the opposing ship or to damage it so severely that the owning player will voluntarily leave the map.

DISENGAGEMENT: Except in wartime (when destruction of ships is important to the long-term war effort), most races will allow a damaged ship to leave the map (the Klingons to avoid further damage to their own ship, the Federation for more noble reasons). Either player can, at the end of any impulse, simply announce that he is disengaging. The scenario is then over.

VICTORY: If one ship is destroyed, that player loses and the other player wins. If one ship disengages, that player has a draw (a tie, since he will claim to have damaged the enemy ship equally in his report to the admiral), while the other player has a tactical victory (he wins, but not as conclusively). If both ships are destroyed, both players lose.

ADVICE: The basic principle of starship combat is to deliver the maximum amount of damage against the weakest available shield over the shortest period of time. None of these qualities are absolute; you may often fire from a less than optimum position simply because you cannot reach a better one or because a better firing position would have other tactical liabilities.
The fundamental differences between the two ships will dictate tactics. The faster firing disruptors and short-range phaser-2s call for close in-fighting, while the slower loading photon torpe-

does call for an in-and-out style of combat, avoiding close contact when the torpedoes are reloading.

INSTANT REPLAY: After reading the plasma torpedoes rules in Scenario #6, you can use the Romulan ships in this scenario.

RULES FOR SCENARIO #6

Having now faced direct combat with a ship as powerful as your own, you are ready for an enemy that is just as dangerous and twice as devious. The Romulans use powerful plasma torpedoes as their main weapons; the rules for which are below.
The Romulans use the cloaking device to make their ships difficult to target. This device reduces their electromagnetic emissions to such a low point that the scanners on enemy ships cannot lock onto them. Rules for the cloak are included below.

(FP1.0) PLASMA TORPEDOES

A plasma torpedo is a ball of matter on the brink of being converted to energy. The weapon is extremely powerful. It is used by the Romulans, Gorns, and Interstellar Concordium. Plasma torpedoes are seeking weapons represented by counters which move (like drones) and follow their targets.

(FP1.1) LAUNCHERS
(FP1.11) Each "TORP" box on the SSD represents one plasma torpedo tube and can arm one plasma torpedo at a time. In the Cadet Game all torpedoes are "type-S." The Standard Game includes the more powerful type-R used by the Romulan War Eagle. Graduate Training will introduce ships with the smaller plasma-F torpedo. SFB includes several other types.

(FP1.2) ARMING
(FP1.21) Each plasma torpedo requires three turns to arm. Energy must be allocated to the specific launch tube on each of three consecutive turns. The arming energy can come from any source.
(FP1.22) The energy to arm a plasma-S torpedo must be applied over a three-turn period in EXACTLY these increments: two points on the first turn, two points on the second turn, and four points on the third turn. If not launched on the third turn, the ship must allocate two points of energy on the next turn to hold it (allowing it to be launched on that fourth turn) or the torpedo is ejected harmlessly into space. For an advanced technique, see Reserve Power (H7.2) on page 44.
EXCEPTION: A ship may, in effect, delay the launching of a plasma torpedo by only allocating two units of energy on the third turn of arming. If done, the first turn's energy is lost, and the second and third turns (two energy points each) become the first two turns of the three-turn arming cycle. This is known as the "rolling delay."
(FP1.23) Ships do not begin the scenario with torpedoes armed, but must arm them during the scenario. The robot ship is something of an exception.

(FP1.3) LAUNCHING
Each plasma torpedo may be launched during the Launch Seeking Weapons Step of any impulse during the third turn of arming. If it is not launched during this turn, it may be held over and launched during any subsequent turn. However, holding an armed torpedo requires paying two additional points of energy each turn. Plasma torpedoes CAN be launched in the same hex as their targets.
The torpedo must move directly forward on its first impulse.

(FP1.4) MOVEMENT

Plasma torpedoes are seeking weapons represented by counters and move by rule (F2.0). As the type–S plasma torpedoes in Basic Training have an endurance of 25 hexes, they may (if launched late in the turn) be on the board during parts of two turns (more in Scenarios #1–#6). All plasma torpedoes move at the maximum speed allowed in that scenario (8 in Scenarios #1–#3, 16 in Scenarios #4–#6, and 32 in Scenarios #7–#12), so the torpedoes are actually MORE dangerous (i.e., they stick around longer) in the early scenarios.

(FP1.5) WARHEAD STRENGTH

The warhead strength of a plasma torpedo is determined at the instant of impact, based on two factors: the distance that the torpedo has traveled (it grows weaker the farther it travels) and damage done to it by phasers and (possibly) other effects. The warhead strength after traveling a given range (for the plasma-S torpedo) is shown on the Romulan Cadet cruiser SSD. The damage is applied to the target during the Resolve Seeking Weapons Step (exactly as with drones).

(FP1.6) FIRING AT PLASMA TORPEDOES

Plasma torpedoes may be fired at by only phasers (of any type) just as any ship may be. Every two points of damage by phaser fire reduces the warhead strength by one. Record hits made against a given plasma torpedo, and adjust the strength of the weapon accordingly on impact. (Note that phaser damage is effectively a permanent reduction on that specific torpedo's strength.) Only the phased-energy beam of the phaser can damage a plasma torpedo. No other weapon, including another plasma torpedo, will damage a plasma torpedo. ONLY phasers or impact with a huge object (such as a planet or asteroid) will damage a plasma torpedo.

(FP1.7) SPECIAL COMBAT RULES

If a plasma torpedo has been armed, and the torpedo launch tube is destroyed, the torpedo may still be launched during the next 1/4 turn; otherwise it is lost. It cannot be held. If the 1/4-turn period extends into the next turn, no holding energy is required. Destruction of the plasma torpedo systems box on the SSD destroys the ability of the ship to produce new weapons, but not its ability to launch the one it has already created.

(FP1.8) FEEDBACK

If the torpedo is launched in the same hex as its target and hits its target before the target moves to another hex, the firing ship receives "feedback" damage on the shield facing the target equal to 25% of the warhead's strength (multiply by 0.25 and drop any fraction less than 0.50, raise fractions of 0.50 to the next whole number). This does not reduce the warhead's strength. This feedback damage does not affect any other unit in that hex.

(FP2.0) TYPES OF PLASMA TORPEDOES

Only the type-S torpedo is used in the Cadet Game. Type-R torpedoes (used in the Standard Game) require 2-2-5 energy to be armed and cannot be held. Type-F torpedoes (used in Graduate Training) require 1-1-3 energy to be armed and cost 1 point to hold. Note that the terms "plasma-S" and "type-S plasma" are interchangeable, as with phaser-2 and type-2 phaser. In the Captain's Edition, there are several other types of plasma torpedo (types G and D) which are smaller than the type-S.

(FP3.0) FIRING ARCS AND LAUNCHERS

During the Launch Seeking Weapons Step in which a plasma torpedo is launched, the counter for the torpedo is placed on top of the firing ship. The direction that the counter is faced depends on the launcher. There are two types: fixed and swivel.

(FP3.1) FIXED LAUNCHERS

This type of launcher is used on the Romulan Cadet cruiser and Romulan Cadet KR cruiser (and on the War Eagle in the Standard Game). It is fixed in position and will only launch a torpedo directly ahead; the target must be in the ship's FA firing arc or the torpedo cannot see it and will be lost. If no target is within the valid arc, the torpedo cannot be targeted (a plasma-R, which cannot be held, would have to be ejected into empty space). The counter must be faced in the same direction as the ship.

(FP3.2) SWIVEL MOUNTS

These are not used in Basic Training. This section can be ignored until you complete Scenario #6, but will be needed later.

Some ships have "swivel" tubes allowing their torpedoes to be aimed at targets within a larger arc. In Advanced Training, the Romulan KR uses this system. (The KR used in the Cadet Game uses a fixed launcher.) The left torpedo can be launched in directions 1, 5, and 6 (relative to the ship) and can be locked on any target in the LF and L firing arcs. The right torpedo can be launched in directions 1, 2, and 3 (relative to the ship) and can be locked on any target in the RF and R firing arcs.

(FP4.0) PLASMA TORPEDO GUIDANCE

Plasma torpedoes are self-guiding. Once launched, they do not require the assistance of any ship to find their targets.

(G13.0) THE ROMULAN CLOAKING DEVICE

This is a simplified digest of the somewhat complicated cloaking rules. It will be adequate for all of the scenarios in Cadet Training Handbook. If you do not want to use the cloaking device, or if you want to learn the above rules first before adding the complexity of the cloaking device, then skip these rules and play Scenario #6 immediately. Use the KR cruiser.

(G13.1) At the start of each turn, after the Energy Allocation Phase, the Romulan player announces if his ship is cloaked or uncloaked. If cloaked, use the special "cloak" counter to designate this fact. (It can be placed on the Romulan ship counter or beside it). If cloaked, the ship remains cloaked for the entire turn; if uncloaked, the ship remains uncloaked for the entire turn.

(G13.32) If the Romulan player wants to cloak his War Eagle-class ship, he must pay six points of energy (per turn) to activate the device. A KR-class Cadet ship pays eight points of energy (per turn).

(G13.33) If the Romulan ship is uncloaked, it operates normally. If it was cloaked during the previous turn, it cannot fire or launch weapons on the first impulse of the turn it is uncloaked.

(G13.34) If the Romulan ship is cloaked, it cannot fire any weapons. If any direct-fire weapons are fired at it, take the actual range in hexes (true range), double it, and then add five. Use this range (i.e., the effective range) to determine the damage scored by the weapons. If any drones or plasma torpedoes (launched before or after the ship cloaked) targeted on the cloaked ship enter its hex, roll one die. If the result is 1–4, the seeking weapon misses and is removed from the game. If the result is 5–6, the weapon strikes normally but does only half the normal damage.

Note: See (E3.31) when firing disruptors at a cloaked ship.

This scenario uses these rules from earlier scenarios:
#1: the movement, turning, combat, and phaser rules.
#2: the shield, seeking weapon, and photon torpedo rules.
#3: the impulse, shield, drone, and disruptor rules.
#4: the energy allocation rules.
#5: the damage allocation rules.
#6: the rules for this scenario given above.

CADET SCENARIO #6:
THE ENEMY UNSEEN

PLAYERS: This scenario is designed for two players. It can be played by one; see rules for one player below.

REQUIRED MATERIALS: You will need the 16-Impulse Movement Chart, the Basic Impulse Procedure Chart, the Basic Sequence of Play, the Cadet Damage Allocation Chart (page 19), the map of sectors A and B, the counters for the Federation ship *Constellation* and the Romulan ship *Eagle*, a plasma torpedo counter, a die, some scratch paper (to keep track of damage to the plasma torpedo), a copy of the SSD for the Federation Cadet cruiser, and a copy of the SSD for the Romulan Cadet cruiser.

MAP: Use the entire A+B map. Any ship that leaves the map has "disengaged" (i.e., gone home). It cannot be further damaged, but cannot return to the scenario.

SCENARIO SET UP
Place the Federation cruiser in hex 0101 facing C.
Place the Romulan cruiser in hex 2816 facing F.
For purposes of the acceleration limits, all ships are presumed to have been moving at a speed of 16 on the turn before the scenario begins.

SCENARIO LENGTH: This scenario continues until one ship has been destroyed or has voluntarily left the map.

SPEED: The speed of each ship is determined in the Energy Allocation Phase. The plasma torpedoes move at a speed of 16.

OBJECTIVE: The objective of each player is to destroy the opposing ship or to damage it so severely that the owning player will voluntarily leave the map.

ADVICE: The Romulan ship has limited firepower except for the slow-firing plasma torpedo. The cloaking device allows the ship to survive during the reloading process.

RULES FOR ONE PLAYER: USING THE ROBOT SHIP: It will be almost impossible for the robot rules to control the Romulan ship; it simply isn't smart enough. For the robot rules to control the enemy ship, use these rules
The robot ship will fire at an uncloaking ship on the first impulse. The robot ship will fire any available phasers at a torpedo if it moves within two hexes of the robot ship. This will be done when the Impulse Procedure calls for phasers and when armed phasers have the torpedo in their firing arc; it might happen (with different phasers) on more than one impulse. The robot ship will turn away from the torpedo and move at the best speed away from the torpedo. The robot ship will ignore all other targets until the torpedo strikes or is reduced to zero strength (by phasers and/or range); then it will resume normal operations.

INSTANT REPLAY: THE KLINGON BATTLECRUISER: The Klingons have not always been on friendly terms with the Romulans. The scenario can be played again by replacing the Federation Cadet cruiser with the Klingon Cadet battlecruiser.

INSTANT REPLAY: THE ROMULAN KR CRUISER: In an attempt to outmaneuver the Federation, the Klingons sold the Romulans several older D6 class ships. The Romulans refitted these as KRs. A counter for the KR-class cruiser *"Kestrel"* is included in Cadet Training Handbook, and the SSD is shown below. This ship can cloak (for a cost of eight energy points) and is a much more dangerous opponent than the War Eagle.

INTRODUCTION TO OTHER RACES

The **Kzintis** are a felinoid race. They have common borders with the Lyrans (whom they regard as mortal enemies), Klingons (whom they hate only slightly less than the Lyrans) and Federation (with whom they have fought, but eventually formed an Alliance against the Klingons). Cadet ships are provided for this race, you have already learned all the rules to operate a Kzinti ship. Kzinti ships slightly less maneuverable and use more drones than disruptors. The large numbers of ph-3s do give them a huge volume of fire at close range and create redundancy in their phaser armament.
Kzinti counters are black on a white background.

The **Gorns** are a reptilian race; more about them is found in Advanced Training. They are friends of the Federation and enemies of the Romulans. You already know all of the rules you need to fly the Cadet Gorn, which is armed with Plasma–F torpedoes. Gorns do not have cloaking devices.
Gorn counters are Red on a white background.

The **Orion Pirate** ships in Cadet Training Handbook have photon torpedoes and drone racks, rules you already know. The Orions have no friends, and they operate in virtually everyone's space, as pirates. The Orions in Cadet Training Handbook provide a challenge, but the Orions found in Basic Set are much more dangerous due to certain advanced rules too complex to present here. If you find the Orions too tame, give their ships the cloaking device (as some of their ships have this system). The Cadet Cloak takes 6 points to operate; the larger ship 12 points.
Orion counters are white on a blue background.

CONGRATULATIONS, LIEUTENANT!

Having completed the first six scenarios, you are ready to leave the Cadet ships for the full-size ships of the Standard Game. The remaining scenarios in Cadet Training Handbook use the 32-Impulse Movement Chart and the full-size ships. These are the larger (full page) SSDs in the book; they are slightly modified from the Captain's Edition, deleting items not covered in Cadet Training Handbook. We will continue to use the Federation cruiser *Constellation* and the Klingon battlecruiser *Destruction*, along with the Romulan cruiser *Eagle* and KR-class *Kestrel.* You can also use the Gorn cruiser *Reptilicon* (which has two plasma torpedoes but no cloak) and the Orion Pirate Raider *Queen of Diamonds*. You may decide to use both maps, adjusting the scenarios as needed, to have more room to maneuver.

RULES FOR SCENARIO #7

Before you can use these "real" ships, however, you'll have to learn a few more rules. More importantly, the full-size ships require several changes to rules you have already learned.

(B3.0) ENERGY ALLOCATION

Several additional functions are required in the Standard Game. Note that you must use the Standard Game Energy Allocation Form rather than the Cadet Energy Allocation Form.
STEP 7 LIFE SUPPORT: All of the ships require one point of power for life support. This must be allocated every turn, or the entire crew will perish immediately.
STEP 8 FIRE CONTROL: All of the ships require one point of power for fire control. If this point is not allocated on a given turn, the ship cannot fire weapons during that turn.
STEP 11 SHIELDS: All standard ships require 2 points of power to activate their shields (i.e., for the shield boxes on the SSD to block damage). If this power is not allocated, the shields do not function and are ignored.
STEP 14 MOVEMENT: Speed cannot increase by more than double the speed on the previous turn, or by more than 10, whichever is greater.

(D4.0) DAMAGE ALLOCATION

The standard SSDs require the standard Damage Allocation Chart (DAC) (on page 31) and certain additional rules.
(D4.12) ARMOR: One ship included in Cadet Training Handbook, the Romulan War Eagle, has armor installed in its hull. All damage points which penetrate any of the shields strike the armor. When all armor has been destroyed (by the first five

points of internal damage), use the DAC to distribute further internal damage from then on.
(D4.21) DAMAGE ALLOCATION CHART: Note that the more elaborate standard Damage Allocation Chart must be used with the standard ships. This requires the use of two dice. This chart is used in Scenarios #7 through #12 and some Instant Replays.

(D4.3) DAMAGE ALLOCATION
RESTRICTIONS AND CONDITIONS
Several conditions, restrictions, and special rules are involved in the Damage Allocation Procedure.
(D4.31) BOLD-FACE RESULTS: Note that some of the results on the Damage Allocation Chart are printed in BOLD-underlined type. These results are treated specially. A given BOLD result can only be scored ONE time in each volley. For example, if three hits were scored, and the allocation die roll was a "12" in each case (unlikely, but possible), then these three hits would be scored against: auxiliary control, emergency bridge, and scanners. If the three allocation die rolls had all been "9," then the hits would have been scored against left warp engine, forward hull, and forward hull. Note, however, that the prohibition against scoring a BOLD result twice is against the position of the chart, NOT against the given system. If allocation die rolls of "10" and "4" were obtained, both would be scored against phasers.

(D4.32) SPECIAL WEAPONS CONDITIONS
(D4.321) PHASER DIRECTIONAL HITS: In the case of damage points scored against (not by) phasers, these must be scored against a phaser that is capable of firing in the direction from which the volley came. For example, if a Federation cruiser in hex 0619-A was hit from the direction of hex 0719 (the #2 shield) and a phaser hit was called for, the owning player could mark this hit against either a forward or right phaser since these could fire in this direction. However, the damage point could not be scored against the left or rear phasers (which cannot fire that direction) since the hull protects these from the blast. If such a hit cannot be scored against a weapon bearing in that direction, it is then (and only then) scored against the system in the next column of the Damage Allocation Chart. Hits marked as "any weapon" may be scored against phasers regardless of direction.
ONLY phasers use the "direction" rule for damage allocation.
(D4.322) MULTIPLE WEAPONS: Ships with several types of a given weapon must score every third hit in a volley against one of the more powerful types. In Cadet Training Handbook this only affects those ships which have two kinds of phasers (1 and 2 on the KR, 1 and 3 on the Orion and Lyran ships, 2 and G on the Hydran ship).
(D4.323) ALTERNATE HIT RESULTS: The result "TORP" on the Damage Allocation Chart is applied to disruptor bolt, photon torpedo, and plasma torpedo boxes on the SSDs.
(D4.324) ANY WEAPON HITS: An "any weapon" hit could be scored on a phaser, drone, or torpedo. It could also be scored on a shuttle box occupied by a shuttle, but this isn't required.
(D4.325) SHUTTLE HITS: A shuttle hit can be scored on any shuttle box. The exact box chosen is up to the player, but if it contains a shuttle, that shuttle is also destroyed.

(D4.33) SPECIAL FUNCTION TRACKS: On each SSD are four Special Function Tracks (sensor, scanner, damage control, and excess damage). These will be explained later. The boxes on these tracks are destroyed in order, from best (top or left) to worst (bottom or right). The last box on the sensor, scanner, and damage control tracks is NEVER marked as destroyed. This represents the residual capability (if any) existing after the system has been effectively destroyed. (The last sensor box is always 0, the last scanner box is always 9, and the last damage control box is always 0.)

(D4.34)   MULTI-SHIP   VOLLEYS: It is possible for a volley striking a given shield during a given impulse to include hits scored by two enemy ships firing from two slightly different directions. This causes a problem when "phaser" hits (which have a directional restriction) must be resolved. In such a case, first resolve the damage points from the unit which caused the most damage, then from other units in the order of the damage they caused. The volley is still resolved as a single volley; this procedure governs only the direction of fire for the phaser hits.

(D4.35) SPECIFIC DAMAGE CASES
(D4.351)   HULL   HITS: These are differentiated as Forward and Aft (or Rear) Hull; this is marked on the SSD. Some ships (War Eagle, Orion) have only one group of hull spaces. These "center" hull spaces are destroyed on any hull hit (forward or aft). Other ships have two groups of hull spaces. In this case, the forward group (marked F) is destroyed on "forward" hits, the aft group (marked A or R) on "aft" (or rear) hits. If one group is completely destroyed, its hits are NOT transferred to the other group but go to the next column of the DAC. The Gorn cruiser has three groups of hull spaces; the central group absorbs forward hits after all hull boxes in the forward group are destroyed and aft hits after all boxes in the aft group are destroyed. Some ships, such as the Federation cruiser, have two groups of hull spaces that are in an identical position with respect to forward and aft, but in opposite positions (right versus left) with respect to longitudinal symmetry. Such groups are considered to be the same (as they are marked); they are drawn in this way only for artistic purposes in making the SSDs as symmetrical as possible. Some aft hull boxes are marked with an "R" in one box.
(D4.352)   ENGINE   HITS: Warp engines are designated as "left," "right," or "center;" damage allocated to a left engine can never be transferred to the right or center engine, or vice versa.
(D4.353)   BRIDGE: The bridge can now be destroyed by the DAC. Most ships have an Emergency Bridge and an Auxiliary Control room; each is hit on a separate entry.
(D4.354)   FLAG   BRIDGE: These hits are scored on the Security Stations of Klingon ships. Only the Lyran ship has a Flag Bridge, other ships in Cadet Training Handbook just move to the next column of the DAC.

D4.5) EXAMPLE OF DAMAGE ALLOCATION
   This example shows the resolution of a volley of 55 damage points striking the forward shield of a Klingon D7 battlecruiser. The first 30 are scored on the forward shield, destroying it completely. The remaining 25 are scored on interior systems (determined by the Damage Allocation Chart) as follows:

Hit #	Die Roll	System Destroyed
1	6	One forward hull box
2	7	No cargo on SSD, so one forward hull box
3	9	One left warp engine box
4	2	One bridge box
5	7	No cargo, so one forward hull box
6	4	One phaser Klingon picks right wing phaser
7	10	One phaser, Klingon picks left wing phaser
8	7	No cargo, so the last forward hull box
9	8	One aft hull box
10	11	One disruptor bolt box
11	7	No cargo or forward hull, so one battery
12	6	No forward hull, so one impulse engine box
13	3	One drone rack
14	8	One aft hull box
15	5	One right warp engine box
16	7	No forward hull, one battery
17	8	One aft hull box
18	4	The phaser on this line has been hit, so one transporter
19	5	The right warp engine on the line has been hit, so one aft hull
20	10	The phaser on this line has been hit, so one tractor beam
21	12	Auxiliary control hit
22	7	No cargo or forward hull, so the last battery
23	9	The engine on this line has been hit, and there is no forward hull, or cargo, or batteries, so the hit is scored on the lab
24	7	There is no cargo, forward hull, battery, or center engine, scored on a shuttle box
25	2	Flag bridge (Security Station)

(D6.0) SENSORS AND SCANNERS

   The standard ship SSDs include tracks known as "sensor" and "scanner." These represent the ability of the ship to detect targets and guide weapons. Since you are using these large ships now, you must learn how to use sensors and scanners. Be advised, however, that until these tracks receive damage, there is no practical effect to the way you have been playing.

   Ships use their sensors and scanners to detect, identify, and (sometimes) direct weapons to targets. The ships in *Star Fleet Battles* use a system functionally similar to 20th century radar (although operating on different principles because the ship and its target are usually moving faster than light).

   Sensors and scanners broadcast an electronic pulse which will be reflected back by any target or object. Computers analyze the returns to gain information about the target. Certain types of known targets (asteroids, Klingon frigates, plasma torpedoes) have distinctive patterns that can be recognized.

(D6.1) SENSORS
   Sensors are the detection system (similar to radar) used to "lock-on" to targets. Failure to allocate energy to fire control (B3.0-Step 8) is equivalent to failing to lock-on.

(D6.11)   LOCK-ON: Ships must have a lock-on to their target to fire their weapons with their full effect. Ships roll for lock-on in the Sensor Lock-On Phase of each turn.
   Roll a single die, and if the result is equal to or less than the highest undestroyed number on the sensor track of the SSD, the lock-on is achieved. Note that all ships in Cadet Training Handbook have a "6" in the first box of their sensor track, and until damaged, sensor lock-on is automatic. Also note that there can be no lock-on to a cloaked target. See (G13.0) for details.

(D6.12)   EFFECTS   OF   FAILING   TO   LOCK-ON: If a lock-on is not achieved, then the following restrictions are placed on the ship which failed to achieve lock-on.
(D6.121) The failing ship may not launch seeking weapons.
(D6.122) Any drones on the map controlled by the failing ship are removed from the map.
(D6.123)   The firing range to all targets for other weapons is doubled. This doubling refers to the true range, not the range after being adjusted for scanners (D6.2). Note that this is part of, not in addition to, the effect for firing on a cloaked ship. The doubled-range part of that penalty represents the lack of a lock-on; the "add five" part represents additional cloak advantages.

(D6.13) CONDITIONS REGARDING SENSORS
(D6.131) Ships which have launched drones must attempt to achieve a lock-on every turn that they have drones on the map. Failure to achieve a lock-on causes the drones to lose tracking of their target, and they are removed from the map.
(D6.132) Sensors are used to control drones. The ships in Cadet Training Handbook can control a number of drones equal to their sensor rating (usually six). Note that the term "control" is not absolute; the drones must be moved within the rules (F2.0).

(D6.2) SCANNERS
Scanners are the weapons sighting systems of the ship. They are used to aim and fire all direct-fire weapons.

(D6.21) SCANNER ADJUSTMENT: The scanner adjustment factor is the lowest numbered undestroyed box on the scanner track. This is initially "0" for all ships in Cadet Training Handbook. When computing firing range, always add the scanner adjustment factor to the actual range in hexes (which may have been doubled due to failure to achieve sensor lock-on (D6.1)). Note, however, that as this factor is zero until the scanner track has taken considerable damage, it can be ignored until then.
EXAMPLE: A Klingon D7 battlecruiser has taken two hits on its sensors (reducing this factor from 6 to 5) and three hits on its scanners (increasing this number from 0 to 3). The Klingon wishes to fire. At the start of the turn, he rolled for sensor lock-on. He rolled a "6" and did not achieve lock-on. The true range is 3 hexes. This is doubled to 6 (because there was no lock-on), and then the scanner adjustment factor of 3 is added to that, resulting in an effective range of 9. At this range, the phasers of the battlecruiser will do little, if any, damage.
Note also that a cloaking device could increase the effective range by five more hexes.

WEAPONS

(E1.0) DIRECT-FIRE WEAPONS: Standard ships have approximately twice as many weapons as the Cadet ships, but do not have twice as much power.

(FD4.21) DRONE RACKS: The Klingon D7 has two drone racks. Each turn, the D7 can launch one drone; this can be launched from either rack. The Orion Pirate Raider in Scenario #8, or a Kzinti ship, can launch one drone from each rack each turn.

(G13.0) CLOAKING DEVICES

On the standard War Eagle, the cost to operate the cloaking device (each turn) is six energy points. The cost for the KR is 20 energy points.
The Cadet cloak rules in Scenario #6 require a ship to remain cloaked (or uncloaked) for an entire turn. The Standard Rules used in Advanced Training allow a ship to cloak or uncloak during the turn. This reduces the amount of time that the ship is vulnerable to damage and reduces the predictability of when the ship will appear and fire.

CLOAKING DURING THE TURN: If the Romulan player pays the energy for the activation of the cloaking device at the start of a turn, he is not required to turn the device on at the start of the turn. He can activate it at any later point in the turn. To do this, he announces (in the Cloak/Uncloak Step) that he is cloaking. From that point and for the remainder of the turn, the ship is under all restrictions of cloaking. During the next four impulses (including the impulse on which the announcement was

made), the cloaking ship "fades out" of view. The other (uncloaked) ships in the scenario retain their lock-on during this period, but one is added to the range for each impulse of "fading out" for purposes of direct-fire weapons. After the fade-out period, the ship is completely cloaked and the lock-ons are lost.

UNCLOAKING DURING THE TURN: If the Romulan ship begins the turn cloaked (having paid energy for the activation of the device), it can uncloak during the turn. This is accomplished as follows: In the Cloak/Uncloak Step of any impulse, the Romulan player can announce that his ship is uncloaking. He must then go through a four-impulse "fade-in" period (which includes the impulse of the announcement). During the fade-in period, the ship is under the same restrictions as when it was cloaked. The other ships on the board obtain a lock-on to the cloaked ship when the announcement is made. One is added to the range for each remaining impulse of fade-in (4 on the first, 3 on the second, 2 on the third, 1 on the last) for purposes of direct-fire weapons (instead of the 5 added when the ship is fully cloaked).
No cloaked ship may fire any weapon while cloaked, cloaking, or uncloaking.

WHEN USING THESE RULES: Certain adjustments must be made in the Cadet cloaking rules from Scenario #6. If the ship was not cloaked on one turn, but the player wants to cloak on the next turn, he must pay for the energy during Energy Allocation, but then begins fading out on impulse #1.
If the ship was cloaked on one turn, and did not pay the energy to remain cloaked on the next turn, the ship fades in during the first four impulses of that next turn.

THE KLINGON D6 BATTLECRUISER

The D6 battlecruiser is an older version of the D7 (or the D7 is a newer version of the D6, take your pick). The only differences are that the D6 does not have the two wing phasers, has only two APRs, and cannot fire its disruptors beyond 22 hexes. The Klingon Deep Space Fleet continued to use older D6 ships along side the newer D7s. One shipyard continued to produce D6s for several decades after the D7 appeared. Several dozen retired D6 battlecruisers were stored by the Klingons for a military emergency.

SCENARIO #7: SINGLE COMBAT

This scenario is identical to Scenario #5, except that you use the Commander's SSDs for the Federation cruiser and Klingon D7 battlecruiser, the 32-Impulse Movement Chart, and the modified rules above.
The drones and plasma torpedoes move at a speed of 32.
For purposes of acceleration, the ships were moving at a speed of 20 on the previous turn.
Note that the maximum speed for a ship is 31.
Scenarios #7-#12 use the Advanced Sequence of Play.

INSTANT REPLAY
This scenario can be played with any two ships provided in Cadet Training Handbook. These include the Federation cruiser, the Klingon D7 (or D6) battlecruiser, the Romulan War Eagle, the Romulan KR, the Gorn cruiser, and the Orion Pirate Raider. It is recommended, however, that you do not use the Orion ship until you have played Scenario #8. Do not use the Lyran, Hydran, or Interstellar Concordium ships until you have read their rules in Graduate Training.
You could use all four map segments for more fighting room.

CONGRATULATIONS, LIEUTENANT COMMANDER!

You have now played your first scenario (preferably several) with the full-sized ships and rules. Up to this point, you have played the scenarios and learned the rules in a rigid order. Having done that to this point, you no longer have to follow the set path. You could even, from this point, move directly to *Star Fleet Battles* Basic Set (although it will be easier if you remain with Cadet Training Handbook for at least one more scenario, that being #10).

Scenario #10 provides advanced combat techniques. You should, in any case, play that scenario (several times). Afterwards, you will even be able to play a decent battle against a veteran *Star Fleet Battles* player you might meet at the local hobby store (so long as he is not particularly bloodthirsty, gives you a slightly larger ship, and will agree not to use the even more advanced rules that you haven't seen yet).

The other four scenarios remaining in Cadet Training Handbook illustrate various advanced techniques, tactics, and rules from Basic Set, giving you an idea what the *Star Fleet Battles* game system has to offer you. Those four scenarios can be played in any order, before or after Scenario #10, before or after you move on to Basic Set.

Scenario #8, for example, includes rather simplified rules for tractor beams, transporters, and marines. These rules can be used in the other scenarios from Cadet Training Handbook, but are simplified from those used in the Captain's Edition.

Scenario #9 includes a few rules for shuttlecraft, enough to give you an idea of their possibilities. The Captain's Edition includes many additional options and possibilities.

Scenario #11 is a special challenge — THE PLANET KILLER, an almost indestructible monster that threatens an inhabited planet. This solitaire (one-player) scenario is a powerful test of your skills.

Scenario #12 is another special challenge, in which you will fight three smaller enemy ships. We will use the Cadet ships to simulate frigates. This is a challenge because while you have the firepower to crush any one of the enemy ships, you can't kill them all at once, and the one you are not shooting at is sneaking up behind you!

RULES FOR SCENARIO #8

This scenario involves a pirate raid on a convoy of freighters. The pirate will attempt to capture freighters by boarding them or holding them in a tractor beam.

To play this scenario, you will have to learn several new rules. These include how to handle different movement costs, a simplified version of the tractor beam rules, transporters, and a simplified version of the boarding party combat rules.

(B3.2) FRACTIONAL ACCOUNTING

This section is entirely optional, and you may wish to skip it for now and return to it later. You will find it in Basic Set and it is important to playing Captain's Edition *Star Fleet Battles.*

Many functions in the game require less than one unit of power. In this scenario, for example, the Orion ship needs only 2/3 of an energy point to move one hex, only 1/2 of an energy point to fire a phaser-3, and only 1/5 of an energy point to operate a single transporter.

As fractions are rounded up, however, the act of moving 10 hexes (6-2/3 energy points rounded to 7), firing one phaser-3 (1/2 energy point rounded to 1), and operating two transporters (2/5 energy point rounded to 1) would require 9 points of energy.

Players with passing mathematical skills can gain the effect of slightly more power by calculating all power use in fractions, rather than whole numbers. Using fractions (6.667 + 0.50 + 0.40 = 7.567 rounded to 8) you could save one energy point above, enough to fire a phaser-1. Batteries can hold less than a full point of power, so you could leave the above answer at 7.567 and store .433 points of power in a battery, if you wish.

(C2.12) ENERGY COST OF MOVEMENT

Most of the ships in Cadet Training Handbook are about the same size and require about the same energy for movement (one point of power per hex moved). The hundreds of ships in the Captain's Edition include units which cost from 1/10 of a warp energy point per hex to two warp energy points per hex.

This concept is portrayed in Cadet Training Handbook by the Orion Pirate Raider, which requires 2/3 of a warp energy point to move one hex. This is a simple mathematical relationship; for example, six hexes of movement require four warp energy points. A chart on the bottom of the pirate SSD shows these calculations. Regardless of the ship's movement cost, one point of impulse power always produces one point of movement. However, no more than one point of impulse power can be used for movement purposes.

Unless you are using the fractional accounting, round all movement costs to the next higher whole number, e.g., 1-1/3 = 2.

(G7.0) TRACTOR BEAMS

Tractor beams are magnetic force beams that are used to retrieve small objects and tow starships.

(G7.1) GENERAL RULE
(G7.11) Tractor beams may be used at any speed.
(G7.12) Tractor beams may be activated during any impulse of a turn. Once attached, they can be released during any impulse. Once released, a given tractor beam cannot be reused on that turn. This is done in the Tractor Beam Step.
(G7.13) Each tractor beam on a given ship may only be used once each turn. Once released, it cannot be used again on that turn, or on a subsequent turn if within eight impulses of release.
(G7.14) There are no firing arcs for tractor beams (they all may be used in any direction).
(G7.15) One unit of energy is required to operate each of a ship's tractor beams.

(G7.2) USE OF TRACTOR BEAMS

(G7.21) Tractor beams are used to tow starships; see below.

(G7.26) Tractor beams cannot be used to hold a plasma torpedo. They can be used to hold drones and are a powerful defense against those weapons.

(G7.27) Objects held in a tractor beam cannot be forced into contact with another unit.

(G7.3) OPERATIONS

Gaining a tractor beam hold on another ship or object is referred to as gaining a tractor link to the ship or object. This may be attempted during any impulse, but if a tractor link is made, it must be re-established at the start of each turn or it is lost. It is not mandatory to attempt to re-establish a tractor link. Once a tractor link is established, it can only be broken by rule (G7.4) below. It cannot be broken by the application of speed. It could be voluntarily released (G7.12) by the ship operating it.

(G7.31) RANGE: Tractor beams may only be used against ships or other objects in adjacent hexes or in the same hex. If a tractor link is made, the tractored object will follow the tractoring ship (maintaining a parallel course) for as long as the tractor link is maintained. The courses are parallel in relation to the map grid, not in relation to each other. If a ship that is holding a object in a tractor changes facing, the held object does not "swing" through a 60° arc to maintain the same orientation.

(G7.32) TOWING: In Cadet Training Handbook, tractor beams are used to tow freighters (not other starships) in the Convoy Raid scenario (#8). They cannot be used (in Cadet Training Handbook) to hold an enemy ship. (The rules for that are very complex and can wait for Basic Set) They can also be used to hold drones and prevent them from hitting your ship. They can be used to hold shuttlecraft. Tractor beams cannot be used to hold your own seeking weapons as this interferes with their guidance.

(G7.33) RELEASING A TRACTOR BEAM: If a tractor beam is attached to an object, it can be released voluntarily by the owning player during the Tractor Beam Step of any impulse in the turn. If energy is not allocated at the start of the next turn, the tractor beam is released. A ship released from a tractor beam operates normally for the remainder of the turn, moving with a speed equal to that with which it would have had without the beam. The turn mode (and in Scenario #10 the sideslip mode) is not affected.

(G7.34) DESTRUCTION OF TRACTOR BEAMS: If tractor beam boxes on the SSD are destroyed during the course of a turn to the extent that a ship does not have as many tractor beam boxes as it has tractor beam links established, beams must be voluntarily released until there is a working box (with power supplied to it) for each beam still operating.

(G7.4) TRACTORING A STARSHIP

When a ship is holding a freighter in a tractor beam, the movement cost of the starship is increased by 1/3 for each freighter towed. The freighter's engines are automatically shut down when the tractor link is established. If this is done during a turn, the movement cost of the pirate ship must be recalculated immediately. Take the total cost of the pirate ship and all freighters it is towing. Divide this into the warp power allocated to movement by the pirate ship. Then add one if a point of impulse power was applied.

EXAMPLE: The pirate ship has allocated 10 points of warp energy (producing 15 points of movement) and 1 point of impulse energy (producing 1 point of movement). The pirate tractors a freighter. The movement is immediately recalculated based on a movement cost of one (2/3 + 1/3) to slow the pirate to a speed of 11 (10 + 1). The pirate uses a speed of 11 for the rest of the turn (unless it releases the freighter or tractors another freighter).

When a freighter (or some other object) is held in a tractor beam by one ship, and a tractor beam from a second ship is linked to that freighter, both tractor beam links are broken and those tractor beams cannot be used for the rest of the turn. Either ship could re-establish a tractor link using a different beam.

(G7.5) CAPTURING SHUTTLES AND DRONES

(G7.51) The conditions for gaining a tractor link to an enemy shuttle or drone are as follows: The capturing ship must be in the same or adjacent hex, have an operable tractor beam, and have one point of power allocated to it.

(G7.52) If a drone is tractored and held until its fuel is exhausted, it is removed from play. If a drone is held in a tractor beam by a ship on the same side as the ship that launched it, it loses its tracking and is removed from the board. Enemy seeking weapons do not lose tracking.

(G7.53) Drones cannot be destroyed by being towed by a tractor beam. (In Cadet Training Handbook neither can shuttles.)

(G8.0) TRANSPORTERS

Most starships in the game contain transporters which are used to move personnel and equipment from one starship to another over short distances. Transporters may be used in Cadet Training Handbook to transport boarding parties.

(G8.1) GENERAL RULES

(G8.11) Transporters are capable of picking up people and moving them to their location or transporting people at the location of the transporter to another location. There does not have to be a transporter unit on both ends of the transfer. Transporting may be done during any impulse, but each transporter may be used only once per turn.

(G8.12) In order to use transporters, the given ship must have undestroyed transporter boxes on its SSD sheet.

(G8.13) It requires one unit of energy to operate up to five of a given ship's transporters. If a ship has 6–10 transporters, two units of energy must be allocated if all are to be used. Each transporter can transport one boarding party. If using fractional accounting, each transporter requires 1/5 of an energy point.

(G8.14) The maximum range of transporters is five (5) hexes.

(G8.15) Transporters can never be used to beam enemy personnel or objects (including shuttle pilots, cloaking devices, etc.) without their permission (due to special security systems).

(G8.2) EFFECT OF SHIELDS ON TRANSPORTERS

(G8.21) Transporters will not function through shields, so a ship may have to drop one or more shields to use a transporter. Transporters work on a direct line from ship to ship. To determine which shield must be dropped or destroyed in order to use transporters, use the same rules as are used for direct-fire weapons, i.e., (D3.4) on page #12.

(G8.22) Players may, at their option, voluntarily drop any specific shield to facilitate the use of transporters. A given shield can be dropped during any impulse, but it must remain dropped for one-quarter of a turn, even if this extends into the next turn.

(G8.23) General shield reinforcement (introduced in Scenario #10) will block the use of transporters, even through shields that are voluntarily dropped or destroyed by damage. If a player announces that he is trying to transport boarding parties onto an enemy ship, and the target ship still has general reinforcement shielding power available, then the attempt fails with no loss or damage to either side. However, as each transporter may only be used once in a given turn, no further attempt could be made with that specific transporter until the following turn. Note that reinforcement can be dropped, as shields can, under (G8.22).

(G8.24) In the event that the line of sight passes exactly through the junction of two shields, either may be dropped by the owning player to facilitate the use of transporters. If enemy boarding parties are trying to board such a ship, use the same procedures as determining the shield that would be hit, i.e., (D3.4) on page #12.

(D7.0) BOARDING PARTY COMBAT

This section is somewhat simplified from the Captain's Edition. Ships have a limited ability to transport boarding parties onto enemy ships or freighters for the purpose of capturing them. Each boarding party consists of six humans (or five Gorns, who are larger and take more space on the transporter platform). As a practical matter, capturing an enemy starship is very difficult but not impossible.

Boarding parties (BPs) arrive by transporter during various impulses of the turn. Boarding party combat is resolved at the end of the turn, after all of the impulses.

To resolve boarding party combat, conduct the following steps for each ship that has boarding parties from both sides:

1. Determine how many BPs each side has on board.

2. If one side has more than 10 BPs, divide these into a group of 10 and a group of less than 10 (whatever is left over; if there are more than 20, there will be two groups of 10 plus a smaller group, etc.).

3. For each group, roll one die and cross-index the result with the number of BPs in the group on the chart below.

DIE ROLL	NUMBER OF BOARDING PARTIES									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	0	0	0	0	1	1	1	1	1	1
2	0	0	1	1	1	1	1	2	2	2
3	0	1	1	1	2	2	2	2	3	3
4	0	1	1	2	2	2	3	3	4	4
5	1	1	2	2	3	3	4	4	5	5
6	1	1	2	2	3	4	4	5	5	6

4. The result is the number of "casualty points," that is, the number of enemy boarding parties eliminated. Both sides attack simultaneously.

EXAMPLE: Fourteen Klingon boarding parties are fighting 8 Federation boarding parties. The Federation player rolls a 5, producing 4 casualties. The Klingon player rolls a 3 for his group of 10 (3 casualties) and a 2 for his group of 4 (producing 1 casualty). The Federation is reduced from 8 boarding parties to 4, the Klingons from 14 to 10.

5. If all enemy boarding parties have been eliminated and additional casualty points have been scored, then each one of those points indicates one control station (Bridge, Emergency Bridge, Auxiliary Control) has been captured. (For example, to capture the Federation cruiser it would be necessary to capture six control stations (two bridge boxes, two emergency bridge boxes, and two auxiliary control boxes on the SSD) by scoring six casualty points over and above the number required to eliminate the boarding parties. When all enemy-held control stations have been captured, the ship has been captured. (Freighters have two control stations.)

6. A captured enemy ship may be moved and controlled by the capturing player, but the weapons cannot be fired because of the coded computer interlocks. These can be decoded, but this will take more time than is represented in one scenario.

SCENARIO #8: PIRATE RAID

PLAYERS: Two. One player controls the pirate ship, the other controls the freighters and one starship. The starship can be Federation, Klingon, Romulan, or Gorn. The first time you play the scenario, use the ship you are most familiar with.

REQUIRED MATERIALS: You will need the 32-Impulse Movement Chart, the Advanced Impulse Procedure Chart and Sequence of Play, the map, the counter and SSD for the ship you selected, the counters for all four freighters, the counter for the Orion Pirate Raider, the eight Klingon drone counters (these will be used by the pirate), one die, the Damage Allocation Chart, some scratch paper (to keep track of damage to the drones and freighters), and a copy of the SSD for the Orion Pirate Raider.

MAP: This scenario uses the sector A and B map. The freighters and the defending starship cannot voluntarily leave the map. The pirate can leave the map and can tow freighters off the map or capture them and move them off the map.

SCENARIO SET UP: The four freighters are placed (one each) in hexes 0116, 0117, 0216, and 0215. All are headed in direction B at a speed of two hexes per turn. Each freighter has two boarding parties (which cannot leave the freighter) and two control stations. Otherwise, the freighters operate as in Scenario #3 (in the section marked "And Even Later").

The Pirate Raider is placed in hex 0201 facing C.

The defending starship is placed in hex 2817 facing in direction F on the first impulse of turn 6.

For purposes of the acceleration limits, the defending and pirate ships are presumed to have been moving at a speed of 30 on the turn before the scenario begins.

LENGTH: The scenario will probably end very shortly after the defending starship enters the map. In any case the pirate must leave the map before the end of turn 12, or it will be considered destroyed by additional arriving fleet units.

SPECIAL RULE: The defending starship cannot fire at the freighters, even if they have been captured.

OBJECTIVE: The Orion Pirate Raider is trying to capture freighters. To capture a freighter, the pirate must move it off the map. This can be done by towing it off the map by tractor beam or by capturing it with boarding parties and piloting it off the map. The pirate wins the scenario if he captures three or more freighters. If he captures one or two, he breaks even.

ADVICE FOR THE PIRATE: Use your weapons and drones to eliminate the freighter shields. Transport boarding parties to capture one or two freighters. Grab one or two more with tractor beams and head for the edge of the map. Don't leave the map until you have to as your weapons will be needed to slow down the starship. When it appears, launch drones to slow him down.

INSTANT REPLAY: If the pirate wins too easily, have the starship appear on the fifth turn or even earlier. Another alternative is to roll one die at the start of every turn. The starship appears when a "1" is rolled (after that, stop rolling).
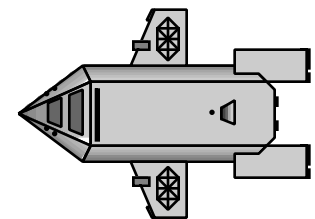
ORION RAIDER CLASS LIGHT CRUISER

RULES FOR SCENARIO #9

We're glad that you have decided to play all of the remaining scenarios. This one will teach you two of the uses for shuttlecraft. As previously noted, Basic Set has several additional options.

(J1.0) GENERAL SHUTTLECRAFT RULES

Shuttlecraft are not ships, but a separate type of unit. They operate within a different set of rules, which are presented here.

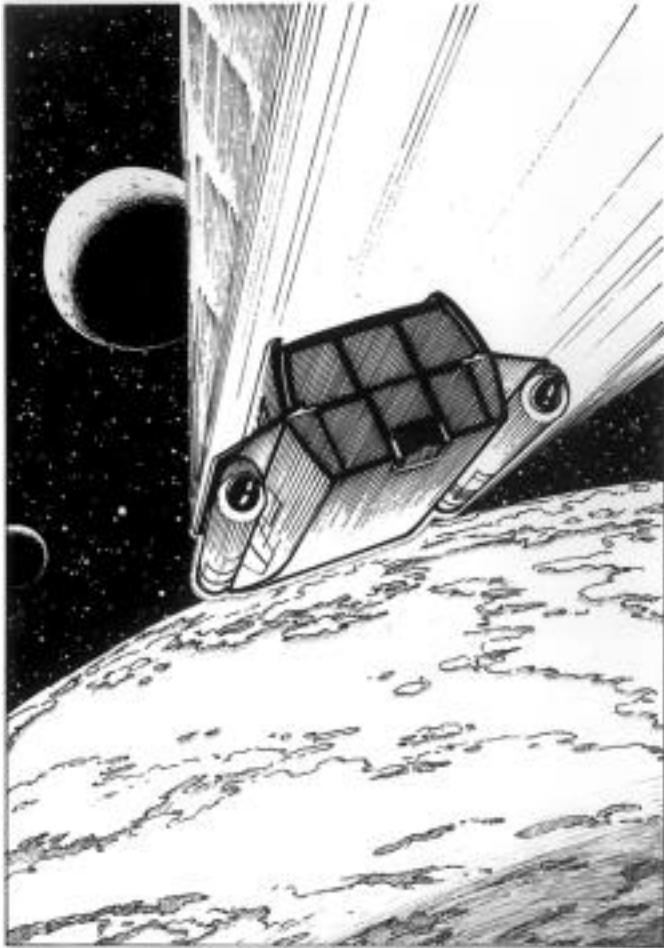Shuttlecraft are small (10 meters long) spaceships carried inside the larger starships. Their primary purpose is administrative: carrying personnel, supplies, equipment, mail, etc. from the ship to other ships or the surface of planets. In combat situations these craft are often used for many other purposes.

In Basic Set you will encounter several types of shuttlecraft (including "fighters"); in Cadet Training Handbook only the common "administrative shuttle" is used here. The term "shuttle" in Cadet Training Module refers to these craft.

Cadet Training Handbook generally provides only one shuttle counter per race. If you need more, you can "borrow" others from races not included in the scenario being played.

(J1.1) ENERGY
Shuttles do not fill out an Energy Allocation Form. Their engine provides energy to move and fire their phaser.

(J1.2) MOVEMENT
The movement rules for shuttles are considerably simpler than those for ships.

(J1.21)   SPEED: Administrative shuttles have a maximum speed of six hexes per turn. They may move at any speed up to this maximum, but must announce their speed at the start of each turn and remain at this speed for the entire turn. If no speed is announced, the maximum speed is assumed.

(J1.22)   ACCELERATION: A shuttle may accelerate (from its speed on the previous turn) by up to one-half of its maximum movement (round up) at the start of a given turn (up to its maximum speed). It may be launched at its maximum speed. It may decelerate by any amount.

(J1.23)   TURN   MODE: All administrative shuttles have a turn mode of 1 at all speeds. Note that while a shuttle can be launched in any direction, it must move one hex directly forward before it has satisfied its turn mode.

(J1.3) COMBAT
(J1.31)   Administrative shuttles have a single phaser-3 that can be fired in any direction.

(J1.32)   Shuttles can be fired at by any weapons. As they do not have SSD sheets, however, damage is not distributed or allocated, but simply recorded for each shuttle. Administrative shuttles are destroyed when they receive six damage points. The Commander's SSD sheets include check-off tracks for each shuttle carried by the ship. When six or more points of damage are scored on a given shuttle, that shuttle is destroyed and removed from the game.

(J1.33) A shuttle is considered "crippled" when the number of damage points scored on it equals three (or more) points. When an administrative shuttle is crippled, its maximum speed is reduced to three hexes per turn, but there is no other effect. If the shuttle was moving faster than a speed of 3, it immediately slows to that speed.

(J1.34) A shuttle can be fired at (with direct-fire weapons) on the impulse it is launched.

(J1.35)   For purposes of Cadet Training Handbook, shuttlecraft cannot be fired at with direct-fire weapons from a range of more than five hexes.

(J1.4) RECORD KEEPING
Each SHTL box on the SSD represents one administrative shuttle. When a shuttle is launched, the corresponding box on the SSD is marked with an "L" (or any other convenient mark), indicating that the shuttle has been launched. The number of undestroyed boxes on a SSD will indicate the carrying capacity of the ship, while the number of boxes without these marks will indicate the number of shuttles still on board the ship. When a shuttle hit is scored, the owning player may score it against a shuttle box that contains a shuttle (destroying the shuttle and the capacity to operate it) or one that does not currently contain a shuttle destroying its capacity to operate one, at his option.

(J1.5) LAUNCHING SHUTTLES
A given ship may not launch or recover more than one shuttle per bay during any two consecutive impulses. Note that a ship can launch OR recover a shuttle; it cannot do both at the same time. Shuttles can be launched facing in any direction.

(J1.6) RECOVERING SHUTTLES
Shuttles can be recovered (that is, taken aboard a ship) either by being hauled aboard by a tractor beam or by landing on the flight deck under their own power.

(J1.61)   LANDING   ABOARD: A shuttle may only land aboard a ship under its own power if both the ship and the shuttle are in the same hex and the ship is moving at the maximum speed of the shuttle or less. Note that this procedure is used to land aboard friendly ships; it cannot be used to land on enemy ships in Cadet Training Handbook. Only manned shuttles (those with a

crew on board) can land aboard by this procedure. Suicide shuttles (below) cannot land by this (or any) method. A shuttle cannot land unless there is an empty shuttle box in the bay.

(J1.62) LANDING VIA TRACTOR BEAM: A ship can recover a friendly shuttle using a tractor beam, regardless of the relative speeds of the ship and shuttle, if all of the following conditions are met:

1. The ship has a working tractor beam, power has been supplied to that tractor beam, and the tractor beam is not being used for any other purpose during that turn.

2. The ship is not moving at more than twice the maximum speed of the shuttle.

3. The ship has an empty shuttle box in one of its bays.

(J1.621) PROCEDURE: The tractor can be attached to the shuttle at a range of one hex. At the instant the tractor is attached, the shuttle's engines are shut down and the ship controls the shuttle. The shuttle (now held in the tractor beam) moves in the same direction and speed as the ship (paralleling its course) and can be pulled into the hex with the ship (by the tractor beam) on the next impulse during the Recover Shuttlecraft Step. At that point, it is assumed to be landed on the ship.

(J1.63) SHUTTLES LANDING ON ENEMY SHIPS: This cannot happen in Cadet Training Handbook. The somewhat complex rules to resolve this situation are included in Basic Set.

(J2.0) ADMINISTRATIVE SHUTTLES

Almost all starships in the game have boxes on their SSD sheets marked "shuttle." Each holds one administrative shuttle.

(J2.1) GENERAL

All administrative shuttles are identical, regardless of the race using them. (This is a generalization for the purpose of simplicity, but within the game the various types of administrative shuttles are operationally identical.) All administrative shuttles have a maximum speed of six hexes per turn, have a turn mode of 1, are armed with a single phaser-3, and are destroyed by the sixth damage point scored against them.

(J2.2) MISSIONS

Administrative shuttles may be used for several missions. Two of these are shown in Cadet Training Handbook.

(J2.21) STANDARD administrative shuttles may be used for transport, reconnaissance, and combat duties.

(J2.211) An administrative shuttle, in its standard configuration, can carry one crew unit (not relevant to Cadet Training Handbook) or two boarding parties (a total of about 10 people).

(J2.212) In the monster scenario (#11), an administrative shuttle could be used to gain information about the monster. Each administrative shuttle on the map counts as one "lab" box, but at the range of the shuttlecraft, not the range of the ship.

(J2.213) Administrative shuttles carry a phaser-3 (360° firing arc) and can be used to provide additional protection from seeking weapons or enemy shuttlecraft. In a close-range ship-to-ship duel, however, they cannot be expected to survive for long. They can fire their phaser once per turn but not within 1/4-turn of when it was fired on the previous turn. They cannot fire their phaser within 1/4-turn of being launched. See also (J1.31)

(J2.22) SUICIDE SHUTTLES: For this use the shuttle is unarmed and unmanned. It is loaded with a high yield anti-matter bomb, which has a force of up to 18 damage points. It is otherwise considered to be a seeking weapon (a drone) and moves by (F2.0). It has unlimited endurance.

A suicide shuttle can be targeted on an enemy ship, shuttle-craft, or drone. It cannot be targeted on a plasma torpedo.

(J2.221) In order to launch a suicide shuttle, the launching ship must expend 1–3 energy points per turn for three turns. The third turn can be the turn of launching. If not launched on the third turn, it costs one point of energy per turn to keep it on board. If this energy is not paid, the suicide bomb is deactivated but the shuttle cannot be used on that turn. The energy to arm a suicide shuttle must come from warp engines. The energy to hold it on board can come from any source. The explosion strength of the suicide shuttle is equal to twice the amount of energy put in it.

(J2.222) The fact that an administrative shuttle is armed as a suicide shuttle is not revealed until it reaches the target. While the opposing player might suspect this status because the shuttle moves toward his ship and never fires its phaser, a manned shuttle could be doing this for purposes of deception.

SCENARIO #9: RESCUE AT RIGEL

PLAYERS: Two, each controls a starship. For purposes of this scenario, we will assume the two players to be Federation (conducting the rescue) and Klingon (trying to stop it). Note, however, that any ships could be used, or the Federation and Klingon could reverse roles.

REQUIRED MATERIALS: You will need the 32-Impulse Movement Chart, the Advanced Impulse Procedure Chart and Sequence of Play, the DAC, the map of sectors A and B, the counters for two opposing ships and their shuttlecraft (and torpedoes or drones as appropriate), the counter for the planet, a die, a scratch paper (to track damage to the drones and plasma torpedoes), and copies of the SSDs for the selected ships.

MAP: Use the entire A+B map. Place the planet counter in hex 1508. Any ship which leaves the map cannot return.

SCENARIO SET UP: For purposes of the acceleration limits, all ships are presumed to have been moving at maximum speed (31 for most ships) on the turn before the scenario begins.
    Federation cruiser in hex 2816 facing F.
    Klingon cruiser in hex 0101 facing C.

LENGTH: The scenario continues until the Federation ship has left the map, or has been destroyed or captured, or until 10 turns have been played, or as required by the Objective rules below.

SPECIAL RULE: Located on the planet is a group of 10 survivors from the crash of a shuttlecraft. The Federation ship has been sent to rescue them. (Ten personnel amount to one crew unit and can be carried by one shuttlecraft or transported by one transporter action. While a boarding party of six people also requires one transporter action, those six are heavily armed and prepared for tactical combat, not simply being transported.) The survivors cannot be attacked while on the planet. They can be killed only if a shuttlecraft carrying them is destroyed.

(P2.0) COMBAT RULES FOR THE PLANET: Ships cannot enter or fire weapons into or through the planet hex. Shuttlecraft can enter the planet hex. The owning player can declare them to have landed; shuttles on a planet cannot be hit by any weapons. A line of fire exactly along the edge of a planet hex is not blocked. Seeking weapons and ships which enter the planet hex crash into the surface and are destroyed.

OBJECTIVE: If the Federation ship rescues the survivors and escapes from the map, the Federation wins the scenario. If the survivors are killed, the Klingons win and the scenario is over. If the Klingon ship leaves the map before the scenario is over, the Federation wins. Any other result is a Klingon victory.

ADVICE: The fundamental problem for the Federation is that rescuing the survivors will require either dropping a shield or using a shuttlecraft. Either option exposes the ship or the survivors to damage or destruction.

INSTANT REPLAY: Shuttlecraft can be used in any duel scenario. Also, a planet could be added as a terrain feature or obstacle. You might even create a scenario of your own where one ship is trying to damage the planet. The targets are specific facilities, not the planet in general. Roll "to hit" these facilities and record the total number of damage points.

RULES FOR SCENARIO #10

Now that you have had some experience, it's time to learn some more advanced combat techniques, procedures, and tactics. The rules below are completely modular. You can use any or all of them here, although all of them are rules commonly used in the Captain's Edition and should be learned before you go to Basic Set or immediately after you do. You are advanced enough now to set your own pace. You can use them all, or any number of them, in the next scenario you play or in the other advanced scenarios (#7, #8, #9, #11, #12) in Cadet Training Handbook.

(C4.0) SIDESLIP

The restrictions of the hexgrid used in this game create certain limitations on the movement of ships (and other units) that do not correspond with reality. To correct this situation, ships may execute a "sideslip" maneuver.
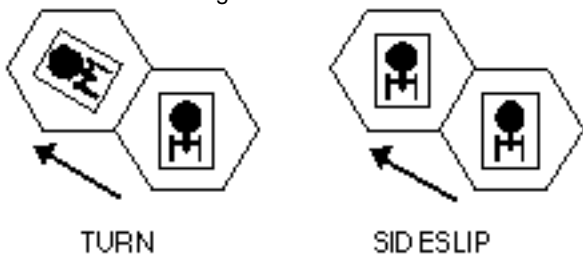
(C4.1) SIDESLIP MODE
A sideslip maneuver is a substitute for regular forward movement and may be executed whenever a unit is scheduled to move and has satisfied its sideslip mode. For purposes of sideslip maneuvers ONLY, all ships at all speeds are assumed to have a "slip" mode of "1." After satisfying the requirements of this slip mode (i.e., moving one hex in a straight line since the last sideslip or turn), the ship may execute a sideslip maneuver. After executing a sideslip, the ship begins counting again to satisfy the requirements of a sideslip. After satisfying the normal turn mode, it may make a normal turn; after satisfying the sideslip turn mode of "1," the ship may execute a sideslip. Normal and sideslip turn modes are recorded and satisfied independently of each other, but a ship cannot turn AND sideslip on the SAME impulse.

(C4.2) PROCEDURE
When executing a sideslip, the ship is moved into one of the hexes forward and to the side, but retains its original facing.
EXAMPLE: A starship in hex 1212 facing A has satisfied the requirements of either a turn or sideslip. If the owning player wanted to execute a turn on the next impulse when the ship is scheduled to move, it would be turned to face direction F and moved into hex 1112. If the owning player wanted to execute a sideslip, the ship would (when next scheduled to move) enter hex 1112 but retain its heading of "A."

TURN   SIDESLIP

(C4.3) RESTRICTIONS
(C4.31) For purposes of satisfying the sideslip mode requirement, the hex entered during the sideslip does not count.
(C4.32) For purposes of satisfying the regular turn mode, the movement before, during, and after the sideslip counts as movement in the same direction.
(C4.33) A unit may not sideslip on the hex of movement made during a normal turn. (That is, a ship may not turn and sideslip on the same impulse.)

EXAMPLE: A given ship has a turn mode of three at its current speed. It is in hex 1616 facing in direction F. It moves one hex straight ahead to hex 1516. It has now (by moving one hex straight ahead) satisfied the sideslip requirement. On its next impulse the ship sideslips to hex 1515, maintaining its "F" facing. It cannot sideslip on its next movement impulse because it has not moved one hex in a straight line, so it moves ahead into hex 1414 (facing F). At this point it has moved three hexes in direction F (sideslips count as forward movement for normal turn mode requirements), and during its next impulse it executes a right turn, moving into hex 1413 facing in direction A. Note that the one hex of movement into hex 1413 counts as movement in a straight line for turn and sideslip mode requirements. The ship could not, however, turn and sideslip on the same impulse to move into hex 1514.

(C5.0) TACTICAL MANEUVERS

From time to time a ship's captain may be unable or unwilling to move the ship out of the hex it occupies, but may want to retain the ability to turn his ship to respond to the enemy. This is a tactical maneuver. There are two types of tactical maneuvers: sublight tactical maneuvers and warp tactical maneuvers.

(C5.1) SUBLIGHT TACTICAL MANEUVERS
Players operating ships which cannot move faster than one hex per turn (for example, a badly damaged ship) or, on a given turn, do not wish to move at that speed may either move in normal movement or use "tactical maneuvers."

(C5.11) PROCEDURE: A player wanting his ship to make sublight tactical maneuvers may write "TAC" in his movement plot indicating the intention to use high sublight speed for tactical maneuvers. In this case, the ship does not actually move (it remains in the hex it is in), but on any impulse AFTER the first impulse it may make ONE 60° turn.
EXAMPLE: A Romulan ship programmed to move one hex is in hex 0305 facing hex 0304. The owning player has the option of using normal movement, in which case he could move his ship either "1A" (which would move him to hex 0304), "1B" (which would move him to hex 0404), or "1F" (which would move him to hex 0204). If he had plotted "TAC," the Romulan would be able to turn the ship to face one of these hexes, but not enter it. However, he could make this maneuver at any time and in either direction, during the course of the turn. Note, however, that only ONE such maneuver is permitted during each turn of the game.

(C5.12) RESTRICTIONS: A ship must spend one unit of impulse engine energy to make a sublight tactical maneuver. This energy must come from impulse engines.

(C5.2) WARP TACTICAL MANEUVERS
In certain tactical situations a ship's captain may decide that he does not want to change his position for the next turn, but that he does wish to maintain warp maneuverability.

(C5.21) PROCEDURE: Tactical warp maneuvers are performed much like sublight tactical maneuvers. The ship remains

in the same hex for the entire turn, but can turn 60° (several times) under certain circumstances.

(C5.22) ENERGY COST: A given ship may make up to four tactical warp maneuvers during a given turn. Each TAC requires the same energy the ship would have expended to move one hex. Impulse energy may not be used to perform tactical warp maneuvers.

(C5.23) OPERATIONS: When a ship is designated to make tactical warp maneuvers, the number of such maneuvers paid for is announced. This is the speed used on the movement chart.

(C5.231) A ship using tactical warp maneuvers is assumed to have earned its first maneuver on the second impulse of the turn. Thereafter, it earns another maneuver each time it is scheduled to "move" by the impulse chart, except on the last impulse of the turn. Thus, a ship scheduled to make four tactical maneuvers would earn one on impulses 2, 8, 16, and 24 (but not 32).

(C5.232) A given ship may have only one "earned" and unused tactical warp maneuver at any one time. If the movement chart calls for the ship to move (i.e., earn another maneuver) and it has not used the last one it earned, the new one is lost and the ship still has only one "earned" maneuver.

(C5.3) COMBINATIONS

A ship may use tactical warp maneuvers and sublight tactical maneuvers during the same turn. In this case, the ship earns tactical warp maneuvers as above and has a sublight tactical maneuver to use at any time (as per those rules). It cannot use both types of maneuvers on the same impulse.

(C5.4) RESTRICTIONS

On the turn after performing tactical maneuvers (warp or sublight or both), the ship is considered to have had a speed of "zero" for acceleration purposes. The count of hexes for the turn and sideslip modes are reset to zero.

(D3.0) SHIELDS, ADVANCED TRAINING RULES

(D3.34) SHIELD REINFORCEMENT

The purpose of reinforcement is to use some of the ship's energy to absorb damage points and prevent them from damaging the ship (i.e., to avoid marking out any boxes on the SSD). A ship can only use reinforcement if it has activated its shields.

(D3.341) Energy allocated for general reinforcement is divided by two, and the resulting number (round fractions down) is the number of general reinforcement points available during that turn. These points reinforce all shields and are eliminated by the first damage points from any direction (but NOT from each direction). For example, if 10 units of energy had been allocated, this would provide 5 points of general reinforcement. The first 5 damage points scored on the ship during this turn (regardless of direction) destroy this. If not used, these points do not carry over to the next turn; new energy can be allocated each turn.

(D3.3411) General reinforcement must be used to absorb damage before specific reinforcement is used to absorb damage.

(D3.342) Energy for specific reinforcement must be designated for a specific shield. Each point of energy adds one "extra" box to that specific shield for the duration of the current turn. If not used, reinforcement boxes do not carry over to the next turn; new energy can be allocated each turn.

(D3.343) A shield that is down (reduced to zero) cannot be specifically reinforced, but general reinforcement would still block fire coming from that direction up to the limit of its strength.

EXAMPLE: A ship has a front shield of 20 boxes. The ship has allocated 10 points of energy to reinforce the front shield and 6 points to general reinforcement. At a given point in the turn, 2 damage points are scored on a different shield, eliminating 2 of the 3 points of general reinforcement. Later during the turn, 15 points of damage are scored on the front shield. The first point is stopped by general reinforcement, the next 10 by specific reinforcement, and the last 4 score hits on the shield, reducing it from 20 boxes to 16. Note that without the reinforcement, the shield would have been reduced to 5 boxes.

NOTE: General reinforcement will block transporters.

(D3.41) SHIELD BOUNDARIES

In the event that the line of fire (for direct-fire weapons) strikes exactly at the junction of two shields (Example: Target in 0304 facing D, firing ship in 0405 facing A, weapons strike the junction of the #1 and #6 shields), resolve the situation by the following method.

Determine from the Impulse Chart which ship is to move next. Move that ship (temporarily) one hex directly forward and observe which of the two shields the line of fire enters first. That is the shield damaged by the fire.

If both ships are scheduled to move next, move both ships (temporarily) one hex forward and observe which shield the line of fire enters first. If the situation remains unresolved, use the method specified in Scenario #3.

See also (D3.4) on page #12.

(D9.0) DAMAGE CONTROL

Damage control is the ability of a ship to repair damage without a base or other facilities. Damage control is used to repair the shields during a scenario. It is assumed that the damage control parties are, during the course of the game, also taking action to seal off any hull areas that rupture and to prevent any fires or electrical overloads from spreading. This is factored into the various charts and tables and can be ignored.

(D9.1) DAMAGE CONTROL CAPABILITY

The current level of damage control ability is reflected in the damage control rating, which is the highest undestroyed box on the damage control track of the SSD. This rating itself may be reduced by damage taken during combat.

(D9.2) REPAIRING SHIELDS IN COMBAT

During any turn, energy may be allocated to damage control up to the highest number on the track. For each two units of energy allocated to damage control, one destroyed shield box is repaired at the end of the turn.

EXAMPLE: Four is the highest damage control rating of any ship in Cadet Training Handbook. This allows four units of energy to be used for damage control each turn; those four units would repair two shield boxes. Note that energy allocated on one turn produces shield boxes at the end of that turn, but is then expended (as with any other system) and does not produce additional shield boxes on later turns. Additional energy must be allocated (on later turns) to repair more shield boxes.

Energy allocated to damage control is NOT used to reduce the effects of hits made during the turn. It can only be used to repair shield boxes damaged on a previous turn.

For example, if two boxes of Shield #1 were destroyed on turn 1, energy would be allocated to repair them on turn 2 and they would be repaired at the end of turn 2, although they would not be able to stop any damage until turn 3.

You must specify which shield you are repairing during the Energy Allocation Phase. Energy cannot be allocated to undamaged shields in anticipation of damage. Energy from reserve power (H7.0) cannot be allocated to damage control.

If the damage control rating is reduced by damage during a turn, this takes effect at the start of the next turn.

(G6.0) SECURITY AND KLINGON MUTINY

Unlike other ships in the game, the Klingon starships include numerous individuals of "subject races" in their crews. Normally, over half of the crew is composed of such individuals. While most of the "subjects" are not slaves, they are not considered to be "politically dependable," and the security stations on each ship keep a constant watch on these crewmen.

(G6.1) SECURITY STATIONS
Hits designated by the DAC as "flag bridge" hits will be scored against the security stations of a Klingon ship.

(G6.2) HOW MUTINY CAN OCCUR
If all security stations are destroyed, there is a possibility that the crew will mutiny and successfully take control of the ship. This is determined by a die roll. When the last security station is knocked out, a die is rolled immediately to determine if a mutiny has broken out. If it has not, then at the end of that turn, and at the end of all subsequent turns until a mutiny is staged, a die must be rolled. On a die roll of "1," the mutiny has occurred. When the mutiny occurs, roll a second die to determine if the security troops were able to retain control. On a die roll of "1," "2," or "3," the mutiny has been put down. On a die roll of "4," "5," or "6," the mutiny has been successful.

(G6.21) While there is nothing to prevent the Klingon player from transferring boarding parties around between his ships, the presence of more or fewer boarding parties has no effect on the chance of a mutiny happening or on its success since the boarding parties themselves are largely non-Klingon troops and would be as likely to mutiny as the crew of the ship.

(G6.22) For every fourth enemy (enemy of the Klingons, not counting mutineers) boarding party on board, subtract 1 from the die roll when determining if the mutiny has occurred (a result of less than 1 is considered to be 1) and add 1 to the die roll when determining if it was successful (over 6 is treated as 6).

(G6.23) If all control spaces (Bridge, Auxiliary Control, Emergency Bridge) on the ship have been destroyed before a mutiny has been declared, subtract 1 from the die roll when determining if it occurs and add 1 to the die roll when determining if it was successful. This is cumulative with (G6.22).

(G6.24) If the mutiny occurs and is put down, do not roll on subsequent turns. Any crewmen who might have tried it are dead.

(G6.3) EFFECTS OF A MUTINY
If the mutiny occurs and is successful, these actions occur.

(G6.31) No further mutiny die rolls are made.

(G6.32) The ship cannot move or fire weapons. The non-Klingon beings among the crew are never taught these skills. If the mutineers seize control during the turn (as opposed to at the end), the ship stops immediately.

(G6.33) If the mutinous ship was the only Klingon ship, the scenario is over and the ship is captured. The Federation will release the crew on a colony planet and (after examining it thoroughly) return the ship to the Klingons.

(G6.34) If other Klingon ships are in the scenario, it continues with the winning player gaining control of the mutinous ship.
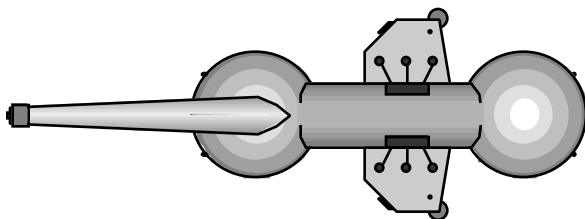
GORN HEAVY CRUISER *REPTILICON*

(H7.0) RESERVE POWER

Ships may use their batteries as a source of reserve power.

(H7.1) OPERATIONS
A battery may be discharged at any time, even during the middle of a turn, at the option of the owning player. Such discharges may be, but aren't required to be, planned on the Energy Allocation Form. Note, however, that if reserve power is used to activate some system during the turn (say, reinforced shielding), this takes effect from that point until the end of the turn. It is not retroactive to the beginning of the turn, nor does it carry over into the next turn. This is the penalty for the flexibility gained.

(H7.2) USE OF RESERVE POWER
Power from batteries may be used to reinforce a specific shield, to operate transporters or tractors, or to fire weapons (those that do not require more than one turn of arming). Reserve power may be used to reinforce a specific shield after enemy weapons have resolved their fire against that shield but before that shield is damaged by the volley in question. Reserve power can be used to complete the arming of a plasma torpedo which is using rolling delay. For example, if a Gorn cruiser had powered a torpedo with 2+2+2, two points of reserve power would complete the third turn of arming and allow the torpedo to be launched.

(H7.3) RESTRICTIONS
Even with reserve power, a given system cannot be operated more often than the rules allow. E.g., a phaser can only fire once per turn. It can fire with power from reserve power or from the capacitor. But NOT with power from capacitors the first time and batteries the second time (or vice versa).

EXAMPLE: A Federation CA has all four batteries remaining, and each is holding one unit of power. During the turn, an unexpected opportunity to fire two phasers at an enemy ship is presented. Power had not been allocated for this, but the Federation player can draw it (two units) from two of the batteries. This requires an adjustment of the battery records because it was not originally allocated on the Energy Form. Later in the same turn, the enemy ship fires on the cruiser, delivering four points of damage to the #1 shield. This shield had been reinforced specifically with two units of power. This negates two of the four damage points. Rather than accept the other two points of damage onto the front shield, the Federation player elects to discharge his reserve power (the two remaining points in the batteries) into the front shield as specific reinforcement, canceling the other two points of damage. Thus, none of the damage is permanent.

(H7.4) RESERVE WARP POWER
This technique is not used in Cadet Training Handbook.
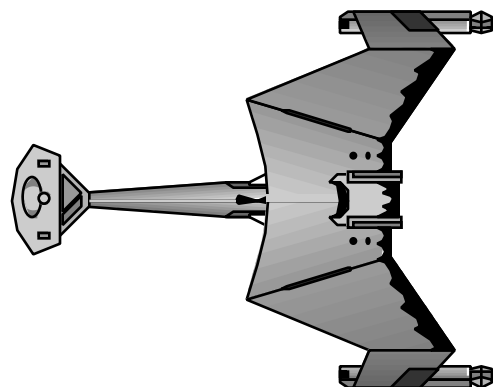
ROMULAN KR CRUISER *KESTREL*

SCENARIO #10: DIRECT COMBAT

This scenario is identical to #7, except that you can make use of the advanced combat techniques learned in this scenario and (possibly) those learned in Scenarios #8 and #9.

Any of the available ships can be used.

If you have several friends who have learned the game with you, or if you and a friend each command two ships, use a Federation and Gorn as allies against a Romulan and Klingon.

RULES FOR SCENARIO #11

This scenario is solitaire, requiring only one player. The two rules you must learn are relatively minor and simple. The scenario, however, is one of the most challenging you will ever face.

(G4.0) LABORATORY SYSTEMS

The laboratory boxes indicate the ability of the ship to conduct scientific experiments and gather information. In "monster" scenarios, labs can be used to gain victory points. In combat with other ships, however, they in effect become just free hits.

(G4.1) SCIENTIFIC RESEARCH

The primary operation of labs in scenarios is the scientific investigation of a monster. The chart below is used to determine the amount of information gained about the monster on each turn. During the turn, the player should record the closest approach (in effective range, as adjusted for failure to lock-on or sensor damage, if any) of his ship to the monster. (That is, the range to the monster at the point when the ship and monster are closest to each other.) The chart is based on the distance from the monster at closest approach.

Die	RANGE										
Roll	0	1	2	3	4	5	6	7	8	9	10
1	10	9	8	7	6	5	4	3	2	1	0
2	9	8	7	6	5	4	3	2	1	0	0
3	8	7	6	5	4	3	2	1	0	0	0
4	7	6	5	4	3	2	1	0	0	0	0
5	6	5	4	3	2	1	0	0	0	0	0
6	5	4	3	2	1	0	0	0	0	0	0

At the end of each turn, the player must determine how much information he has gained about the monster. This is determined using the chart above. Noting the range at his closest approach to the monster and rolling a single die, the player obtains a result from the chart. This number, multiplied by the number of functioning lab boxes on his SSD at the end of the turn, is the amount of scientific information gathered about the monster. Shuttles (J2.212) and probes (G5.0) may assist in obtaining information.

(G4.2) IDENTIFYING DRONES WITH LABS

This rule is not used in Cadet Training Handbook because there is only one type of drone in this game module. In the Captain's Edition, where there are many types of drones (and secret target identification), it becomes very important.

(G4.3) LAB SUBSTITUTIONS

A ship without labs, including ships that lost them in combat or never had them, can use one (not more) of its control spaces (Bridge, Flag Bridge, Aux Con, Emergency Bridge) as a lab. This does not interfere with its ability to function as a control system.

Security stations cannot be used for this purpose.

(G4.4) OTHER LAB RULES

Cloaked ships cannot use their labs to detect or study anything outside of the ship.

Labs do not require power for scientific research.

(G5.0) PROBES

Probes are instrument packages used to gather scientific information. Probes can be used against certain types of space monsters or as emergency weapons. In most cases, the probe box on the SSD is just another free hit.

(G5.1) GENERAL RULES

(G5.11) Probes have a maximum range of six hexes.

(G5.12) All launchers in Cadet Training Handbook carry five probes. The box on the SSD is the launcher. A track on the SSD provides check-off boxes for this use.

(G5.13) In Cadet Training Handbook, probes are launched (for either purpose) during the Direct-Fire Weapons Step.

(G5.2) INFORMATION

Probes launched for informational purposes cost one unit of energy each turn for two turns to launch. The second turn of charging may be the turn of launching, or the probe can be held. If not launched on the second turn of arming, the first turn of arming is lost and the second turn of arming is considered to be the first turn of a new two-turn cycle.

When a probe is launched, it gains 20 factors of "information" as detailed in that scenario, but only if the ship is within six hexes of the object being studied.

Only one probe may be armed or launched at a time for each launcher on the ship.

(G5.3) EMERGENCY WEAPONS

Probes may be launched at ships or monsters as anti-matter bombs.

While the probe launcher could be used as such (using the procedure below), it is intended for use as a scientific tool. It can only be fired as a weapon if one (or more) of the following conditions are met.

    1. If the ship is crippled. (Half of the internal boxes, not including tracks or armor, are destroyed.)

    2. If there are two or more enemy ships and only one friendly ship in the scenario.

    3. If directed to use it by the scenario.

(G5.31) Anti-matter probes have a warhead strength of 8 and are considered a direct-fire weapon.

(G5.32) They are armed by allocating two units of warp energy on two consecutive turns; the weapon MUST be launched on the second turn. Energy must come from warp engines. Only one probe may be armed at a time (by each launcher), and if a probe is being armed for firing as an anti-matter bomb, no information-research probes may be launched. If energy is not allocated on the second turn, arming is aborted and the energy allocated on the first turn is lost. The same probe could be armed again, or used as a scientific device, on a later turn.

(G5.33) While probes may be launched in any direction, anti-matter bombs may only be launched directly ahead (in the row of hexes extending directly ahead of the ship).

(G5.34) To determine if the probe has hit its target, roll a single die. If the result is greater than or equal to the effective range from the ship to the target, the probe has scored a hit.

The probe can be fired at a range of zero (an automatic hit).

SCENARIO #11: THE PLANET KILLER

From a distant corner of the galaxy comes word that some "thing" is destroying entire planets. It is the size of several large ships and seems to be either a living thing or perhaps some massive ship sent on a raid by one of the hostile races. Your ship locates the monster as it approaches another inhabited world.
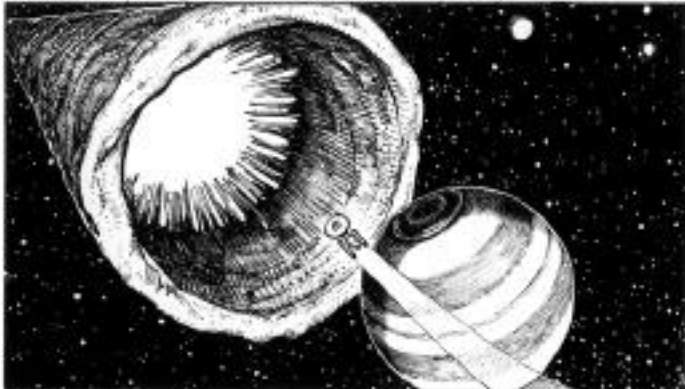
PLAYERS: One. The monster moves by automatic rules.

As an alternative, find a friend and use two ships against the monster. This will teach you teamwork, as each ship must be ready to distract the monster if the other ship is in jeopardy.

REQUIRED MATERIALS: The 32-Impulse Movement Chart, DAC, Advanced Impulse Procedure Chart and Sequence of Play, the map of sectors A and B, the counters for one ship (and its shuttlecraft, torpedoes, or drones as appropriate), the counter for the planet, the counter for the Planet Killer, one die, some scratch paper (to keep track of damage to the monster and any other things), and a copy of the SSD for the ship you selected.

MAP: Use the entire A+B map. If the ship leaves the map before the monster is destroyed, the monster wins.

SCENARIO SET UP: For purposes of the acceleration limits, all ships are presumed to have been moving at their maximum speed on the turn before the scenario begins.

The Planet Killer in hex 0101.
One planet in hex 2514 (See Cadet Scenario #9)
One ship in hex 2503. Facing is at the option of the player.

LENGTH: The scenario continues until either the monster destroys the planet or the starship destroys the monster.

SPECIAL RULES

1. The monster moves by special automatic rules. As his "mission" is to destroy the planet, the monster will always move (unless distracted by the ship) toward the planet. In cases where the monster may move into either of two hexes (both of which are "toward" the planet), the player may roll a die (odd numbers going left, even numbers going right), toss a coin, or simply alternate.

2. The monster has a speed of six hexes per turn.

3. If, at the beginning of any impulse, a starship is within two hexes of the monster, the monster will begin to follow the starship (as a seeking weapon). If two or more starships are within this "detection" range, the monster will follow the closer one. If two are at the same range, decide by die roll.

4. On the first impulse that the monster "detects" (is within six hexes of) a starship, it will fire its "weapon." This operates as a phaser, but uses the special chart below:

Die roll	1	2	3	4	5	6
Damage	40	30	20	10	5	1

Range has no effect on the result, but the weapon is limited to a range of six hexes. If the monster is within range of the planet, it will fire at the planet. The monster can fire its weapon only once per turn. Exception: The monster will always fire its weapon at a starship it has not fired at during that turn when it (the monster) begins to follow that starship. The monster will also fire its weapon (in addition to any other fire on that turn) at any plasma torpedo (operates as a phaser) that moves within two hexes. The weapon has a 360° field of fire.

5. The monster has a turn mode of "0" and can change direction by one or more hex sides on every impulse. That is, it can move freely without satisfying any turn mode requirements.

6. The monster is equipped with the close-in defense system. Whenever a drone enters the hex of the monster, there is a 50% chance that the drone will be destroyed before it hits. Roll a die: 1–3 means the drone hit the monster; 4–6 means the drone is destroyed. The monster will also use this system on any shuttle within three hexes (4–6 means destroyed), but will not fire at a given shuttle more than once per turn.

7. If the monster moves adjacent to the planet, it will cease movement, unless it moves to follow a starship.

8. The Planet Killer will not follow a shuttlecraft, drone, or plasma torpedo.

HOW TO WIN THE SCENARIO

The monster wins if it can inflict 200 points of damage on the planet. The player wins if he can destroy the monster.

The problem is that you don't know how to destroy the monster, and we aren't going to tell you. If you intend to be a starship commander, you are going to have to work some of these things out for yourself.

Use your labs (and possibly probes, but don't use too many of them) to gain scientific information on the monster. When you have accumulated 100 points, roll one die and consult the table below to determine how the monster can be killed.

DIE	HOW THE PLANET KILLER CAN BE DESTROYED
1	Planet Killer can be destroyed by a suicide shuttlecraft.
2	The Planet Killer will be torn to pieces and destroyed if held in a tractor beam at a crack you just found.
3	The Planet Killer can be destroyed by 200 damage points, including UP TO 150 points of damage scored prior to rolling this result.
4	The monster can be destroyed if struck by an anti-matter probe (fired as a weapon).
5	The monster can be destroyed by a boarding party transported to a special brain cell you have located.
6	Insufficient data. Accumulate 50 more points, roll again.

NOTE: Accumulation of scientific data is continuous. Even after accumulating 100 points of this data, you continue to accumulate more. For every 50 points after the first 100, you can make another roll on the chart, which might give you the same result or a different one. If you receive result 4 but have no probes left, you'll have to find another way to kill the monster (by accumulating more data). In the case of result 3, actions you conducted before the die roll can affect the monster. In any other case, however, you cannot take those actions until that result has been found.

INSTANT REPLAY

Obviously, this can be played with any ship. An alternative is to use two ships (in hexes 1401, 2814; each controlled by a different player) and increase the speed of the monster.

DO YOU FEEL LUCKY, CAPTAIN?

If you aren't scared yet, try this....

This graduate training will introduce you to three races who do not have common borders with the Federation, but have their own unique technologies which, in turn, create their own tactical advantages and disadvantages. The technologies of these races are more complex and require more exposition than the weapons used by the races bordering the Federation.

INTRODUCTION TO THE LYRANS

The Lyrans, a race of 6-foot felines who are allied to the Klingons, enemies of the Hydrans and Kzintis, and use the same phasers and disruptors you are familiar with. But instead of drones, the Lyrans use the Expanding Sphere Generator as a defensive (and offensive!) weapon system. Lyran ships are a little less maneuverable than Klingon ships found in the Basic Training, and will generally try to close and "ram" opposing ships with their ESGs if there is not a significant drone or fighter threat.

Lyran counters are green on a yellow background.

(G23.0) EXPANDING SPHERE GENERATORS

Carried by most Lyran ships, the Expanding Sphere Generator (ESG) is used to protect the ship from drones and fighters entering the range of the sphere (or field). ESGs are often used to ram enemy ships (or activated in time to allow enemy units to ram the sphere), and harvest fighters like a scythe.

(G23.1) DEFINITION

(G23.11)   SSD: Each box on the SSD labeled ESG represents one expanding sphere generator. Note that the term "ESG" is often used for the generator itself and the sphere or field (the terms are interchangeable) it generates.

(G23.12)   MULTIPLE   ESGs: Many Lyran ships carry more than one ESG. If so, they function independently of each other.
(G23.121) Multiple ESGs on the same ship may operate at the same time or alternate; they could be at the same or different radii. One could be activated while another was operating [or during its announcement phase (G23.31)]; if two or more were operating, one or more could be shut down.
(G23.122) In the event of multiple ESG fields of different radii, the field which a given object encounters first interacts with it first (G23.51). If two fields are at the same radius, the one that has been active longer interacts first. If they were released at the same time, the owning player decides which will interact first. In any of these cases, the interactions of the first field must be completely resolved (i.e., the field must be reduced to zero or the targets encountered destroyed) before the interactions of the second field are resolved. There is no "gap" between the two ESGs (at the same radius). If two 20-point fields struck an object requiring 35 damage points to destroy, one field would be reduced to zero and the other to 5.
(G23.123) The specific ESG generator which is generating each specific ESG field can be detected and must be announced (at the same point the field itself is).

(G23.14)   DESTRUCTION: ESGs are destroyed on "drone" hits. If the box on the SSD representing the ESG is destroyed (or if a ship with an active ESG field is destroyed), the field collapses immediately at the point in the Impulse Procedure that it was destroyed.

(G23.2) ENERGY ALLOCATION

(G23.21)   ENERGY: Energy is allocated to ESGs during the Energy Allocation Phase. See (G23.223) for fractional points.
(G23.211) This energy can come from any source and can be accumulated over any number of turns during a scenario.
(G23.212) Reserve power (H7.2) can be added to the ESG generator; it cannot be added to an active ESG field to increase or restore its strength or to extend its active period.

(G23.22)   POWER   STORAGE: The more energy held in an ESG (up to a maximum of 5 points), the more powerful the field will be when the energy is released. Note: If using the Cadet cruiser no more than two points of energy can be allocated to the ESG.
(G23.221) Energy may be stored in the ESGs for up to 25 turns. If not used within this period, which does not count any turns before the scenario begins, the power is lost.
(G23.222) When a given generator is activated, all of the energy in it must be released.
(G23.223) Fractional points of energy can be stored in an ESG, but an ESG can only use whole units of power, the fractional points are lost when the ESG is activated (as "all power" in an ESG must be used).

(G23.23)   INITIAL   ENERGY: A ship entering a scenario in the Cadet Handbook has its ESGs fully charged, but may have varying amounts of energy in the main game.

(G23.3) ACTIVATION OF AN ESG

(G23.31)   ANNOUNCEMENT: The energy stored in an ESG can be released on any impulse, but the intention to release one must be announced 4 impulses (1/8 turn, this would be 1 impulse on the 8 impulse chart, or 2 impulses on the 16 impulse chart) in advance during the Launch Seeking Weapons Step of the Impulse Procedure, and is a decision made after observing if any drones are being launched during the same step. See (G23.46). Deactivation of ESGs precedes activation in the Procedure.
(G23.311) The energy and radius are not announced until release, but must be recorded at the time of announcement and are revealed at the time of release (G23.46). The player must reveal the number of generators he plans to release when the 4-impulse notice is given. See (G23.312) for a partial exception.
(G23.312) An ESG cannot be released without the required prior announcement, even at the start of a turn. If release at the start of a turn is desired, the owning player would have to announce the release during the previous turn (without knowing if he will have sufficient energy available, in which case the announcement could be canceled) or announce the release at the start of the turn and delay it the required four impulses. If an announcement is made in the last four impulses of the turn (for a release during the first four impulses of the next turn), the strength and radius need not be decided or recorded until the Energy Allocation Phase.
(G23.313) No prior announcement period is required to drop an active ESG, but it cannot be voluntarily dropped (G23.47), except in the Launch Seeking Weapons Step of the Impulse Procedure. The fact that it has been dropped must be announced at that point.

(G23.32)   CYCLE   OF   AN   ESG   FIELD: An ESG field will only remain active for 32 impulses (16 impulses or 8 Impulses if using those impulse charts) and will automatically deactivate itself during the Launch Seeking Weapons Step of the 32nd subsequent impulse. Written records of the impulse any given

field was released and dropped must be kept. The fact that the ESG has reached the end of its active cycle is detectable to all players; no formal notice is required.

(G23.321) A field can be voluntarily deactivated in fewer impulses (G23.47). See (G23.313) for the announcement.

(G23.322) A field reduced to zero strength is dropped at the point when the last strength point was expended (G23.51).

(G23.323) A field cannot be reactivated within 32 impulses (16 or 8 impulses if using the cadet ship) of when it was dropped nor can it be reactivated before the start of the second subsequent turn from the point it was activated. This delay is to the next activation, not to the next announcement. For example, an ESG activated on impulse 10 of turn 2 (announced on impulse 6) and dropped before the end of turn 2 cannot be activated again before impulse 1 of turn 4 (announced impulse 29 of turn 3); if dropped during turn 3, it could be activated 32 impulses later.

(G23.33) CANCELLATION OF ANNOUNCEMENT: A player can announce an intention to release an ESG field and later (publicly) cancel that announcement (before the impulse when the field was to have been released) in the Launch Seeking Weapons Step. If an announcement is canceled, another announcement cannot be made within 1/4 turn (8 impulses, 4 impulses on the 16 impulse chart, 2 impulses on the 8 impulse chart) of the cancellation. Since the ESG is not released when its announcement is canceled, the penalties of (G23.32) do not apply, only the delay imposed by this rule applies.

(G23.4) OPERATIONS

(G23.41) RADIUS: When formed, the expanding sphere field may be set at a radius of 0, 1, 2, or 3 as prescribed by the owning player's records (G23.311). The larger a sphere, the weaker it is.

(G23.42) STRENGTH: To determine the sphere's strength, take the radius and use it to find the Strength Factor on the following chart:

Radius	Strength Factor	Energy Points Contained				
		1	2	3	4	5
0	4.00	4	8	12	16	20
1	3.67	4	7	11	15	18
2	3.33	3	7	10	13	17
3	3.00	3	6	9	12	15

Multiply this strength factor by the number of energy points held in the ESG when released. Round fractions of 0.50 and more up and those of 0.49 and less down. This final result is the strength of the field and is shown in the columns to the right of the Strength Factor (i.e., the calculations have been done for you, but the procedure is shown to improve understanding of the system). For example, radius 2, strength factor 3.33, 2 energy points yields a 7-point field.

(G23.43) TIME OF RELEASE: The energy used is not announced until the time of release. When released, an ESG does not interact with or damage anything at the instant of release; see (G23.56).

(G23.44) FORMING: When released, the sphere (field) forms at the specified radius. It does not expand to that radius damaging units at shorter distances.

(G23.45) MOVES WITH SHIP: The sphere moves with the ship; it does not remain stationary.

(G23.46) KNOWN INFORMATION: The size and strength of the sphere can be detected and must be announced.

(G23.47) VOLUNTARY DEACTIVATION: The owning player can voluntarily deactivate (drop) an operating ESG field in the Launch Seeking Weapons Step of the Impulse Procedure (G23.321), and doing so establishes the point at which it can be reactivated (G23.323). If voluntarily deactivated, the ESG field ceases to function immediately at that point. An active ESG can be deactivated but cannot be voluntarily reduced in strength. See (G23.313) for required announcements.

(G23.5) COMBAT EFFECT

(G23.51) DAMAGE: When operating, the field will automatically score damage points on any ship, shuttle, fighter, monster, drone, or other object specified in the rules entering the field. A unit can enter an ESG field as a result of the unit's own movement, the movement of the ship generating the field (G23.45), or both. See (G23.6) for some other effects.

(G23.511) The field will score damage points up to the number required to destroy the object, or up to the strength of the field, whichever is lower. Each damage point scored reduces the strength of the field by one point. **EXAMPLE:** The field strength is 5. If a drone that is destroyed by 4 damage points contacts the field, the field strength will be reduced to 1 point and the drone will be destroyed. If a shuttle that is destroyed by 6 damage points contacted the 5-point field, the field would be reduced to zero (thereby deactivating it) and the shuttle would receive 5 of the 6 damage points required to destroy it.

(G23.512) The damage caused by the ESG fields is scored during the Move Ships Segment as a separate volley. Two or more ESG fields at the same radius or different radii generated by the same ship count as a single volley (G23.75). If ESG fields generated by different ships strike a single object in the same impulse, they are counted as separate volleys, although it would take VERY arcane circumstances for this to happen because of the priorities of (G23.52). Players are welcome to try and determine just what these circumstances are.

(G23.513) ESGs do not negate shields or armor. Damage from an ESG is scored on the target's shield which is facing the ship generating that ESG. This is judged by the same procedures as direct-fire weapons (D3.4), unless the line of fire falls exactly along a shield boundary, in which case score the damage on the shield which was facing the ESG hex which the other ship entered (or the ESG hex which entered the same hex as the other ship). If the ESG ship and the other ship move on the same impulse, judge the situation by whichever ship moved first. If both move at exactly the same time [all tie-breakers in (C1.3) being exhausted], the ESG interaction is judged as if the other ship had moved first.

> **(G23.5131)** Exception: If the "other" ship is inside the ESG and moving out of it (or the ESG is dragged over it), the shield struck would be the one opposite the one facing the ship generating the ESG.

> **(G23.5132)** Exception: If the units are tractored, and the line of fire is on a shield boundary, damage from an ESG is scored on the target's shield which is facing the ship generating the ESG. In the Cadet Handbook this will only affect freighters.

(G23.514) ESG impact is determined during movement but resolved after tactical maneuvers, allowing a ship (qualified to Tac) to turn a different shield toward the oncoming ESG after knowing that the ship will be hit.

(G23.515) ESGs cannot damage units (boarding parties, shuttles) on planets. See (G23.653).

(G23.52) MULTIPLE TARGETS: If two or more objects enter the field simultaneously, damage is caused to (and by) the ESG field in the following priority:

1. Units which move completely through (G23.571) the field (unless both are generating an ESG, in which case priority two is resolved first). (Example: The field is in hex 0404, the generating ship in 0401, and a drone targeted on the ship in 0405. Both the ship and the drone move in this impulse, so the drone would move to 0404 and the field to 0405, effectively passing each other, although since either the drone or the field will not survive the encounter, this is only a temporary convenience to keep track of the counter locations.) If there are several such units, these are damaged in the order given in steps 2-5 below.
2. Other ESG fields (G23.73).
3. Planets and other solid objects (G23.65).
5. Other units in order of size from the smallest to the largest, with each such unit receiving one point in turn. The field will score one point on each (beginning with the smallest; roll a die to resolve ties) and will repeat this procedure until field strength is reduced to zero or all objects are destroyed.

   EXAMPLE: A drone, a shuttle, and a ship all strike an ESG with a strength of five at the same time. Two points would damage the drone, two the shuttle, and one the ship based on their size.

(G23.53) DAMAGE ANY TARGET: The field will damage any qualified target, including Lyran ships, and even shuttles or seeking weapons launched by the ship generating the sphere.

(G23.54) HOLLOW: Note in the illustrations below that the sphere is hollow and will not damage targets inside of its lethal radius. For play purposes, the ESG field consists of the entire hexes at the specified radius, not the inner or outer edges of such hexes. For partial exceptions to this rule, see (G23.562), (G23.573), and (G23.72). Thus, a ship wishing to launch a shuttle could generate a field of radius 3 on one turn, launch a shuttle and move it two hexes away from the ship, then generate a field of radius–1 with a different generator on a later impulse.

RADIUS 1
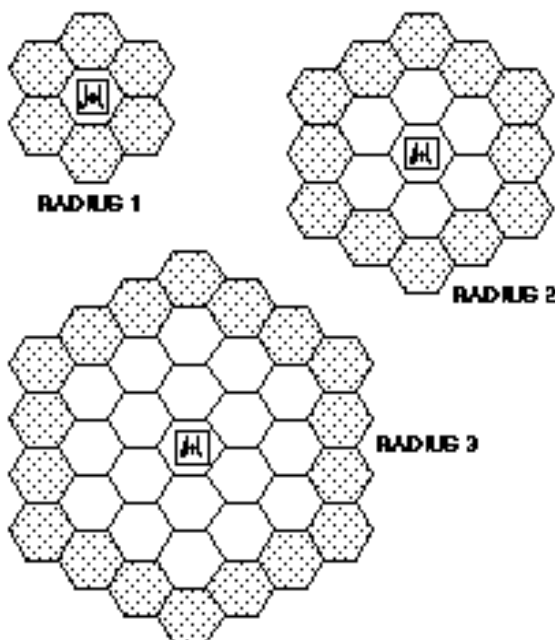
RADIUS 2

RADIUS 3

(G23.55) RADIUS ZERO: If the sphere is set at a radius of "0" and drones targeted on a unit inside the field enter that hex, they will strike the field before their target. See also (G23.72).

(G23.56) TIME OF FORMATION: If the ship generating the ESG does not have one active, but generates a sphere at a specified radius, any objects at that radius are not damaged.

(G23.561) Merely being in a sphere hex cannot result in damage; only entering such a hex can cause damage. Moving parallel to and at the same speed as the generating ship is still considered to be movement for purposes of ESGs and results in damage; see (G23.573).

(G23.562) At the time of formation, all units in the same hex as a forming ESG are considered to be "outside" the ESG for purposes of moving toward or away from the generating ship. If such units move toward the generating ship (or vice versa), they are treated as "jumping" (G23.571) the ESG. If they move away from the generating ship (or vice versa), they take no damage. If they move into another hex of the same ESG field, they take damage as per (G23.561). There is a partial exception in (G23.72).

(G23.57) MOVEMENT OF GENERATING SHIP: Movement of the ship (that is generating the ESG) in such a way as to cause the ESG field to contact another unit has the same effect as the movement of that unit (i.e., the unit is damaged).

(G23.571) Note that it is possible for the target unit and the ship generating the ESG to move (toward each other) on the same impulse. In this case, the damage is still resolved normally (the target cannot "jump" across the field unharmed), but the Impulse procedure must be interrupted. Use (C1.3) to determine which unit moves first, move that unit, determine the ESG damage (including all units damaged) immediately, then move the other units and continue the normal Impulse Procedure.

EXAMPLE: A Lyran CA is in hex 1010 heading A and projecting an ESG into hex 1007 (among others), while a Klingon D7 is in 1006 heading D. Both ships are scheduled to moved straight ahead, resulting in the D7 being in 1007, the CA in 1009, and the ESG in 1006. It could be argued that the D7 and ESG "passed" and there was no contact, but this is obviously illogical and the situation is resolved by the above rule. The same situation can occur when units are moving apart, in which case it is resolved the same way.

(G23.572) Note also that, if the ESG ship is moving in the same impulse as its target, but is moved first in that impulse by (C1.3), and the subsequent (but same impulse) movement of the target again moves it clear of the field (but not across it), no contact with the field actually took place.

EXAMPLE: In the above case, had the Klingon D7 been moving in direction A, the Lyran CA would have moved first by (C1.3) and would have moved its ESG into 1006, but the D7 moves to 1005, avoiding it, even though the apparent non-simultaneity of the actual movement of the counters would seem to indicate otherwise.

(G23.573) If the generating ship and a potential target which is in an ESG hex are moving parallel and at the same time, the potential target does take damage as if it had entered an ESG hex.

(G23.5731) This is true even if the two units are linked by tractor beam from the generating ship, unless the ship generating the ESG and tractor voluntarily decides to treat the matter under (G23.5732).

(G23.574) Turns (without changing hexes) by the generating ship do not damage units in ESG hexes. Turns (without changing hexes) by units in ESG hexes do not result in damage to those units. (The ESG field itself does not "rotate", so it cannot damage enemy units in ESG hexes like a "disk sander.")

(G23.6) OTHER EFFECTS OF AN ESG FIELD

(G23.62) CLOAKS: Cloaking devices and ESGs have significant interactions. Note that no ship in the Cadet Training Handbook has both a cloaking device and an ESG.

(G23.621) Cloaked ships are affected by the sphere as if they were not cloaked. If a cloaked ship is damaged by an ESG, it can be locked-onto during the impulse the damage is taken.

(G23.622) A cloaked ship cannot operate an ESG while the cloaking device is operating, or until fade-in is complete, or after fade-out begins. If the ship is cloaked (or fading), it cannot activate an ESG, i.e., begin the activation phase by announcing activation, until fade-in is complete. If a ship with an active ESG starts to cloak, the ESG must be dropped before the cloaking device can be activated. This can be done at the time that the cloak is activated, outside the normal Sequence of Play.

(G23.63) EXPLOSIONS: Destruction (explosion) blast effects ignore ESGs.

(G23.64) TRANSPORTERS: Transporters (G8.0) can operate through ESG fields and are not affected by them in any way.

(G23.65) TERRAIN generally overwhelms an ESG and causes it to collapse. Should an ESG field strike a planet, the field is reduced to zero and no damage is caused to the planet or to anything on it (the effect is spread over too wide an area).

(G23.66) TRACTORS: Tractors (G7.0) can operate through ESG fields and are not affected by them in any way. See also (G23.573).

(G23.7) CONDITIONS AND RESTRICTIONS

(G23.71) MULTIPLE ESG OVERLAP: The spheres created by ESGs on two different ships cannot overlap [this would result in damage under (G23.73)] or be contained within each other.

(G23.711) It is the release of an ESG, not its announcement, which causes this interaction. However, as deactivation precedes activation in the Sequence of Play (G23.31), with careful timing two ESG-equipped ships could keep a continuous screen of ESGs around themselves, barring a field being deactivated by damage before a second field can become active.

(G23.712) If two ESGs are activated in violation of (G23.71), whichever ESG was activated second would collapse, the sphere never forming and the energy being lost. If two ships both activated ESG fields simultaneously, both fields would fail and the power would be lost.

(G23.713) Two ships or more in the same hex could not use ESGs simultaneously. If the fields were at different radii, the above rule would apply; if they were at the same radii, they would immediately damage each other (G23.73). They would damage each other even at zero radius (G23.73).

(G23.72) ZERO-RADIUS: When creating a zero-radius field, the Lyran player designates which friendly units are inside of it. All other units are considered to be outside of the field. Items outside of the field are not damaged when the ESG-generating ship leaves the hex, or when those objects themselves leave the hex.

(G23.721) Other units entering that ship's hex will strike the field; units inside the field which leave that ship's hex will also strike the field (from the inside).

(G23.722) If there are two fields of zero radius generated by the same ship, both are identical in regards to units inside and outside of the field.

(G23.723) Units inside the field are not affected as per (G23.573); units outside the field are affected by (G23.573).

(G23.73) ESG vs. ESG: Two ESG fields (generated by different ships) that strike each other (occupy the same hex) will damage each other (G23.52). Two ships operating zero-radius ESGs in the same hex will interact and the ESGs will damage each other, even if both sides designated (G23.72) that the other was outside of their field.

(G23.75) DOUBLE RAM: It is theoretically possible that, if a ship had two ESGs active at different radii, a single target (on a closing course) could strike both of them, the first as a "jumper" in step 1 and the second under step 5 of (G23.52). In this case, the two "volleys" of damage are combined into a single volley.

(G23.8) EFFECT ON OTHER WEAPONS

(G23.81) PLASMA WEAPONS: The sphere has no effect on plasma torpedoes.

(G23.83) DIRECT-FIRE WEAPONS: The ESG sphere does not affect any direct-fire weapons in the Cadet Training Handbook.

(G23.86) PROBES: A probe launched for information cannot pass through or damage an ESG field (G5.23); it would be destroyed without gaining any information if this was attempted. A probe which did not penetrate an ESG field could gather information on objects behind it.

An armed probe (fired as a weapon) can pass through an ESG field (G5.37).

SCENARIOS AND TACTICS

Players are invited to play each of the scenarios presented previously, using the small scale Lyran Cadet Ship for the first six scenarios, and the full sized Cadet Tiger CA for the rest. Duels between the ship(s) and the other Cadet ships can be conducted. This will give the players a feel for the strength and weaknesses of the technologies of the various races against each other.

Versus races with drones, Lyran ships either rely on the ESG field to destroy the drones while engaging their targets with long range disruptor fire, or use their phaser-3s to destroy the drones and close to "ram" the opposing ship with the ESGs.

Versus races with no drones, the Lyrans will usually try to close for a decisive ESG overrun.

Against plasma races, the Lyrans will employ a combination of long-range disruptor fire and maneuver to try to create a situation where the plasma ship can be caught with its plasma tubes empty by an ESG overrun.

Against the Hydrans, the Lyrans use the ESGs to try to keep Hydran fighters from closing to use their phaser-Gs to effect and to eliminate them. Finally for the decisive overrun to destroy the Hydran ship itself.

You could use all four map segments to give yourself additional maneuvering room. The game plays very differently (particularly for the plasma-armed ships) on a larger map.

INTRODUCTION TO THE HYDRANS

The Hydrans, a race of 4-foot tall three-legged methane breathers who are enemies of the Lyrans and Klingons, use the same phasers you are familiar with, plus a new one, the gatling phaser. They use the short-ranged fusion beam as their primary heavy weapon and the phaser-G for drone defense and supplementary close-in combat power. But what makes the Hydrans into Hydrans is their Stingers, a small shuttle-sized fighter also armed with a gatling phaser.

Hydran counters are white on a green background.

(E7.0) FUSION BEAMS

The fusion beam is the primary armament of many ships in the Hydran Fleet. Its power is derived from a stream of excited tritium nuclei that are projected to the target via a trans-light warp. The nuclei are then fused into helium, releasing tremendous energy at the instant of contact. The weapon is short-ranged but extremely powerful.

The standard Hydran tactic is to move rapidly toward the target, leaving the fusion beams uncharged to save power for more speed. The Hydran ship tries to end the turn near the target, then arms and fires its fusion beams at the start of the next turn.

(E7.1) DESIGNATION

(E7.11)   SSD: Each box on the SSD represents a single fusion beam generator. Each such generator is recorded separately.

(E7.12)   DESTRUCTION: Hydran fusion beams are destroyed on "torp" hits.

(E7.2) ARMING PROCEDURE

(E7.21)   ENERGY: Charging a fusion beam requires two points of power from any source during a single turn.

(E7.22)   COOLING: If the weapon is fired, it requires one turn of cooling and cannot be armed or fired during the game turn after the turn on which it was fired. The weapon can be discharged, i.e., the power is simply dumped into space not fired at an enemy ship, in which case cooling is not required.
EXAMPLE: If a fusion beam is fired during any impulse of turn 1 (no matter whether 1 or 32), it cannot be armed or fired on any impulse of turn 2.

(E7.23)   HOLDING: Armed fusion beams, like disruptors, cannot be be held over a turn break. The energy in them must be fired or released into space at the end of each turn.

(E7.24)   RESERVE   POWER: Fusion beams can be fired with reserve power (H7.2).

(E7.3) FIRING FUSION BEAMS

(E7.31)   FUSION   BEAM   TABLE: Fusion beam fire is resolved on the FUSION BEAM TABLE, which is found on the SSDs of ships armed with fusion beams.

(E7.32)   PROCEDURE: Determine the range to the target. Roll one die, and cross-index the die roll result with the range column. The result is the number of damage points scored.

(E2.15) TYPE G – GATLING PHASER

(E2.15)   TYPE   G - GATLING   PHASER: A particularly vicious weapon developed by the Hydrans. This weapon uses the same general rules for phasers found in (E2.0), except as modified below. The terms phaser–G, and ph–G are used interchangeably, although ph–G is the most common.
(E2.151)   A gatling phaser can be fired up to four times during a single turn. Each firing may be during the same or a different impulse and at the same or a different target. Gatling phasers can fire at different targets in the same impulse. A gatling phaser cannot fire more than four shots per turn, nor can it fire more than 4 shots within a 1/4-turn period. The 1/4-turn period can include some shots fired during the final portion of one turn and some shots fired during the early portion of the subsequent turn.
(E2.152)   The effect of a phaser-G is determined on the phaser-3 table. Each firing costs 1/4 of an energy unit (a total of 1 point for all four shots).

(J4.0) FIGHTERS

Certain advanced shuttlecraft are used as "fighters" within the game universe. The Cadet Training Handbook presents only one fighter, the Hydran Stinger-F.

All "fighters" are "shuttles," but not all "shuttles" are "fighters." Note that the authors were VERY careful to define "fighter" and "shuttle" in each case. If a rule refers to "fighters" it does not apply to non-fighter shuttles.

(J4.1) MOVEMENT

Fighters have certain advantages in movement over non-fighter shuttles. They otherwise operate as normal shuttles except as provided in this rules section.

(J4.11)   TACTICAL   MANEUVERS: All fighters may make tactical maneuvers (C5.2). This is done at speed zero [as with ships]. The fighter can make a tactical maneuver whenever its movement is called for [based on the maximum current speed of the fighter (as adjusted for crippled status) even though the fighter is not actually moving], but no more often than once in every four impulses. This forms several exceptions to the procedures for ships.

Non-fighter shuttles cannot make tactical maneuvers.

(J4.12)   ADDITIONAL   MOVEMENT   RULES: Stinger fighters have a maximum speed of 15 hexes a turn and a turn mode of 2 at speeds of 12 or higher. Stinger fighters are considered to be crippled if they have taken seven or more points of damage, and have their maximum speed reduced to 8 hexes per turn. Fighters move in the Move Ships part of the Impulse Procedure, but ALWAYS move after all ships have moved irrespective of speeds, and BEFORE seeking weapons move.
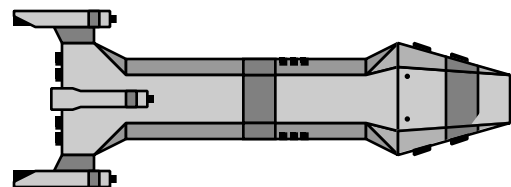
HYDRAN RANGER HEAVY CRUISER

(J4.3) FIGHTER LAUNCH RESTRICTIONS AND LANDING CONDITIONS

(J4.32) DIRECT-FIRE WEAPONS: Fighters may not fire their phasers until eight impulses after they have been launched. Fighters may only fire their phasers at targets in their FA arc. If a fighter has taken seven or more points of damage, it is considered to be crippled and its phaser-G will only be able to fire one phaser-3 shot each turn until it is repaired.

(J4.34) LAUNCHING AND LANDING: Hydran ships are equipped with "Launch Tubes", shown as solid triangles on their SSDs associated with the shuttle bays. One fighter may be launched per launch tube per impulse subject to the number of fighters and the number of launch tubes, this is in addition to any shuttle (or fighter) which launches from a given shuttle bay's normal launch/land hatch. These tubes cannot be used by normal shuttles. Fighters land by the same procedures as shuttles in (J1.6). The Hydran Ranger has three shuttle bays, two of which only have fighters. In the Cadet Training Handbook, fighters cannot land on planets or in the shuttle bay of an opposing, or a friendly non-Hydran, ship.

(J4.4) ADDITIONAL RULES ON FIGHTERS

(J4.41) INELIGIBLE MISSIONS: Fighters may not be used for suicide missions (J2.22), scientific research (J2.212), and cannot transport crew units or boarding parties.

(J4.42) BOARDING: Fighters may not be boarded by boarding parties (D7.0).

(J4.44) PHASERS: Fighters can fire their phasers each turn (gatling phasers, of course, fire four times per turn). The energy to rearm the phaser is drawn from the fighter's engine each turn with no reduction in the fighter's speed (or any increase if there is no reason to recharge the phaser).

(J4.47) TARGETING: As with shuttles, fighters cannot be targeted outside of five hexes range. Fighters are small and very erratic targets. All fire directed at them, even if by another fighter, is affected by a modifier of plus 1 to the die roll, e.g., if a disruptor was fired at a fighter at range three, and the die roll was a 4 (a hit), the plus one modifier would change this to a 5 (a miss). If the die roll is a six, the result is shift to the six of the next larger range bracket, e.g., a die roll of six at range 3 for a phaser-1 would normally be three damage points, but the plus one changes the result to a die roll of six at range four, resulting in only two damage points.

Plasma torpedoes are not affected by the plus 1 modifier, but drones are. When ever a drone "hits" a fighter, roll one die. If the result of the die roll is a six, the drone scores only half of its damage on the fighter, i.e., 6 points instead of 12.

(J4.48) REPAIRS: Fighters that are on their mother ship at the start of a turn may be declared to be undergoing "repairs". If the fighter does not launch from the mother ship for that entire turn, one point of damage on that fighter can be repaired. If a fighter that was crippled is repaired to a point where it has less than seven damage points marked off, it is no longer crippled, but would still be damaged. A fighter with nine damage points scored on it could be fully repaired at the end of nine turns.

(J4.49) DESTRUCTION: Fighters are destroyed, with no chance of recovery or repair, if they ever accumulate ten damage points before any repairs are applied.

(J4.5) CLOSE COMBAT MANEUVERING

(J4.51) AGAINST SHUTTLES: Fighters may always fire at any other shuttle that is in the same hex as they are regardless of relative facing. This reflects "close combat maneuvering." (This assumes that the fighter is otherwise able to fire.) This rule is used only against shuttles.

(J4.52) AGAINST SHIPS: A fighter may use "close combat maneuvering" in a hex to position itself to fire upon an enemy ship from an advantageous position.
(J4.521) To use CCM against a ship, the fighter must already be in the same hex as the ship as a result of movement on previous impulses. CCM cannot be used if the ship entered the hex on the current impulse. Because of the Sequence of Play, CCM cannot be used if the fighter entered the hex on the current impulse (as its movement would already be complete).
(J4.522) The fighter announces that it is using CCM; it does not leave the hex even if scheduled to move. The fighter is then turned to a new facing and is deemed to have moved around the ship and turned to position the ship on its forward centerline, usually facing a down or weak shield on the target ship. The fighter is then facing that shield and is in the corresponding weapon arcs of the target. A fighter using CCM is maneuvering so violently through the hex that any ship in the hex can fire any weapon at the fighter regardless of firing arcs.
(J4.523) EXAMPLE: A fighter is in the same hex as a Klingon D6 at the start of the impulse. The D6 is facing in direction A. Based on (D3.42), the fighter is facing the #1 shield of the D6. The #3 shield of the D6 is down from a previous attack, and the fighter wishes to engage this shield. The fighter announces CCM to face in direction F. It is now facing the D6's #3 shield, and the fighter is in the R and RR firing arcs of the D6, and could be fired on by any direct-fire weapon possessed by any other ship in the same hex.

SCENARIOS AND TACTICS

Players are invited to play each of the scenarios presented previously, using the small scale Hydran Cadet Ship for the first six scenarios, and the full sized Cadet Ranger CA for the rest. Duels between the ship(s) and the other Cadet ships can be conducted. This will give the players a feel for the strength and weaknesses of the technologies of the various races against each other.

Hydran ships are designed to get close to their target and then destroy it. This is reflected in their design which makes their ships very durable. Their weapons are all very short ranged. Hydran ships may use all of their available power to get close to a target, and then on the following turn, load the fusion beams and fire them.

Deploy some of the fighters for plasma or drone defense against races with seeking weapons (two versus the Klingons, four against the Gorns or Romulans is one possibility), but keep enough available to wreck your opponent in the close-in fight. Remember, your fighters are not as fast as your ship, or your opponent's ship, so you must plan to use them carefully.

You could use all four map segments to give yourself additional maneuvering room. The game plays very differently (particularly for the plasma-armed ships) on a larger map.

INTRODUCTION TO
THE INTERSTELLAR CONCORDIUM (ISC)

The ISC, a Federation of races similar to the United Federation of Planets, attempted to bring peace to the Galaxy by means of military force. Their ships eventually fought those of every known race in the Galaxy. The ISC ships were equipped with plasma torpedoes, but also with the Plasmatic Pulsar Device, which was the centerpiece of their operations.

ISC counters are black on a yellow background.

(E11.0) PLASMATIC PULSAR DEVICE

At some point ISC scientists developed the Plasmatic Pulsar Device (PPD). The basic concept of the weapon is a series of intensely focused plasma energy pulses that are conveyed to a target on a carrier wave.

(E11.1) DESIGNATION

(E11.11)   DEFINITION: Each box on the SSD labeled "PPD" represents one device. Each device is treated and recorded separately. The PPD is a direct-fire weapon.

(E11.12)   DESTRUCTION: PPDs are destroyed on "drone" hits.

(E11.15)   FIRE CONTROL: Active fire control (D6.1) and a lock-on (D6.11) is required for the entire time that the weapon is pulsing, even if over two turns.

(E11.2) ARMING PROCEDURE

(E11.21)   POWER: To arm a PPD, four points of power (from any source) must be allocated on each of two consecutive turns. The PPD can then be fired on the second turn of arming.

(E11.22)   HOLDING: If not fired on the second turn of arming, the PPD may be held ready to fire at a cost of two points of energy (from any source) per turn. As with other weapons, if a PPD armed on a previous turn is not fired, the holding cost must be paid at the start of the new turn or the energy is lost and ejected into space. If the holding cost is paid, the weapon can be fired during that turn or held longer if the holding cost is paid each turn.

(E11.23)   CYCLE: The PPD can only receive energy for one firing at a time. It cannot receive the first turn energy for one charge if it is still holding (or arming) an unfired charge. Note that, as firing takes place over a period of four impulses, arming energy can be added at the start of one turn while firing begun on the previous turn is still in progress.

EXAMPLE: The weapon was armed on turns 1 and 2 and was fired on impulse 31 of turn 2. The pulses are resolved on impulses 31 and 32 of turn 2 and on impulses 1 and 2 of turn 3. Even so, arming energy could be added during the Energy Allocation Phase of turn 3 (and the weapon fired on turn 4, assuming arming was completed on that turn).

(E11.24)   RESERVE POWER: The PPD cannot begin arming with reserve power.

(E11.25)   UNDERLOAD: The PPD can be loaded at less than the full charge, although arming still requires two consecutive

turns with at least two points of energy, and a maximum of four, added on each turn. For every two points of energy added to the PPD, it can fire one pulse (at the same target, within the rules). An undercharged PPD can be brought to greater (or full) strength with reserve power or by holding it for an additional turn and allocating more energy (the holding energy does not increase the strength, and is not reduced for the lower strength). Note that the normal arming level requires eight points of energy and produces four pulses. See (E11.311). It is not possible to produce a PPD with one pulse.

(E11.3) COMBAT PROCEDURE

(E11.30)   GENERAL: When the PPD is fired, it operates over the current impulse and the next three impulses. In effect, it gets four "shots" (termed "pulses;" there may be less than four in some cases) at the same target and rolls for a wave-lock (E11.31) each time. [It cannot change targets between pulses of the same charge; exceptions: (E11.56) and (E11.546).] Whenever a wave-lock is achieved, all subsequent pulses automatically hit.

(E11.31)   PROCEDURE: The PPD is a direct-fire weapon and is fired during the Fire Direct-Fire Weapons Step before any other fire by that side. The owning player designates the target (at the same time as all other direct-fire is designated) and resolves fire as follows:
   Determine the range;
   Roll two dice for each PPD; and
   If the total of the two dice is equal to or less than the wave-lock probability number (i.e., "hit number") for that range shown on the chart on the SSD, the device has achieved a wave-lock. It then begins to score damage (E11.331). See (E11.37).
(E11.311) Upon firing a PPD, the owning player must write down the turn and impulse of firing, the identity of the firing ship, and how many impulses each PPD is programmed to pulse; see (E11.25). This written record is then placed face down. After each pulse is resolved, the owning player must announce whether or not the PPD wave-lock is still present. After the wave-lock is released, the written record is revealed and confirmed. Retain this record until the end of the scenario to verify the energy allocation records.
(E11.312) In all cases, the dice roll is made at the effective range and the damage is based on the true range. The weapon cannot be fired if the true range is 3 hexes or less, regardless of what the effective range is, although in some cases a wave-lock might be retained (E11.521).

(E11.33)   PULSES: The dice are rolled on the impulse of firing. If the dice roll indicates a wave-lock, the damage for that range is scored.
(E11.331) Unless conditions change (E11.5) and the wave-lock is lost, the same damage will be scored on the subsequent impulses until the total number of pulses for which energy was provided have been fired. If the dice roll indicates no wave-lock, the wave (or pulse) for that impulse is lost but the player rolls for another wave-lock on the next impulse (E11.34), assuming that the weapon has another pulse to fire. Once a wave-lock is achieved, all remaining pulses (from the original arming, if any) score damage unless the wave-lock is lost (E11.51). Exception: Cloaked targets (E11.473).
(E11.332)   All damage scored by a given PPD during a given impulse is resolved as a single volley separate from other weapons (including other PPDs) and other pulses of that PPD. These PPD volleys are resolved before other direct-fire weapons.
   For purposes of phaser damage restrictions (D4.321), internal damage is considered to have come from any or all

directions with penetrated shields that the specific PPD pulse came through. For example, a ship with its #1, #2, and #3 shields down hit by a PPD on its #3 shield would lose phasers able to fire through the #2 or #3 shield, but not phasers only able to fire through the #1 shield, since none of the PPD "splash" struck that shield.

(E11.333) It is not possible to voluntarily "pass" on one pulse and then continue with subsequent pulses. The weapon can be voluntarily shut down on a subsequent Fire Direct-Fire Weapons Step, but at that point all remaining pulses are lost (E11.362). The player could deliberately miss with a pulse, but would have to roll to re-acquire wave-lock (E11.34) on the next Fire Direct-Fire Weapons Step.
    EXAMPLE: A PPD is fired at a target at a range of 12. The dice roll at the instant of firing is 11, indicating a miss (i.e., failure to attain wave-lock). Thus, the first of the four pulses is lost. On the next impulse, a 4 is rolled, indicating a wave-lock has been achieved. Thus, pulse #2 will hit, as will (automatically, unless wave-lock is lost) pulses #3 and #4, one pulse on each of the next two impulses. Pulse #1, however, missed and is lost.

(E11.34) RE-ACQUISITION: If the PPD achieves a wave-lock and scores damage, and then [due to changing conditions (E11.5)] loses its wave-lock, it will try to re-acquire the wave-lock (by making another dice roll) to the original target in any remaining firing impulses. It cannot switch targets.
    EXAMPLE: In the example above, if the target moved behind a planet on impulse 2 the wave-lock would be lost and pulse #2 would miss. If a clear line of sight was established on the next impulse a new die roll could be made to see if pulse #3 hits. If this happened (and the dice roll failed) in impulse 3, the PPD would cause no damage in that impulse, but would still roll for a wave-lock during impulse 4.

(E11.35) SPLASH EFFECT: The impact of the weapon is spread over two or three shields. This is not an optional use of the weapon. It is the way that the weapon always operates. Players cannot voluntarily operate the weapon "without splash" under any circumstances. [See (E11.353) for an example of involuntarily losing a splash element.] The total damage shown on the "damage" line of the PPD chart is for statistical purposes and never reflects the damage actually scored on a single shield.
(E11.351) If the line of fire is directly along a hex side (D3.41), do not determine which shield is hit but divide the damage points evenly between the two shields (as on the "alternate" line on the chart), with any odd points going to the stronger shield. If the shields are of equal strength, the owner (of the target) decides which will take the extra damage point.
(E11.352) If the line of fire is against a single shield, then divide the damage points between that shield and the adjacent shields on either side, according to the "splash" line on the chart. The main (center) element is scored against the facing shield of the target, while the splash elements are scored against the adjacent shields clockwise and counter-clockwise from the facing shield. For example, six damage points from a PPD facing the #3 shield would be scored as 1 damage point on the #2 shield, 4 damage points on the #3 shield, and 1 damage point on the #4 shield. In the case of two damage points, ignore the weaker adjacent shield (if both adjacent shields are equal, the owner of the target decides which takes the damage point); in the case of one damage point, ignore both adjacent shields.
(E11.353) In the case of fighters, drones, [and monsters], or other targets which do not and never had shields], ignore the splash effect and use only the central number on the splash line. For example, when fired at a drone at range 6, the PPD would score only 4 points per impulse (if it achieved wave-lock). (This does not apply to ships which have dropped or lost their shields.)

(E11.36) RESTRICTIONS: Once firing has commenced, the PPD cannot be switched to another target during the firing sequence.
(E11.361) There are very few exceptions to (E11.36), and none of them are voluntary. Rule (E11.54) provides for the involuntary transfer of wave-lock to a planet. If a wave-lock is achieved to a shuttle or fighter at 5 hexes range, and the range is increased to six hexes, wave-lock will be lost.
(E11.362) The owning player can voluntarily drop the wave-lock and (essentially) cease firing after any pulse. This can be announced at any point after one pulse is fired and before the next is fired. Whether dropped voluntarily or involuntarily, all subsequent pulses are discharged into space. See (E11.546) for an exception when PPD pulses cannot be canceled.

(E11.39) GENERAL REINFORCEMENT: The player operating the target ship can use any general reinforcement (D3.341) to offset the damage from any elements of the PPD at his option, but all general reinforcement points must be used against the first pulse (unless there are more points than needed to stop the damage) before any PPD damage is scored on shields or specific reinforcement.
    EXAMPLE: A PPD hit scores 1 point of damage on the #2 shield, 4 points on the #1 shield, and 1 point on the #6 shield. The player operating the target ship has 2 points of general reinforcement. He elects to use one to block the damage to the #6 shield, which is down. He must use the remaining point now, however, rather than waiting for the next impulse when another damage point will strike that shield; he uses it to reduce the damage to the #1 shield.

(E11.4) INTERACTION WITH OTHER SYSTEMS

(E11.41) ESG: The PPD does not interact with an ESG field It cannot damage the field and is not inhibited by it.

(E11.45) PLASMA SYSTEMS: The PPD has no effect on plasma torpedoes (FP1.6) or anything that plasma torpedoes won't affect.

(E11.47) CLOAKING DEVICES: These have special effects on a plasmatic pulsar device.
(E11.471) A ship might begin cloaking while held in a wave-lock. The fade-out procedure defines the steadily "increasing" or "decreasing" (effective) range. A PPD can maintain a wave-lock on a ship that is cloaking until the end of the fade period and can lock onto a cloaked ship while it is fading-in so long as the true range is greater than three (E11.52). The fade-in period will define the decreasing effective range.
(E11.472) A PPD cannot be fired at a cloaked ship in the Cadet Training Handbook.
(E11.475) Ships cannot fire PPDs while cloaked, cloaking, or uncloaking.

(E11.5) CHANGING CONDITIONS

    Certain events can change the conditions of the wave-lock and require a new dice roll or permanently break the wave-lock.

(E11.51) NON-LOCKED IMPULSES: During any firing impulse when a firing PPD does not have a wave-lock, it will roll to try to achieve one. If one is not achieved, that pulse will miss (be wasted).

(E11.52) RANGE: The damage scored by a given pulse is based on the true range (E11.312) during the Fire Direct-Fire

Weapons Step it is fired. Changes in range will affect the damage caused by a PPD pulse, but will not break the wave-lock (unless the target moves beyond the 40-hex maximum range.

EXAMPLE: A target at range 10 is held in a wave-lock. The pulse fired on impulse 5 causes 6 points of damage. The target moves one hex farther away (range 11), and the pulse fired on impulse 6 causes only 5 points of damage. The firing ship moves one hex closer (range 10), and the pulse on impulse 7 causes 6 points of damage.

(E11.521) If the target moves within the minimum range (known as the "myopic zone"), the PPD retains its wave-lock even though no damage is scored, and if the true range subsequently increases beyond the minimum while the weapon is still firing, it will cause damage during the impulses after the range increases.

(E11.54) BREAKING WAVE-LOCK: If any of the following events occur, the wave-lock is broken and all subsequent pulses are lost. Do not roll for a new wave-lock.

(E11.541) The target moves out of the firing arc (D2.0) of the PPD or moves out of range.

(E11.542) The target is destroyed (D4.4).

(E11.544) The specific PPD box on the firing ship is destroyed (D4.2).

(E11.545) The firing ship is captured (D7.0).

(E11.546) The line of fire is blocked by a planet. The transfer of wave-lock is made in the Fire Direct-Fire Weapons Step; PPD fire cannot be canceled between the involuntary transfer and the actual firing (E11.362).

(E11.548) The owning player ceases fire by dropping the wave-lock (E11.362).

(E11.549) The firing ship turns off its active fire control or otherwise loses lock-on. See (E11.15).

(E11.56) TARGET DOCKING: If the target lands inside of a larger unit, the carrier wave will switch to the larger unit as its target. If something launches from a target, the wave-lock will remain on the larger element.

(E11.58) NON-BREAKING INCIDENTS: The following events will NOT (at least not in and of themselves) break a wave-lock:

(E11.581) The firing ship is boarded, changes speed or direction (unless the target becomes out of arc), or any other event not specifically listed in (E11.54).

(E11.582) The target is held in a tractor beam, changes speed or direction, or any other event not specifically listed in (E11.54).

SCENARIOS AND TACTICS

Players are invited to play each of the scenarios presented previously, using the small scale ISC Cadet Ship for the first six scenarios, and the full-sized ISC Star Cruiser for the rest. Duels between the ship(s) and the other Cadet ships can be conducted. This will give the players a feel for the strength and weaknesses of the technologies of the various races against each other.

Phasers are the principle drone defense of ISC cadet ships, and you will have to make sure that you keep enough handy to stop any drones which are going to catch you.

Use your plasma torpedoes to down shields on the enemy ship, and then use the PPD to systematically strip the enemy of weapons with its multiple volley capability.

Use speed and maneuver to avoid becoming closely engaged where your PPD will become useless. Especially avoid allowing Hydran fighters to get close, good advice for any race.

You could use all four map segments to give yourself additional maneuvering room. The game plays very differently (particularly for the plasma-armed ships) on a larger map.

ISC CADET CRUISER
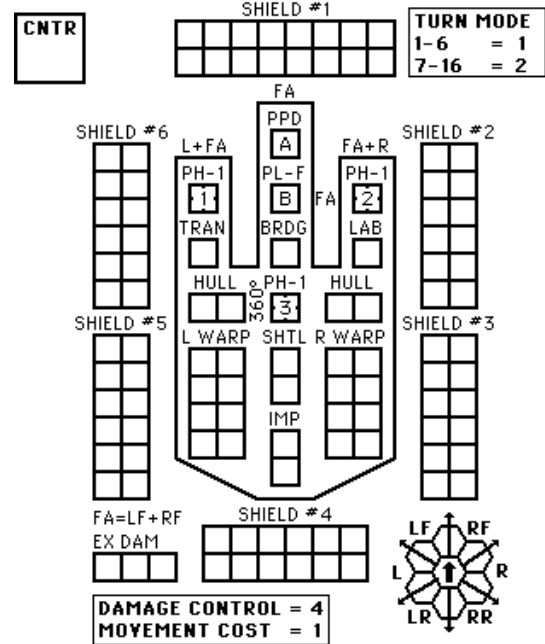
TYPE I OFFENSIVE PHASER TABLE

DIE ROLL	RANGE 0	1	2	3	4	5	6-8	9-15	16-25	26-50	51-75
1	9	8	7	6	5	5	4	3	2	1	1
2	8	7	6	5	5	4	3	2	1	1	0
3	7	5	5	4	4	4	3	1	0	0	0
4	6	4	4	4	4	3	2	0	0	0	0
5	5	4	4	4	3	3	1	0	0	0	0
6	4	4	3	3	2	2	0	0	0	0	0

PLASMATIC PULSAR DEVICE COMBAT TABLE

RANGE	0-3	4-10	11-15	16-20	21-25	26-30	31-40
HIT#	–	9	8	7	6	5	4
DAMAGE	0	6	5	4	3	2	1
SPLASH	0	1+4+1	1+3+1	1+2+1	1+1+1	1+1+0	0+1+0
ALT	0	3+3	3+2	2+2	2+1	1+1	1+0

PLASMA TORPEDO WARHEAD TABLE

RANGE	0-5	6-10	11-12	13-14	15
TYPE F	20	15	10	5	1

SCENARIO #12: FORCE DYNAMICS

One of the more challenging situations is to face two or more smaller opponents which are individually inferior but collectively superior. The reverse is also true as ships often have to team up to defeat a larger opponent.

Use Scenario #10, but replace one ship with two or three Cadet ships. The Cadet ships have a movement cost of 1/2, do not pay for life support or fire control, pay only one point for their shields, and use the smaller Cadet Damage Allocation Chart.

GRADUATION

Congratulations, Captain! Having completed Scenarios #1 through #7, plus #10 (and possibly others), you have graduated from the Star Fleet Academy and are now ready to move onward and upward to a starship command of your own.

There are two things to do at this point. The first is to purchase Basic Set and assume command of your starship; the second is to contact a group of *Star Fleet Battles* players.

If you did not play all of the scenarios from Cadet Training Handbook, your first move with Basic Set should be to play those scenarios, but with the full rules from the Basic Set rulebook. You should play these scenarios (with one set of rules or the other) before playing Scenario #13.

SCENARIO #13: EARNING RESPECT

Like the 19th hole in golf, this scenario isn't part of the course but something that you do afterwards. The general idea is to locate an established SFB playing group, contact one of their players, and challenge him to a starship duel. You can do this before you purchase Basic Set (giving you a chance to look over his copy) or afterwards (in which case you may not have to make him leave out some of the rules).

This challenge will take a certain amount of courage. After all, he (or she) has been playing for several years. You may very well lose, but if you have played and learned Cadet Training Handbook, you should be able to earn his respect. When you find a Star Fleet player, tell him that you just graduated from Star Fleet Academy and are looking for an experienced opponent for Scenario #13. (If he looks bewildered, show him Cadet Training Handbook and tell him that you learned to play SFB through it.)

For your first battle, stick with the basic Federation cruiser and Klingon D7. Show your opponent this paragraph, which lists the rules that he (or she) CANNOT use. Of course, if you have learned some of these rules while looking for an opponent, you can graciously allow their use.

The Basic Set Up is: Scenario (SG1.0) THE DUEL using free movement and a fixed map. Disengagement is by leaving the map only. All drones are type-IF (speed 32).

The prohibited list (which shows how much more a starship can do) includes the following (The rules marked * should be the first you learn after acquiring Basic Set):

Any Advanced Missions rules.

C (Movement): High energy turns*, emergency decelera-
    tion*, positron flywheel, erratic maneuvering, changing
    speed in mid-turn.

D (Combat): Electronic warfare*, UIMs, critical hits.

E (Direct-fire weapons): Overloaded weapons*, anti-drones.

F (Seeking Weapons): Scatter-packs, drone racks B-G*.

G (Systems): Probes as weapons, crew units, computers,
    ship separation.

H (Power): Reserve warp power*.

J (Shuttles): Wild weasels*, fighters.

P (Planets): Any type of terrain.

Good luck, Captain!

And if an opponent underestimates you, *show him no mercy!*

NOW TAKE COMMAND WITH BASIC SET

Star Fleet Battles Basic Set is the cornerstone on which the entire game is built. The comprehensive 224-page rulebook includes all the information you need in an integrated format. Basic Set includes a larger map, 216 counters, and several pages of charts and SSDs.

Do not discard your copy of Cadet Training Handbook when you acquire Basic Set. The playing pieces and most of the charts can be used with the rest of the Star Fleet Universe, and you will eventually want to use Cadet Training Handbook to teach the game to your friends.

Because you have played Cadet Training Handbook, you should be able to learn Basic Set faster and more easily than someone who has not. In fact, you will have a dramatic head start. Go through each section of Cadet Training Handbook, checking it against the corresponding section of Basic Set. This will quickly reveal any new items that you need to learn. (You will also find all of the "missing" rule numbers.)

Basic Set includes a "training module" (rule A4.0, the "Cadet Game"). You can ignore this; you already know everything it was trying to teach.

To work your way through Basic Set, you should return to the basic Duel Scenario (#10 in Cadet Training Handbook), but use the appropriate rules from Basic Set. Beginning with a standard Federation vs. Klingon duel, you should learn the sections on overloaded photons, overloaded disruptors, and DERFACS. To play the pirates, you should read (G15.0). To play the Romulans, review the more detailed cloaking device rules in (G13.0).

Plasma torpedoes will require the greatest effort to learn since you must learn the high energy turn (C6.0), emergency deceleration (C8.0), the wild weasel decoy (J3.0), the plasma bolt (FP8.0), and the pseudo plasma torpedo (FP6.0) to use them effectively.

One new concept that should be mastered is electronic warfare (EW). This includes ECM (jamming) and ECCM (counter-jamming). The EW function is used to account for a broad range of effects besides simply jamming the enemy's sensors.

Basic Set also includes another space-faring race, the Tholians, with their webs. Other products include many more new races, each with unique ships, concepts, and technology.
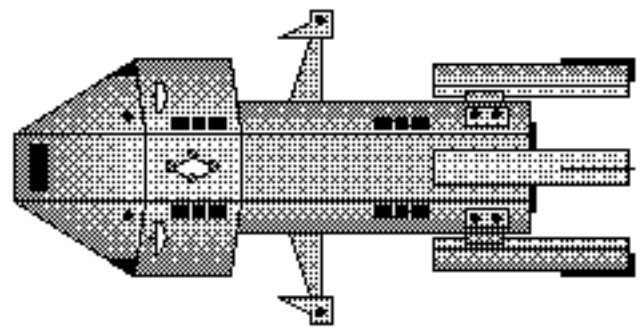
KZINTI BATTLECRUISER

THE STAR FLEET UNIVERSE

The Star Fleet Universe consists of several products. Not all of the products are necessary to play the game, but if you become as excited about *Star Fleet Battles* as thousands have, you'll be glad to know that there is plenty of game out there. Space is vast, and only a vast game can accurately portray it. Here is a list of the products included in the Star Fleet Universe. More information can be found in the Task Force Games catalog.

BASIC SET: This is the basic *Star Fleet Battles* game.

ADVANCED MISSIONS expands *Star Fleet Battles* with more ships and advanced rules and scenarios.

NEW WORLDS I (Module C1) adds 3 new races (Lyran, Hydran, and WYN), with their unique rules, weapons, and ships.

NEW WORLDS II (Module C2) adds three more new races (Andromedan, Interstellar Concordium, and Neo-Tholian), with their unique rules, weapons, and ships.

FIGHTERS (Module J) adds many fighter shuttles to the game, along with carriers, escorts, campaigns, and rules.

FAST PATROL SHIPS (Module K) adds the "PT Boats of Space" to the game system, with their unique rules and SSDs.

SCENARIO BOOK #1 (Module S1) adds 51 additional scenarios to prevent you from becoming bored. There is also S2.

TACTICS MANUAL will help you get a good foundation in basic and advanced combat tactics.

FEDERATION AND EMPIRE: This is a grand strategic simulation of space warfare between a dozen races over a quarter of the galaxy. F&E is an independent game, but can be used as a campaign system to generate scenarios for *Star Fleet Battles.* Expansions for F&E are now in preparation.

CAPTAIN'S LOG is a serial book appearing at odd intervals with fiction, scenarios, tactics, rules, and articles about *Star Fleet Battles* and *Federation & Empire.*

WEB SITE: Visit www.starfleetgames.com where you will find all manner of extra ships, rules, gamers, tactics, and help in getting the most out of your SFB experience.

DESIGNER'S NOTES

A lifetime ago, in 1986, I was talked into doing a product known as *Introduction to Star Fleet Battles* by our publisher's marketing director. It proved to be a smash hit, as well as an interesting design challenge (to produce a simple game).

In the years from 1986-91, we totally revised *Star Fleet Battles,* turning the third (Commander's or Golden Anniversary) edition into the fourth (Captain's or Doomsday) edition. The old *Introduction to SFB* product was out of print and only a fading memory (and a hot collector's item). A player talked us into reprinting it, and the expanded version became the *Cadet Training Module.*

In late 1996, it was decided to expand that product with new sections and turn it into the *Cadet Training Handbook.* That product remains in print, and a very popular item for beginning players.

By 1998, we had signed the deal with Interplay to produce *Star Fleet Command,* and, in 1999, ADB Inc. became an independent publisher rather than just a design house. The gang at Interplay offered us the chance to include *Cadet Training Handbook* on the CD for *Star Fleet Command* in order to show the new generation of computer players that there is more than one way to fly a starship.

Now, don't get me wrong, computers and computer games are great things in their place. Nothing can beat the convenience of an opponent who is always ready to play. But, on the other hand, nothing can beat the camaraderie of a human opponent sitting across the table, a few sodas and a bag of pretzels.

I hope you all find SFB as fun to play as it was to design.

--Stephen V Cole, Professional Engineer

FINDING OTHER PLAYERS

Contacting a local playing group should not be difficult.

Check the local hobby stores to see if they have on-premises gaming, and find out when the *Star Fleet Battles* group meets.

If no store has on-premises gaming, check the gaming contact bulletin boards in the stores. (Most game and hobby stores have these or a similar system. If your store doesn't have one, suggest that they start one.) If there are no *Star Fleet Battles* groups listed, put up a notice of your own and either find a local group or start one.

ADB maintains a list of known SFB players. If you send mail to TFG or ADB about SFB, you will be put on the list. You can obtain a copy of the list for your zip code area from ADB (address below) for $1 and a stamped self-addressed envelope.

There are many advantages to being in an active playing group. You can always find an opponent, and by playing several different opponents, you can sharpen your skills. You get a chance to look at new products and will have someone to answer your questions. There will be enough people to run a campaign or to play the Captain's Game.

If there is a local gaming convention, it may have a *Star Fleet Battles* event. Even if it doesn't, go there and set up an SFB game in the Open Gaming room, and you should attract some opponents. Eventually, you'll want to attend the Origins National Adventure Gaming Convention and compete for the Fleet Captain's Gold Hat, the mark of the National SFB Champion.

DESIGN CREDITS

SFB Game Design.................................Stephen V. Cole, PE
Concept Development *Introduction* ....David W. Crump
Game Development *Introduction* ....Ray D. Olesen,
    Felix Hack, Jeff Smith, Frank Crull
Design: *Cadet Training Handbook* ....Steven P. Petrick
Playtesting *Cadet Training Manual*......................Ken Burnside
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Graphics (computer art)...............................Stephen V. Cole
Interior art (non-computer)...................................... Lee Moyer
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Publisher .... John Olsen
Production ....Tim Olsen

The playtesters for the original *Introduction to SFB* included Cris Hammond, Barbara O'Bannion, Mark Manning, Mike Orrick, and Delilah Smith.

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BASIC IMPULSE PROCEDURE CHART

Turn Record Track

MOVE SHIPS	**1**
MOVE SEEKING WEAPONS	**2**
RESOLVE SEEKING WEAPONS	**3**
LAUNCH SEEKING WEAPONS	**4**
FIRE DIRECT-FIRE WEAPONS	**5**
RESOLVE DIRECT-FIRE WEAPONS	**6**
END OF IMPULSE	**7**

This chart is used for Scenarios #1 through #6.

8-IMPULSE MOVEMENT CHART

SPEED Impulse	8	7	6	5	4	3	2	1
1	1	–	–	–	–	–	–	–
2	2	1	1	1	1	–	–	–
3	3	2	2	–	–	1	–	–
4	4	3	3	2	2	–	1	–
5	5	4	–	3	–	–	–	–
6	6	5	4	–	3	2	–	–
7	7	6	5	4	–	–	–	–
8	8	7	6	5	4	3	2	1

This chart is used for Scenarios #1 through #3.

CADET SEQUENCE OF PLAY

1. ENERGY ALLOCATION
2. SPEED DETERMINATION
3. IMPULSE PROCEDURE
   (REPEAT 8 OR 16 TIMES)
4 END OF TURN

This chart is used for Scenarios #1 through #6.

ADVANCED SEQUENCE OF PLAY

1. ENERGY ALLOCATION
2. SPEED DETERMINATION
3. SENSOR LOCK-ON
4. IMPULSE PROCEDURE
   (REPEAT 32 TIMES)
5. ROLL FOR KLINGON MUTINY
6. BOARDING PARTY COMBAT
7 END OF TURN

This chart is used for Scenarios #7 through #12.

CADET ENERGY ALLOCATION FORM

SHIP / COUNTER	1	2	3	4	5	6	7	8	9	10
1. WARP ENGINE POWER										
2. IMPULSE ENGINE POWER										
3. REACTOR POWER										
4. TOTAL POWER AVAILABLE										
5. BATTERY POWER AVAILABLE										
6. BATTERY CAPACITY DISCHARGED										
9. PHASERS										
10. HEAVY WEAPONS A										
B										
14. ENERGY FOR MOVEMENT										
16. RECHARGE BATTERIES										
19. CLOAKING DEVICE										
20. TOTAL POWER USED										
21. BATTERY POWER USED										
NOTES										

This modified form covers all of the functions used in Scenarios #4 through #6 of the Cadet Training Handbook..

(D4.21) DAMAGE ALLOCATION CHART

DIE ROLL	A	B	C	D	E	F	G	H	I	J	K	L	M
2	**Bridge**	**Flag Bridge**	**Sensor**	**Damage Control**	**A Hull**	Left W En	Trans	Tractor	Shuttle	Lab	F Hull	Right W En	Excess Damage
3	**Drone**	**Phaser**	Impulse	Left W En	Right W En	A Hull	Shuttle	**Damage Control**	Center W En	Lab	Battery	Phaser	Excess Damage
4	**Phaser**	**Trans**	Right W En	Impulse	F Hull	A Hull	Left W En	APR	Lab	Trans	Probe	Center W En	Excess Damage
5	**Right W En**	A Hull	Cargo	Battery	Shuttle	**Torp**	Left W En	Impulse	Right W En	Tractor	Probe	Any Weapon	Excess Damage
6	F Hull	Impulse	Lab	Left W En	**Sensor**	Tractor	Shuttle	Right W En	Phaser	Trans	Battery	Any Weapon	Excess Damage
7	Cargo	F Hull	Battery	Center W En	Shuttle	APR	Lab	Phaser	Any W En	Probe	A Hull	Any Weapon	Excess Damage
8	A Hull	APR	Shuttle	Right W En	**Scanner**	Tractor	Lab	Left W En	Phaser	Trans	Battery	Any Weapon	Excess Damage
9	**Left W En**	F Hull	Cargo	Battery	Lab	**Drone**	Right W En	Impulse	Left W En	Tractor	Probe	Any Weapon	Excess Damage
10	**Phaser**	**Tractor**	Left W En	Impulse	A Hull	F Hull	Right W En	APR	Lab	Trans	Probe	Center W En	Excess Damage
11	**Torp**	**Phaser**	Impulse	Right W En	Left W En	F Hull	Tractor	**Damage Control**	Center W En	Lab	Battery	Phaser	Excess Damage
12	**Aux Control**	**Emer Bridge**	**Scanner**	**Probe**	**F Hull**	Right W En	Trans	Shuttle	Tractor	Lab	A Hull	Left W En	Excess Damage

This chart is used in Scenarios #7 through #12 of the Cadet Training Handbook (and in Captain's Edition *Star Fleet Battles*).

ADVANCED IMPULSE PROCEDURE CHART

	MOVE SHIPS
	MOVE SEEKING WEAPONS
	RESOLVE SEEKING WEAPONS
	CLOAK / UNCLOAK
	TRACTOR BEAMS
	LAUNCH SEEKING WEAPONS
	SHIELDS / TRANSPORTERS
	RECOVER SHUTTLECRAFT
	LAUNCH SHUTTLECRAFT
	FIRE DIRECT-FIRE WEAPONS
	RESOLVE DIRECT-FIRE WEAPONS
	END OF IMPULSE

This chart is used in Scenarios #7 through #12 of Cadet Training Handbook.

16-IMPULSE MOVEMENT CHART

SPD / Impulse	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2	2	1	1	1	1	1	1	1	1	–	–	–	–	–	–	–
3	3	2	2	2	2	2	–	–	–	1	1	–	–	–	–	–
4	4	3	3	3	3	–	2	2	2	–	–	1	1	–	–	–
5	5	4	4	4	–	3	3	–	–	2	–	–	–	–	–	–
6	6	5	5	–	4	4	–	3	3	–	2	–	–	1	–	–
7	7	6	6	5	5	–	4	–	–	3	–	2	–	–	–	–
8	8	7	7	6	6	5	5	4	4	–	3	–	2	–	1	–
9	9	8	–	7	–	6	–	5	–	–	–	–	–	–	–	–
10	10	9	8	8	7	–	6	–	5	4	–	3	–	–	–	–
11	11	10	9	–	8	7	–	6	–	–	4	–	–	2	–	–
12	12	11	10	9	9	8	7	–	6	5	–	–	3	–	–	–
13	13	12	11	10	–	–	8	7	–	–	–	4	–	–	–	–
14	14	13	12	11	10	9	–	–	7	6	5	–	–	–	–	–
15	15	14	13	12	11	10	9	8	–	–	–	–	–	–	–	–
16	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

This chart is used in Scenarios #4 through #6 of Cadet Training Handbook.

Impulse Movement Chart — rows are IMP (impulse, 1–32, reading down the left edge), columns are SPEED (32 down to 2, reading across the top).

IMP \ SPEED	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	3	2	2	2	2	2	2	2	2	2	2	—	—	—	—	—	—	1	1	1	1	1	—	—	—	—	—	—	—	—	—
4	4	3	3	3	3	3	3	3	3	—	—	2	2	2	2	2	2	—	—	—	—	—	1	1	1	—	—	—	—	—	—
5	5	4	4	4	4	4	4	—	—	3	3	3	3	—	—	—	—	2	2	2	—	—	—	—	—	1	—	—	—	—	—
6	6	5	5	5	5	5	—	4	4	4	4	—	—	3	3	3	3	—	—	—	2	2	—	—	—	—	1	—	—	—	—
7	7	6	6	6	6	—	5	5	5	5	—	4	4	4	—	—	—	3	3	—	—	—	2	—	—	—	—	1	—	—	—
8	8	7	7	7	7	6	6	6	6	—	5	5	5	—	4	4	4	—	—	3	3	—	—	2	2	—	—	—	1	—	—
9	9	8	8	8	—	7	7	7	—	6	6	—	—	5	5	—	—	4	—	—	—	3	—	—	—	—	—	—	—	—	—
10	10	9	9	9	8	8	8	—	7	7	—	6	6	—	—	5	5	—	4	4	—	—	3	—	—	2	—	—	—	—	—
11	11	10	10	—	9	9	—	8	8	—	7	7	—	6	6	—	—	5	—	—	4	—	—	3	—	—	2	—	—	1	—
12	12	11	11	10	10	10	9	9	9	8	8	—	7	7	—	6	6	—	5	—	—	4	—	—	3	—	—	—	—	—	—
13	13	12	12	11	11	—	10	10	—	9	—	8	8	—	7	—	—	6	—	5	—	—	4	—	—	—	—	2	—	—	—
14	14	13	13	12	12	11	11	—	10	10	9	9	—	8	—	7	7	—	6	—	5	—	—	—	—	3	—	—	—	—	—
15	15	14	14	13	13	12	12	11	11	—	10	—	9	—	8	—	—	7	—	6	—	5	—	4	—	—	—	—	—	—	—
16	16	15	15	14	14	13	13	12	12	11	11	10	10	9	9	8	8	—	7	—	6	—	5	—	4	—	3	—	2	—	1
17	17	16	—	15	—	14	—	13	—	12	—	11	—	10	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	18	17	16	16	15	15	14	14	13	—	12	—	11	—	10	—	9	8	—	7	—	6	—	5	—	—	—	—	—	—	—
19	19	18	17	17	16	16	15	—	14	13	13	12	—	11	—	10	—	—	8	—	7	—	—	—	—	4	—	—	—	—	—
20	20	19	18	18	17	—	16	15	15	14	—	13	12	—	11	—	10	9	—	8	—	—	6	—	5	—	—	3	—	—	—
21	21	20	19	19	18	17	17	16	—	15	14	—	13	12	—	11	—	—	9	—	—	7	—	—	—	—	—	—	—	—	—
22	22	21	20	—	19	18	—	17	16	—	15	14	—	13	12	—	11	10	—	—	8	—	—	6	—	—	4	—	—	2	—
23	23	22	21	20	20	19	18	—	17	16	—	15	14	—	—	12	—	—	10	9	—	—	7	—	—	5	—	—	—	—	—
24	24	23	22	21	21	20	19	18	18	17	16	—	15	14	13	—	12	11	—	—	9	8	—	—	6	—	—	—	3	—	—
25	25	24	23	22	—	21	20	19	—	—	17	16	—	—	14	13	—	—	—	10	—	—	—	7	—	—	—	—	—	—	—
26	26	25	24	23	22	—	21	20	19	18	—	17	16	15	—	—	13	12	11	—	—	—	8	—	—	—	—	4	—	—	—
27	27	26	25	24	23	22	—	21	20	19	18	—	—	16	15	14	—	—	—	—	10	9	—	—	—	—	5	—	—	—	—
28	28	27	26	25	24	23	22	—	21	20	19	18	17	—	—	—	14	13	12	11	—	—	—	—	7	6	—	—	—	—	—
29	29	28	27	26	25	24	23	22	—	—	—	19	18	17	16	15	—	—	—	—	—	—	9	8	—	—	—	—	—	—	—
30	30	29	28	27	26	25	24	23	22	21	20	—	—	—	—	—	15	14	13	12	11	10	—	—	—	—	—	—	—	—	—
31	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2