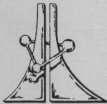


**STAR FLEET
OFFICERS ACADEMY**

TRAINING MANUAL

Volume 1



**Star Fleet Command
United Galactic Alliance**

DEDICATION

This manual is dedicated to the memory of the *Challenger* seven, who gave their lives on January 28, 1986 while helping us reach for the stars.

Dick Scobee, Commander

Mike Smith, Pilot

Judy Resnik, Mission Specialist

El Onizuka, Mission Specialist

Ron McNair, Mission Specialist

Greg Jarvis, Payload Specialist

Christa McAuliffe, Teacher

**STAR FLEET
OFFICERS ACADEMY
TRAINING MANUAL
Volume 1**

Additional Instructions For

STAR FLEET I.

The War Begins!™

Version 2.1

by

†interstel
corporation

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Message From the Commandant

Welcome aboard! I wish to congratulate you on being accepted into the Star Fleet Officers Academy. It is here you will learn the basics of commanding the most sophisticated spaceships in the known universe. After completing the required classroom instruction, you will be given an assignment aboard the cadet training ship, U.G.A.S. REPUBLIC.

When you have finished your training, you will be a highly trained officer in the finest peace-keeping force in the galaxy. I hope you will be given the assignment and responsibilities of your choice.

This manual has been written to provide you with more information which, when combined with the Officer's Manual, provides a strong background to help you get started on your career as an officer in Star Fleet. Section I Parts A and B provide technical information and starship command techniques, plus a brief introduction to combat strategy. Part C is an excerpt from the ship's log of Captain Wallace during one of his missions while in command of the Prince of Wales. This mission was selected because it provides an excellent example of how the basic techniques of combat can be combined with the awesome power of a starship. Captain Wallace has since been promoted to Commodore. Section II Part A gives general information about Star Fleet and this Academy. Part B was compiled by the Intelligence Division of Star Fleet Command and gives you a brief description of the Alliance's most threatening adversaries.

*On behalf of the Academy, I hope you enjoy your stay with us. This manual is intended as an introduction to Star Fleet and the Academy. You will learn much more during your regular studies. As a prerequisite to studying this manual, I suggest that you read the **Star Fleet Officer's Manual, Volume One.***

Regards,



Vice Admiral Robert L. Winkler
Commandant,
Star Fleet Officers Academy

STAR FLEET COMMAND UNITED GALACTIC ALLIANCE

ORDERS FOR: Lt. Commander Pendergrass

Date: 1600.0

- I. Effective immediately, you are to assume command of the U.G.A.S. DUKE OF YORK. After relieving Captain Bertsch, you will proceed directly to the ANTARES III Region.
- II. You are hereby ordered to seek out and engage the forces of the Krellan and Zaldrion Empires which have invaded Alliance territory. In so doing, you are to deplete the enemy fleet sufficiently so that our main battle fleet can be assembled and defeat them before they can reach our colonies.
- III. You must eliminate at least 24 enemy warships within 30 days.
- IV. There will be four starbases located in your region.
- V. Your mission sequence number is 377.

Bon voyage and good luck, Lt. Commander!

SECTION I - PART A

ACADEMY LESSON 1

TECHNICAL INFORMATION & BASIC TECHNIQUES



GETTING STARTED & COMMON PROBLEMS

For mission levels one and two, your mission will begin in a quadrant at condition GREEN, i.e., no hostile enemy vessels present. This is an excellent time to familiarize yourself with your surroundings, and test the available commands. Take advantage of the lower ranks and learn how to use the commands, as things will get very hectic from mission level six and up. Some of these items might not be applicable to your computer.

Clarification is provided for the following items that most often give cadets trouble.

- All coordinates are in row, column; counting from the upper left corner of the quadrant and region.
- In response to a query by the program, the following rules apply:
 - ▶ If the program is looking for a letter answer, you should **NOT** press <ENTER> after typing the letter. Pressing <ENTER> without any input will either cancel the command or cause you to be asked again for a response. If more than one option is available to the query (such as in Shield Control), then pressing <C> will cancel the command.
 - ▶ If a numerical answer is expected, pressing <ENTER> after typing the number(s) is *required* to execute the command. Pressing <ENTER> without any input will either cancel the command or cause zero to be read by the program.
 - ▶ In two cases, you can press <A> for "All". This applies only to Phaser and Mine Controls.
- When asked for a course and C-Factor by Navigation Control, you should make both entries on the same line separated by a comma (e.g., 270,3.5). If you enter only one number, your computer will ask you again for a course and C-Factor. To cancel the command, press <ENTER> without any input or type a course followed by a negative C-Factor (e.g., 270,-3.5).

Remember that in **STAR FLEET I**, the C-Factor is actually a distance. A C-Factor 1.2 will move you 12 sectors, while a C-Factor of 0.3 will move you three sectors.

- The items *course*, *heading*, and *bearing* are all the same. These are simply different terms used to describe the direction of movement or direction from your ship to a given target.
- Each mission time cycle increases your Mission Elapsed Time (MET) by 0.15 ± 0.05 days. This means each command that uses time will increase your MET by between 0.10 and 0.20 days. Some activities also use time (e.g., movement, probes) above the normal time cycle.

DEFENSIVE ENERGY SHIELDS

Your ship's structure can absorb only limited energy before it fails. For this reason, your ship is protected by four independent defensive energy shields. These four shields absorb and dissipate the energy blast from enemy weapons.

Your shield orientation depends on your ship's current bearing. Shield one *always* covers the front of your ship, regardless of your current bearing. The other shields are numbered *counterclockwise* from the front. Thus, to determine which shield will be hit by the enemy, you must take into account your bearing, then count left, rear, and right (or port, aft, and starboard) from there to find your other shield positions. You can also use the target calculator to determine which of your shields is facing the enemy.

Always be aware of your shield strength and orientation in a battle, because if a shield is penetrated by a hit, you will suffer damage and casualties. Do not be afraid to change your shield allocation, since the enemy will not shoot at you when you use Shield Control unless one day has passed since you were last fired upon. Explore the options available and make use of them (more on the shield options is found in Lesson Two). Battle Entry Configuration is a favorite to use when entering into a hostile quadrant, because it reinforces your front shield, which will (probably) face the enemy, at the expense of your rear shield, which is not needed if you stay on the edge of the quadrant facing in. The other options are more optimum for different situations.

Your ship's defensive shields use power at the rate of one unit per 1000 units of total shield power per game cycle.

NOTE

It is strongly suggested that you do not touch your Auto Alert Switch (AAS) during your first missions.

This switch automatically raises/lowers your shields when you go to condition RED/GREEN. This switch will be discussed further in Lesson Two. To turn this switch off without knowing what you are doing can be fatal!

COLLISIONS & HYPERSPACE MOVEMENT

If your navigation computer is working and you collide with an object (e.g., star system, starbase, etc.), your ship will be stopped automatically by your navigation computer in time to avoid any damage. However, if your navigation computer is damaged, manual shutdown is used instead (which is slower) and your ship may suffer damage.

If you collide with an enemy vessel, your navigation computer will help prevent any damage resulting from the collision. However, the enemy is most likely to fire at you and, if your shields are not up, you will suffer damage from the resulting hit.

When you travel at C-Factors greater than 2.0, your ship enters a special state called *hyperspace*. While in hyperspace, your ship will not collide with any objects, but it is still subject to ion storms (see pg. 37).

Your ship will not immediately enter hyperspace when you start your movement. Hyperspace travel requires a ten-sector length acceleration distance and a ten-sector length deceleration distance. In this acceleration/deceleration region, your ship is subject to collision as mentioned previously. If there are Krellans in the adjacent quadrant at the beginning of your move, or in the quadrant preceding your target quadrant, you stand the risk of being intercepted and suffering the consequences. The Auto Alert Switch will provide some protection by strengthening your shields, if required. However, this switch must be turned ON for your shields to be automatically raised. While in hyperspace, you do not have to worry about the enemy ships. If your navigation computer is damaged while in hyperspace, you will emerge into normal space and again be subject to collision at any time.

REPAIRING DAMAGED SYSTEMS

Damaged ship systems will be repaired by your crew and ship's computer. The number of days required to complete the repairs is the Estimated Repair Time (E.R.T.), and is shown in the Damage Control report. The normal repair rate depends on the number of crew you have left and your ship's alert condition. Systems in condition GREEN will be repaired twice as fast as those in condition RED.

You also have the capability to speed up the repairs on damaged systems by allocating power from your reserves via computer link to Damage Control. As a rule of thumb, 100 units of power per day E.R.T. will completely repair the system, irregardless of whether you are in condition RED or GREEN (allocate a little less, say 10-20 units, rather than $100 \times \text{E.R.T.}$, since time is used in carrying out this command). Try and repair critical

systems first, such as Primary Life Support or Defensive Shields Control. Depending on your situation, less important systems such as Mine or Transporters Control can generally be left to undergo normal repair.

DEEP SPACE RECONNAISSANCE PROBES

Your ship has three deep space reconnaissance probes which can be used for determining what is in the quadrants they pass through. For best use of these probes, get near an edge or corner of the region, and fire them off at an angle that will give them the longest track (e.g., 30°, 45°, or 60° from the lower left corner of the region). Being one quadrant diagonally in from the corner to launch your probes is actually more efficient, because your long-range sensors can scan the outer quadrants of the corner, and less power is required to send the probe across the region. Allocating 80 units of power will take a probe across the diagonal length of the region; whereas 60-65 units will take a probe across the width. No probe replacements are available from starbase.

If a probe passes through a hostile quadrant, there is a chance the Krellans will destroy it. The probability of the probes being destroyed is directly related to the number of Krellans in the quadrant.

PRIMARY LIFE SUPPORT SYSTEM

WARNING

If at all possible, never let a damaged primary life support system go unrepaired.

Your ship has a backup life support system which takes over when the primary is damaged. However, if your ship suffers further damage which knocks out your backup system, then your entire crew is killed and your ship is disabled! If you leave it unrepaired, you do so at your own risk.

There may be situations when you have no choice but to allow the primary life support system to undergo normal repair. For example, if you find yourself low on power on your way to starbase, you must accept the risk of traveling with the system out. As in many combat situations, you must use judgement as to when to let the system go unrepaired.

SECTION I - PART B

ACADEMY LESSON 2 ADVANCED TECHNIQUES AND TACTICS



INTRODUCTION

Now that you have experienced flying several missions, we can examine some of the more detailed information, techniques, and tactics that can be used to successfully complete your future missions.

In any war, the victor usually wins by acquiring some advantage over his adversary. This advantage could be weapons, troops, better equipped and trained forces, intelligence, position, etc. In short, there are many ways one can gain an advantage over one's opponent. **STAR FLEET I** is no exception.

In the Officer's Manual you will find descriptions of your weapons, ship's systems, mines, and other means by which you can attack your opponent. Not knowing how to use these "weapons" properly, or efficiently, can make even the most superior weapon useless. You should already know how to fire your torpedoes and phasers, use your marines, mines, etc. Now you will be given some instruction on advanced tactics within the quadrant to help gain an advantage over your opponent. Through this discussion, you will see why it is better to sometimes use phasers instead of torpedoes (and vice-versa), how to make use of the torpedo and phaser auto and manual firing modes, and why there are different options in Defensive Shields Control. The techniques and tactics presented here are the results of the combined experiences of top fleet officers after many battles with the enemy.

Do not be duped into thinking you have such an advantage over the Krellans and Zaldrons that the missions are no challenge (just ask any experienced player). The enemy is extremely mobile, sometimes making you think torpedoes are completely useless. Their ships will make use of available cover (e.g., star systems and starbases). They gang up on you and, as a group, sometimes move closer or farther away, employing a variety of battle formations and tactics. Then there is always that dastardly intruder who always seems to damage the most necessary system at the most critical point in the battle. However, for each enemy weapon, you have a counter-weapon. **How you use your weapons is the key to a long and rewarding career as a Star Fleet officer.**



ZALDRON HUNTING

Different tactics have been successfully employed against Zaldron vessels when they are invisible. Three basic tactics are presented. Each tactic can be aided by the fact that the sector in the Tactical Display that contains the Zaldron may occasionally flicker slightly due to their disturbance of the space-time continuum.



TACTIC #1 - The first tactic is the most effective at the lower ranks. It consists of allowing your ship to be hit (e.g., by moving) and noting which shield(s) are hit by the Zaldron, thus obtaining the general direction to the target for firing a spread of torpedoes manually. As your mission rank increases, this method becomes less effective because the chance of the Zaldron moving between the time he fires and the time you can fire increases. At the higher ranks it may be nearly as effective to simply fire torpedoes in random directions. It is also suggested that this method not be used if you are getting low on power or torpedoes, and used sparingly if there are Krellans present, since it will be harder to determine which shield was hit by the Zaldron.

TACTIC #2 - The second tactic is basically the same as the first, except that phasers are used instead of torpedoes. Using phaser control manual mode, six separate targets can be entered in an attempt to hit the sector containing the Zaldron. As well as determining the direction to the Zaldron by noting which shield(s) was hit, you can also determine the approximate distance to the Zaldron by noting the hit magnitudes. Each time that a sector is manually targeted, the phaser shoots a five-unit burst to determine if anything is in that sector. The same limitations apply to this method as to the previous one, except that power is the main limiting factor rather than available torpedoes.

TACTIC #3 - The third tactic uses torpedoes as mines to catch the Zaldron unawares as he streaks about the quadrant. This method is the most effective at high ranks because the Zaldrons are much more mobile than at the lower ranks. A string of mines laid across the quadrant is thus very likely to damage or destroy the Zaldron. Do not forget that mines are lost once you leave the quadrant. Unexploded mines can be retrieved to replenish your stock of torpedoes. Time is the major consideration with this method. Remember that the Zaldron will not move unless you execute a command that uses time.

SHIELD CONTROL OPTIONS

The designers of the *Invincible* class heavy cruiser carefully considered the protection of the Alliance's main instrument of defense. To assist a captain in effectively and quickly adjusting the ship's defensive energy shields, several options were built into Shields Control. These options distribute shield power differently and each was developed with a specific use in mind.

To review, the available options are:

CANCEL	Cancels the command.
LOWER	Lowers all shields to zero power.
BATTLE ENTRY	Places shields in Battle Entry configuration.
MAXIMUM STRENGTH	Places shields in Maximum Strength configuration.
TOTAL STRENGTH	Allows you to distribute power evenly to all shields.
INDIVIDUAL <ENTER>	Allows you to allocate power to each shield individually.

We will now discuss each option in more detail.

CANCEL

This option allows you to cancel the command and leaves your current shield configuration unchanged. Thus, you can change your mind after entering Shield Control and exit without having to update your current shield setting.

LOWER

This option lowers ALL four shields to zero and the power from your shields is placed in your ship's main reserves. This option is ideally suited for lowering your shields in a hurry when your ship's power reserves are exhausted, or lowering your shields when the Auto Alert Switch is off.

BATTLE ENTRY CONFIGURATION

This option doubles power to your front shield (#1) at the expense of your rear shield (#3). This option is most useful when entering a new, hostile quadrant because it reinforces your forward shield, the one most likely to be hit by enemy weapons. However, since your rear shield is down, you should stay in the outer row or column facing into the quadrant (e.g., located in sector 5,1 with a heading of zero degrees) to avoid suffering

damage from enemy hits that will penetrate your ship's hull in this area. An enemy vessel could also beam aboard an intruder through the lowered shield.

MAXIMUM STRENGTH CONFIGURATION

This option allocates all but 100 units of power (if available) to the shields, with each shield being of equal strength. This places the maximum amount of power into your shields, and leaves 100 units in your ship's main reserves for weapons, movement, etc. This option is well suited for maneuvering in the central portion of a hostile quadrant with several enemy vessels present. This is the usual shield configuration for Zaldron hunting.

If your total power is less than 200 units, this option will allocate all but 25 units to the shields, with each shield being of equal strength. This will give you the maximum protection, with 25 units in your reserves for running away when things get real bad.

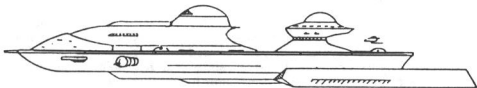
TOTAL STRENGTH

This option allocates one quarter of the total input power to each of the four shields. This option is identical to the Maximum Strength configuration, except here you choose the total shield power. This option provides your ship with maximum protection from enemy weapons, while leaving as much power in your main reserves as you decide. Thus, you can maneuver in the central portion of your quadrant with plenty of power available for phasers, movement, tractor beam, etc. This is the usual choice when you are running low on power, or need maximum protection with lots of power in your reserves in case the enemy gets the better of you.

INDIVIDUAL (Manual Setting)

This last option allows you to adjust your shields in any configuration with any power setting (within the shield limitations) you desire. With this option you can raise one, two, three, or all four shields to whatever power setting you input.

Now that all the options have been discussed in detail, some examples are provided on the following pages to illustrate how they can be used.

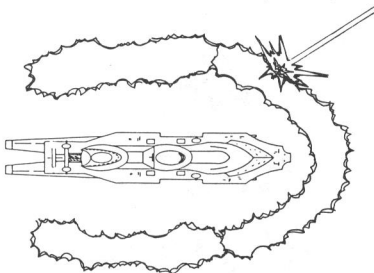


EXAMPLE #1

Your current location is Sector 6,6 in Quadrant 3,4. A long-range sensor scan reveals five Krellans in Quadrant 4,4. Prior to moving, you should place your shields in **Battle Entry configuration**, then enter a course and C-Factor of -90,.5 into Navigation Control. This places you in Sector 1,6 of Quadrant 4,4 facing into the quadrant. Refer to the tactical displays on the right. Since you are in the top row and facing in, the enemy cannot attack you on shield #3. As long as you stay in the top row facing in, you can safely use Battle Entry configuration to reinforce your shields as you suffer hits.

Quadrant 3,4										
	1	2	3	4	5	6	7	8	9	10
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2
3
4
5
6	A
7	↓
8
9
10
<hr/>										
1	A
2	.	k
3
4	.	.	.	*	.	.	*	k	.	.
5
6
7	.	.	k
8	k
9	*
10	k

Quadrant 4,4



EXAMPLE #2

Your current location is Sector 10,10 of Quadrant 2,3. A long-range sensor scan reveals five Krellans in Quadrant 2,4. In this situation, you can make use of a prime tactical location--one of the four corners of the hostile quadrant. Before entering Sector 10,1 of Quadrant 2,4, use the manual option (by pressing <ENTER>) to raise shields #1 and #2 only (refer to the tactical displays below). You will need to turn the Auto Alert Switch OFF to prevent having this shield setting ruined the instant you enter Quadrant 2,4. Since you are in the corner, only two shields are needed to protect your ship. This position allows you to concentrate more power in fewer shields, which means more power can be kept in your reserves for other requirements. You also need fewer units of power to protect your ship since you are raising only two shields, rather than three (Battle Entry) or four (Maximum Strength). This option becomes more important as your available power dwindles.

	1	2	3	4	5	6	7	8	9	10		1	2	3	4	5	6	7	8	9	10	
1		1	.	.	.	*	.	.	.	.	.	.
2		2	k	.	.	.	.	.	.	.	.	.
3		3	.	.	.	.	.	.	k	.	.	.
4		4	.	.	.	.	.	.	.	k	.	.
5		5	.	*	.	.	.	.	.	.	.	.
6		6	.	.	k	.	.	.	.	.	*	.
7		7	.	.	.	.	.	k	.	.	.	.
8		8	.	.	.	.	*	.	.	.	.	.
9		9	.	.	.	.	.	.	.	.	.	.
10	S	→	S	.	.	.	.	.	.	.	.	.	.
	Quadrant 2,3											Quadrant 2,4										

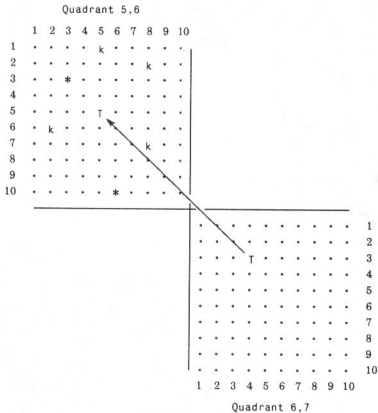
Quadrant 2,3

Quadrant 2,4



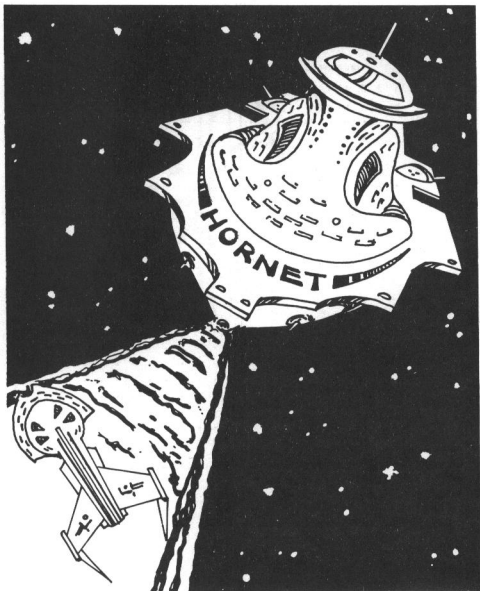
EXAMPLE #3

Your current location is Sector 3,4 of Quadrant 6,7. An update of the Region Map shows three Krellans have entered Quadrant 5,6, bringing the total to four. Prior to moving, place your shields in **Maximum Strength configuration** and target to Sector 5,5 of Quadrant 5,6. Your shields were placed in Maximum Strength configuration because it provides the maximum protection for your ship in the center of the quadrant. Refer to the sample tactical displays below. The **Total Strength** option could have been used as well, allocating all available power to your shields except 100 units (this would have resulted in the exact same shield strength as the Maximum Strength option).



EXAMPLE #4

Assume you are in the same situation as in Example #3. However, this time you want to capture one of the enemy vessels. In this case you should use the **Total Strength** option, allocating all power to the shields except for a few hundred units to be used for phasers. Being able to control the amount of power left in reserves is the greatest advantage of the Total Strength option.



THE SHIELDS/SYSTEM DAMAGE CONNECTION

Some of your ship's critical systems are located in definite places and are only vulnerable to hits through a particular shield area(s). The following table shows which shield areas are critical to each ship system. This information can be used to orient your ship so that even if you have a particular shield penetrated, it will not hurt a system you are trying to protect. Note that if most of your systems are already damaged, another shield penetration could knock out a system not normally vulnerable in that area.

Table I

Relationship Between Shields and System Vulnerability

System	Vulnerable Shield Areas
1. Navigation Computer	All
2. Main Engines	2, 3, 4
3. Auxiliary Engines	2, 3, 4
4. Short Range Sensors	All
5. Long Range Sensors	All
6. Shields Control	All
7. Torpedo Control	1
8. Phaser Control	All
9. Mine Control	3
10. Tractor Beam Control	3
11. Transporters Control	All
12. Primary Life Support System	All
13. Backup Life Support System	All

BYPASSING SHIELD CONTROL

There are two ways to bypass an inoperative Shield Control to lower one or more of your defensive shields and return power to your reserves. One of these methods depends on your Chief Engineer, the other on your ability to use your ship's tractor beam.

With Shield Control out and no power in your reserves, your Chief Engineer will ask if you want him to attempt lowering one of your shields. If you answer yes, he will then ask which shield you want lowered. Then he will rig a bypass circuit in an attempt to lower the shield you selected. There is a chance the attempt will be unsuccessful and additional damage and casualties can occur.

If your Chief Engineer is unsuccessful, you can fire him and use your tractor beam to lower one or more of your shields. In order to use your tractor beam, a valid target (mine or disabled enemy ship) **must** be present in your quadrant. To lower your shield(s), lock onto a valid target and draw it in. Remember: Your backup life support system will only operate for 0.5 days on batteries, so you must act fast.

+++++ CAUTION +++++

- If there are no valid targets in your quadrant for your tractor beam to lock onto, or
- the object is too far away and requires more power than the shield being lowered has available, or
- the tractor beam uses up all the power obtained from the lowered shield, or
- the shield facing the object is already down, or your tractor beam is damaged, and your Chief Engineer is unsuccessful in his attempts ...
prepare to die!

NOTE

Your Chief Engineer will make an attempt each 0.1 days, so he will make up to five tries before time runs out. You can also use your tractor beam as many times as there are valid targets. One of these methods may work.

THE AUTO ALERT SWITCH

Your ship is equipped with an auto alert device which monitors your present situation and automatically raises or lowers your shields if the situation changes. Two situations where your shields will be raised are when your ship enters a new hostile quadrant, or when a Zaldron ship arrives. In either case you might not have enough time to adjust your shields before receiving a hit, thus the need to do so automatically. The Auto Alert Switch is normally left on as a safeguard and will **always** be reset to the ON position when you dock with a starbase.

However, there are some drawbacks to the Auto Alert Switch. Namely, it tends to be overcautious. The Auto Alert Switch has several checks to see whether your current shield setting is adequate, and these checks are fairly conservative. The primary goal of auto alert is to ensure that you will survive even if all the enemy ships are next to you. It also prevents your receiving damage, if possible. However, it is inadequate in that it does not take into account the current position of the enemy ships or your current shields setting--it will blindly allocate power evenly to all shields, which is often *not* the optimum setting. Frequently, a carefully allocated setting, such as is needed for capturing or delivering an enemy vessel, is ruined by the Auto Alert Switch.

In order to help you understand the workings and limitations of the Auto Alert Switch, the following list of checks (assuming condition RED) is provided. (Note: These particular checks apply to the IBM/TI versions. The checks for other computer versions are generally more lenient; i.e., the AAS will not be triggered as easily. Some computer versions, e.g., Atari ST and Amiga, have a second generation AAS that will look at the current tactical situation and raise only the required shields).

- If you have just selected Battle Entry configuration in Shield Control, the switch checks that you have at least 475 units per shield per enemy vessel present to ensure survival. If it passes this test, then the rest of the switch testing is bypassed. Otherwise, it continues testing.
- If your total shield strength is greater than 800 units times the number of enemy ships present in the quadrant, exit the switch tests.
- If your total ship's power (shields plus reserves) is less than 25 units, or you have less than 26 units in reserve, exit the switch tests.
- If a Zaldron has just arrived and your total shield strength is greater than the total power of enemy hits last received plus 2000 units, exit the switch tests. This allows an extra 500 units per shield to absorb the hit from the Zaldron.

The Auto Alert Switch will then allocate the required power to your shields, ensuring that all shields are of equal strength and that at least 25

units of power are left in your reserves. The switch will effectively put your shields in the Maximum Strength configuration.

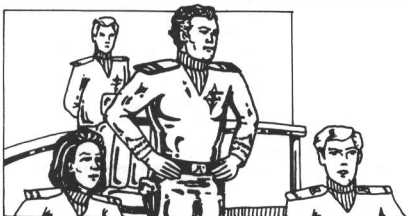
If your switch is ON when your ship goes from condition RED to condition GREEN *without* leaving the quadrant, your shields will automatically be lowered to conserve power. This will not happen if the switch is OFF.

There are several situations in which you might want to turn the Auto Alert Switch off. The most usual ones are:

- You are very low on power and probably would not survive a full attack anyway.
- You want to enter a quadrant with a special shields setting and do not want it spoiled by the Auto Alert Switch.
- You are using transporters or tractor beam and do not want the facing shield raised if a Zaldron arrives.
- You are towing a vessel (which requires one shield to be down) and you do not want to have the lowered shield raised by the Auto Alert Switch, cutting off the tractor beam.

+++++ CAUTION +++++

- **DO NOT TURN THE AUTO ALERT SWITCH OFF UNLESS REALLY NECESSARY AND REMEMBER THAT IT IS OFF!** *Accidentally entering a quadrant where several enemy vessels are present with the Auto Alert Switch turned off, or having the switch off when a Zaldron arrives, are two of the most common ways to lose a mission.*
- **WHEN TOWING AN ENEMY VESSEL WITH THE AUTO ALERT SWITCH OFF, YOU SHOULD SET YOUR SHIELDS IN A BATTLE ENTRY CONFIGURATION.** *This will offer some protection when entering a hostile quadrant or against an intruding Zaldron warship.*



STARBASES

Starbases are provided for resupply and repair of your ship. Crew casualties will be replaced when you dock, as long as you have not already used up the starbase's 500 replacements. To dock with a starbase you must move to one of the eight adjacent sectors surrounding it. Your computer will then ask you if you want to dock. You can dock even if your auxiliary engines are damaged because non-damagable maneuvering engines are used. You can **never** dock with a starbase using your main engines (C-Factor greater than 1.0), so if you arrive in a quadrant using your main engines and happen to stop next to a starbase, you must reenter Navigation Control and input a new course with a zero C-Factor (e.g., 0,0) to dock. This will simply rotate your ship and the computer will then ask you if you want to dock.

While docked, you can still use all your ship's systems normally (e.g., transporters, fire torpedoes and phasers, etc.), and your ship will be protected by starbase's shields. Beware of docking with a starbase that has low shield power and is under attack. If starbase is destroyed while you are docked, you will be destroyed too!

Starbase will not continually resupply your ship as you remain docked. If you use a lot of power and/or torpedoes and want to be resupplied, you will have to leave starbase and dock again. Your ship will only be resupplied once each time you dock. Note that starbase will slowly regenerate its power. The more stars there are in a quadrant, the faster the power will be generated.

Do not run back to starbase everytime you use a little power or a few torpedoes . . . there is a time penalty for docking of at least one day. The more damage your ship has, the longer you will have to stay at starbase to complete repairs. A ship with several inoperative systems could thus spend several days at starbase. If you have enough power remaining to do so, you should repair as many damaged systems as possible before docking. This will reduce the time spent at starbase.

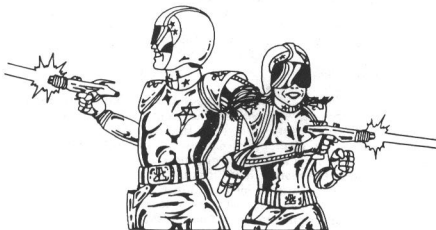
FIND A STARBASE BEFORE YOU NEED ONE! To ensure security, your starbase locations are kept secret until they are attacked. Therefore, you will have to find them yourself. At ranks one and two there are five starbases, and since they cannot be in adjacent quadrants they are fairly spread out and easy to find. However, the higher your rank, the fewer starbases there are in your region. Consequently it is harder to find one--especially at ranks nine and ten where there is only one. Likewise, the higher your rank, the more critical it is to find a starbase early in your mission. It is always a good idea to launch your probes and/or move around and use your long-range sensors to locate a starbase. Since you are unable to resupply and repair your ship without a starbase, it is best to

avoid engaging the enemy, or using too much power and torpedoes, until one is found. If you must fight, it is best to do so early while your ship is strong.

BOARDING/CAPTURING/DELIVERING ENEMY SHIPS

After an enemy ship is disabled, you may use your space marines to board and capture it. Your marines may take prisoners, and these prisoners are brought aboard your ship. Sometimes one of these prisoners escapes and the consequences of this are discussed in the next section. After the enemy vessel is secured in towing position it should be taken to a starbase to be handed over to Alliance authorities. You need not capture an enemy vessel to take it to starbase; however, placing a hostile vessel in tow can be dangerous--they can beam an intruder aboard your ship. It is usually better to use your marines to capture the enemy vessel. The more enemy ships and prisoners you deliver to starbase, the higher your mission efficiency rating. As a bonus, when your marines capture the ship, all remaining power in that ship is transferred to your own power reserves. However, capturing ships takes time, so you must make the tradeoff between more rating points and the additional cost in time.

There can be situations where several enemy ships in a quadrant are disabled and/or captured. Since your ship has only one tractor beam, you can only tow one vessel at a time. If you leave a quadrant with any disabled enemy vessels left, you will find the enemy ships repaired and at full strength when you return. Rather than leave any disabled vessels in a quadrant, you should place one ship in tow and destroy the rest. Disabled enemy ships cannot move or deflect torpedoes.



INTRUDERS/SECURITY CONTROL

There are three sources of enemy intruders (which can be either Krellan or Zaldron):

- Agents that have hidden aboard during resupply at a starbase.
- Escaped prisoners.
- Agents transported aboard (only for ranks six and above). If an enemy vessel is within two sectors of your ship and your defensive shield facing the enemy vessel is down, then they may beam an agent aboard any deck to wreak havoc. Invisible Zaldron ships are almost certain to do this.

Internal Security Control gives you the latest information about the intruder and allows you to start or stop security searches to apprehend the villain.

Your normal ship's security will eventually capture the intruder but initiating a full search (using the SEARCH option) increases your chances of catching him before he does too much damage.

MAXIMUM SECURITY DECK is an option that permits you to select one deck to have maximum security at the expense of all other decks. If you outguess the intruder and he goes onto such a deck, then it is very likely he will be caught, or at least will not be able to sabotage a system on that deck. This option is useful to protect a deck with vulnerable important systems (e.g., primary life support) which are close to the intruder's last known position. Remember that the intruder can only move one deck up or down at a time during each game time update.

Although both the Search and Maximum Security Deck can be selected together (except in the Atari version) or separately, it is recommended that you at least initiate the security search first. You can then select a Maximum Security Deck to help apprehend the intruder.

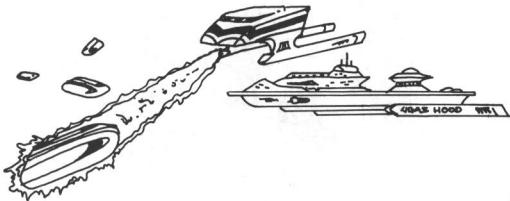


MINES AND EXTRA TORPEDOES

You may use torpedoes as mines by leaving them behind as you move within a quadrant. Mines are especially effective in the high ranks where the enemy is extremely mobile. If an enemy vessel runs into a mine (i.e., attempts to occupy or travel through a sector where one is located), it will be damaged or destroyed. This makes mines ideal for destroying Zal-drons. Mines can be laid by moving in any direction, but only one mine can occupy a sector. If you leave the quadrant, all mines remaining in that quadrant are lost.

Mines can be retrieved and then used as torpedoes. Retrieving mines can be dangerous while in condition RED, since any enemy vessels present can fire at both you and the shuttlecraft which is used to pick up the mines.

Although your ship's *normal* maximum load is twenty torpedoes, it can carry up to thirty. These additional torpedoes will give you extra fire-power for a longer sortie or allow you to lay more mines. Starbase logistics officers are chosen by their ability to "go by the book," and if you happen to dock with more than twenty torpedoes onboard, they will have the extras *removed* so that you end up with the regulation maximum. So, how do you acquire thirty torpedoes when starbase will only give you twenty? Suppose you need to dock with a starbase but still have seven torpedoes remaining in your supply. Prior to docking, but in the same quadrant, enter Mine Control and lay all seven mines on your way to starbase. Then when you dock you will receive twenty new torpedoes. After your ship's resupply is complete, enter Mine Control again and retrieve the seven mines laid earlier. Presto! You now have twenty-seven torpedoes in your ship's supply. An additional bonus to this method is that the mines you laid might happen to snag a Krellan or Zaldrone ship while you are docked.



TACTICAL MOVEMENT AND POSITION

Much has already been written about movement and position, both in the **Officer's Manual** and in this **Training Manual**. The main tactical advantages of movement are avoiding objects in your torpedo line of fire, laying mines, firing phasers, and using your tractor beam. There are also disadvantages to moving within the quadrant. Namely,

- the enemy will shoot at you (although they might miss!)
- moving requires both time and power
- the enemy will also move
- a Zaldron can enter the quadrant

Movement consumes both power and time. Each sector moved requires one unit of power (i.e., C-Factor 4.0 takes 40 units). The amount of time required for movement is computed from the equation:

$$t = \frac{N_{SECTORS}}{(C-Factor) \times 250}$$

where t is time increase in MET and $N_{SECTORS}$ is the number of sectors moved.

Notice that $N_{SECTORS}$ need not equal the C-Factor. The number will be different if you are stopped by a star system or an enemy vessel.

The enemy is often hiding behind star systems when you enter a new quadrant. In this situation, you have three choices: you can use phasers, you can move within the quadrant to get a clear line of fire for torpedoes, or you can leave the quadrant and reenter it. The latter will completely reset the quadrant; that is, all the objects in the quadrant may be in different sector locations when you return.

You can sometimes solve two problems at once. If the situation just described occurs (and it will), instead of leaving and coming back into the quadrant, you could move across the quadrant, laying mines as you go. This way you obtain both a clear torpedo track as well as leaving a string of mines which could damage or destroy an enemy vessel as it moves about.

Phasers can consume an enormous amount of power, especially if you want to destroy an enemy vessel that is many sectors away. To conserve power, you can move closer to your target(s). However, when you move, so does the enemy--they can counter your attempts by moving farther away.

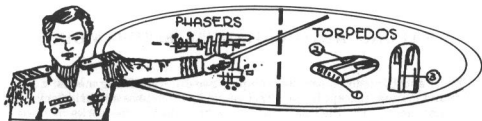
As mentioned in the **Officer's Manual**, your phasers can shoot past objects in the quadrant. If you disable an enemy vessel that is located on the other side of a star system (or any other object), you will have to move to obtain a clear path to the disabled ship for placing it in tow. Your tractor beam will not work on an enemy vessel that is located behind an object.

Even if the enemy vessel (or mine) you want to place in the tractor beam is not behind an object, you may want to move closer to it. The farther away the target is, the more power is required by your tractor beam.

Just as the enemy can use position within the quadrant to their advantage (i.e., hiding behind objects, special attack formations, etc.), you can employ similar tactics to your advantage. Much of what you will need to know will be presented in your studies at the Starship Command Training College; however, some items will be presented here. It must be stressed that experience is the best teacher, so we encourage you to try different tactics in the lower ranks and note the results.

As mentioned previously in the **Shield Control Options** subsection, the outer rows or columns and corners are prime tactical positions. Their main advantage is that more power can be concentrated into fewer shields, allowing more power to be held in your reserves for other uses. Although being on the edge of the quadrant often puts the enemy far away or behind objects, you can still observe the enemy positions and formations without receiving large hits. This will help you plan your attack.

The third tactical advantage requires one of your starbases. Because the enemy's primary target is the Alliance starbase, at least one may come under attack during your mission. You can still attack the enemy while docked with starbase. In this situation, starbase's shields will protect your ship, leaving all available power for your weapons, tractor beam, and other requirements. Starbase will also assist you in the battle by firing its phaser at the closest Krellan. There are other advantages to being in a hostile quadrant with a starbase under attack. If you are not docked, the enemy will concentrate their fire onto the starbase, allowing you to conserve shield power, but they will not completely ignore you. The enemy may still fire at your ship and you will suffer the consequences if a shield is penetrated. You can also use phasers to disable all or part of the attacking Krellans, dock with starbase, resupply, then tractor them all in while you are still docked.



PHASERS vs TORPEDOES

Your ship has two primary weapons systems: phasers and torpedoes. Most of the time you will want to use torpedoes, since they require only five units of power per torpedo fired and up to five can be fired in a salvo. Although phasers can fire at up to six targets, they may use hundreds of units of power if there are several targets, or if the targets are far away. On the other hand, you can also run out of torpedoes.

Torpedoes become less effective at the higher ranks because the enemy is much more mobile. The fewer enemy ships there are in a quadrant, the more likely they are to move after you have fired off your torpedoes. At the higher ranks, it is best to leave single Krellan ships alone (unless you decide to use mines or phasers), and seek a more fruitful quadrant containing several enemy ships. However, if a single enemy ship is in or near a corner, the odds are in your favor that it will not move, and it might be worthwhile attacking it.

Since torpedoes are sometimes deflected, it is often wise to fire two torpedoes at Krellan ships that are not likely to move. You will find that firing an extra torpedo at Krellan ships in line or nearly in line to you (e.g., 3 torpedoes at 2 Krellan ships) is a useful tactic to ensure against deflections. If the first ship is destroyed immediately, then the extra torpedo will then be available against the second ship.

Although torpedoes are your main weapon, there are several advantages to using phasers. One of the most important is that torpedoes cannot travel beyond objects, while phaser fire can. Phasers also allow control over the magnitude of the hit, torpedoes do not. If you only want to disable an enemy ship, then you should use phasers. Phasers are effective against close-range targets because less power is required, while torpedoes deliver the same size hit at all ranges. However, the farther the torpedo must travel, the greater the chance of missing or being deflected. Phasers may also maintain lock-on and track a moving enemy ship, while torpedoes cannot.

Phaser and Torpedo Control are two separate and distinct systems. Each operates completely independent of the other. So if you are in a combat situation where you wish to fire torpedoes at two targets and phasers at the rest, you will first have to fire your torpedoes and then your phasers (or vice-versa). At present there is no integrated fire control combining both systems.

WEAPONS' AUTO vs MANUAL FIRING MODES

Phaser and Torpedo Control both employ two different firing modes: auto-fire and manual (except in the Atari version, which uses a hybrid "smart" manual mode). Detailed descriptions of how each mode works are provided in the **Officer's Manual**, and will not be restated here. However, we will discuss advantages and disadvantages of each mode, and present some insight as to when one may be preferred over the other.

Auto-fire automatically targets all enemy vessels which can be hit, and prioritizes the firing according to the enemy vessels which will do the most harm to your own ship. Torpedo auto-fire is great for simply blasting away at the enemy when there is no concern for capturing an enemy vessel, or you do not want to single out a particular enemy ship. However, torpedo auto-fire will fire torpedoes at all potential targets, regardless of whether they are at full strength or disabled. Torpedo auto-fire will not shoot at captured enemy vessels (lest you destroy your own crew members). Thus, torpedo auto-fire is not suited for firing at only one Krellan ship when more are present in the quadrant (unless the rest are captured, or hiding behind a star system or starbase). For this you must use manual mode. In certain combat situations, it may be better to not fire torpedoes at particular targets (such as the one closest to a starbase). In manual mode, you select the enemy vessel(s) you want to fire at.

Torpedo auto-fire will occasionally have an equipment malfunction and fire the allocated torpedo(es) in a random direction, even though auto-fire target lock-on was indicated. If this occurs, simply try torpedo auto mode again or use manual mode. Unfortunately there is no way to recover the lost torpedoes. Sometimes a torpedo will lock onto a target, then will malfunction and proceed to impact into a star system or other object. This occurs only very rarely.

Phaser auto-fire permits control over the magnitude of the hit on the enemy. You can select some vessels to be disabled and the rest to be destroyed. The greatest disadvantage is you must target **all** the enemy vessels present in the quadrant. In manual mode, you can selectively target only the enemy vessels at which you wish to fire. However, phaser manual mode gives you no hint of the power required to complete your firing needs (except in the Atari version). However, if you have a calculator or superior mental prowess, you can determine the power required for phasers by the following magic equation:

$$P_{req} = \frac{H \times d}{10}$$

where P_{req} = power required for phasers

H = the resulting size of hit

d = distance from your ship to target (in sectors), determined either by using the Target Calculator or by:

$$d = \sqrt{(R_t - R_s)^2 + (C_t - C_s)^2}$$

where R_t, C_t are the sector row and column location of the target

R_s, C_s are the sector row and column location of your ship

To help you more fully understand the previous paragraphs, here is an example.

Suppose there are three Krellan ships present in your current quadrant (refer to the sample tactical display on the right). Krellan vessel #1 (Sector 6,10) is three sectors distant from your ship, Krellan vessel #2 (Sector 2,1) is eleven sectors distant, and Krellan vessel #3 (Sector 9,4) is five sectors distant but behind a star system. You intend to capture Krellan #1 and destroy the other two. To simplify this example, we will assume the Krellans are at full strength and will not move. This is somewhat unrealistic except for rank 1, but describing Krellan movement is not the purpose of this example.

	1	2	3	4	5	6	7	8	9	10
1
2	k	.	.	.	.	.	.	.	.	.
3	*	.	.	.
4
5	.	*
6	k
7
8	*
9	.	.	.	k	*	.	.	.	p	.
10

Phaser auto-fire will complete the firing request, but because Krellan #2 is so far away, your phasers will require considerable power to destroy him. Instead, you could complete the firing in several steps.

First target Krellans #1 and #3 using phaser manual mode and fire your phasers to weaken them. This will lessen the hits you will receive from them later. Then target Krellan #2 in torpedo manual mode (make sure you get the correct firing angle!) and fire one or more torpedoes at it. If its shields do not deflect all the torpedoes, you should be able to destroy the vessel. Unfortunately, all the Krellans will shoot at you again. That is why you should weaken the closest two, since the Krellan farthest away will hit your ship with the smallest blast.

After destroying Krellan #2, phaser auto-fire can be used to destroy Krellan #3 and disable Krellan #1. After disabling Krellan #1, you could then use your tractor beam and marines to attempt capture. Much less power was needed. However, instead of suffering only three hits from the enemy, your ship took eight. Only command experience will tell if it was worth suffering eight hits. Since only the first three hits were from full strength Krellans, the other five should be no major problem (unless you were low on power when you started).

Notice that torpedo auto-fire was not used. Torpedo auto-fire would have targeted both Krellans #1 and #2, and Krellan #1 is the one you want to capture. Krellan #3 would not have been targeted in auto mode because it was behind a star system.

But wait! There is another solution to this problem. Rather than capture Krellan #1 (Sector 6,10), you could capture Krellan #3 (Sector 9,4) instead. You could then use torpedo auto-fire to destroy Krellans #1 and #2, followed by phaser auto-fire to disable Krellan #3. This involves fewer steps, with fewer enemy hits on your ship. However, since there is a star system between you and the disabled Krellan, you will have to move to obtain a clear path for your tractor beam.



THE TARGET CALCULATOR

The Target Calculator is a special function processor of your ship's computer which can be a tremendous asset. The Target Calculator was developed to help you get to where you want to go, find out how far away a target is or, when used in your current quadrant, it will tell you which of your defensive shields is facing the target.

Perhaps the most confusing aspect of the Target Calculator is the target location. Enter the quadrant and sector location of the enemy vessel, starbase, star system, mine, or empty space for which you are targeting, either by entering the sector coordinates, or by using the target designator. (Note: This choice only applies to the IBM/TI versions. Other computer versions just use the target designator.)

Listed below are three examples of the usefulness of the Target Calculator.

1. Movement

You are engaging the enemy in Quadrant 2,8 when you receive an emergency message from Star Fleet Command informing you that Starbase #2 in Quadrant 6,6 is under attack. Speed is of the essence when rescuing a starbase. To help you reach Quadrant 6,6 in a single move, use the Target Calculator to find the bearing and distance from your current quadrant and sector location to the sector you choose in Quadrant 6,6. Then use the special computer link to Navigation Control and move to the target location you selected to rescue Starbase #2. You could have moved without the Target Calculator by first moving at a bearing of 270°, then moving again at a bearing of 180° (or vice versa), or by guessing the direct route. This is perhaps the most important use of the Target Calculator. You need not restrict your use of the Target Calculator to movement between quadrants -- it can be used when you need to move to a particular sector within your current quadrant.

+++++++ WARNING +++++++

You are still subject to all the risks of movement (collisions, running out of power in your reserves, etc.). In addition, there is sometimes an apparent inaccuracy in the Target Calculator of up to three sectors when used to move across several quadrants.

The Target Calculator is accurate. The error is due to navigation dispersions that occur during hyperspace travel over large distances. With this in mind, it may not be wise to always target to a corner, as you may stop in a neighboring quadrant, or in the middle of a group of

hostile Krellans with your rear shield lowered if in Battle Entry Configuration.

2. Laying Mines

In the high ranks where the enemy ships are extremely mobile, mines are one of your best weapons (enemy sensors cannot detect Alliance mine fields). If you want to lay a string of mines across the quadrant from one particular sector to another, you can use the Target Calculator. Unlike moving between quadrants, the Target Calculator will *always* get you to *exactly* the sector you want when moving within your current quadrant. Suppose you want to lay mines between Sectors 1,2 and 7,10. Assume your current location is Sector 10,4 and you choose to start laying mines at Sector 7,10. First, use the Target Calculator and the computer link to Navigation Control to move to Sector 7,10. Now enter Mine Control and allocate the number of mines you want to lay, after which the computer will automatically call up the Target Calculator so that you can target to Sector 1,2. If you so specify, this data will then be transferred directly to Navigation Control. (Note: The Atari version does not have a direct link between Mine Control and the Target Calculator. After allocating mines, you must choose TAR yourself.)

3. Shields

The situation is desperate. Defensive Shields Control is damaged and you are quickly running out of power in your reserves. Not enough power is available to repair the system. Here you can use the Target Calculator and target to any enemy vessel or mine to see which shield is facing the target. In this case, you definitely do not want to enter Navigation Control. This way you can see which shield will be lowered if you use the target to return power to your reserves via a bypass circuit or Tractor Beam Control (refer to the **Bypassing Shield Control** subsection for more information). It is usually best to do this as soon as possible before you destroy the only target that can be used to return power to your reserves.



PROJECTED EFFICIENCY RATING

For those of you who are somewhat mathematically inclined and curious about exactly how the projected efficiency rating (Prj Rtnng) in the Mission Status Report is calculated, here is a detailed explanation.

Refer to the figure on the next page. The required "kill rate" (r_o) is the slope of the line labeled "0" starting at the origin and is calculated by

$$r_o = \frac{N_o}{T_o} \quad (1)$$

where N_o is the number of enemy you are required to destroy, and T_o is the number of days allowed for your mission. These two values define your mission completion boundaries.

Suppose at time T , your kill rate is exactly on this line. In this case, if the line is extrapolated to the mission completion boundaries, you will have destroyed N_o enemy in T_o days, and these numbers are used in the efficiency rating equation (Eq. 2), along with any of your current modifying factors (rescuing bases, destroying Zaldrons, etc.), to calculate your efficiency rating. Naturally, this assumes that you will not accomplish any more of the events that modify the rating. (Note: The Atari version does not include the modifying factors in its projected rating.)

$$\text{Efficiency Rating} = f(N, T, \text{modifying factors}) \quad (2)$$

Suppose your kill rate is higher than required at time T . This is the point marked A in the figure. If this line is extrapolated to the mission completion boundaries, it will hit the required enemy destroyed constraint (N_o) first, at time T_F . The slope of the A line is

$$r_A = \frac{N_A}{T} \quad (3)$$

At the end of the mission, $N_{F(INAL)}$ is known (e.g., N_o), but $T_{F(INAL)}$ must be calculated as follows:

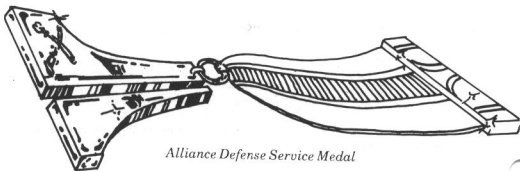
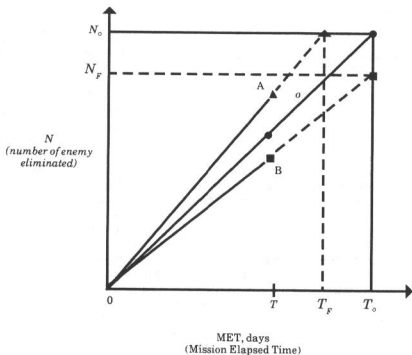
$$T_F = \frac{N_o}{r_A} \quad (4)$$

The values N_o and T_F are then used in Equation 2 to calculate the projected efficiency rating.

Now suppose that at time T , your kill rate is low (point B). If the line through point B is extrapolated to the end of the mission, it hits the mission completion boundary at the time constraint (T_o). The slope of line B (r_B) is calculated by equation 3, using N_B instead of N_A . In this case, the final number of enemy destroyed (N_F) must be calculated as follows:

$$N_F = r_B \times T_o \quad (4)$$

The values N_F and T_o are then used to calculate the projected efficiency rating.



Alliance Defense Service Medal

HAZARDS OF SPACE TRAVEL

Space Diseases

Peaceful exploration of the universe and the defense of democracy are not without hazards. Starship commanders have discovered many different life forms, some of which have proven dangerous to humans. Several ship commanders have also exhibited strange, inexplicable behavior during a mission. Two of the most common diseases are described below.

The Nobles Maneuver

This disease is named after Vice Admiral Charles Nobles, Star Fleet Serial Number SF-1436-027-JSC. The most common symptom is the inability of the commander to control the movement of his ship. A typical example is commanding a C-Factor of 6 instead of .6 to Navigation Control. Vice Admiral Nobles and his crew were last heard from while unexpectedly on their way to the Antares VI region.

The Tomodachi Syndrome

This disease is named after Commodore "Bonzai" Tomodachi, Star Fleet Serial Number SF-1677-041-ARC. The most common symptom is the inability of the officer to be promoted from some ranks without great difficulty, but having no problem at others. As an example, Lieutenant Tomodachi was promoted to Lieutenant Commander after 14 missions, promoted to Commander after only five missions, promoted to Captain after 32 missions, and finally promoted to Commodore after eight missions. Commodore Tomodachi has yet to reach Rear Admiral, even after completing 57 missions while a Commodore. Although the organism which causes this disease is yet to be isolated, Star Fleet Command is working on it because the health of its officers is of prime importance. The "Brick Wall" syndrome is related to the Tomodachi Syndrome, but instead of being cyclic, it is like hitting an impenetrable barrier (the command capabilities barrier -- no more promotions).

Ion Storms

Traveling across the vast distances of space has its own dangers. There are still many unknown and unexplained phenomena within the universe. One of these is the ion storm. Although many of the causes of such storms are known (nova explosions, nebula clouds, gravitational disturbances, black holes, etc.), their location can be quite random and unpredictable. Such storms have been tracked by Alliance starships across light years before they begin to dissipate. Ion storms can appear suddenly, and be

extremely violent, causing anything from minor structural damage to complete systems failures and casualties. They can affect both normal and hyperspace travel. The use of defensive energy shields provides some protection, but violent storms will still cause damage. Note: Ion storms do not appear in the Atari version.



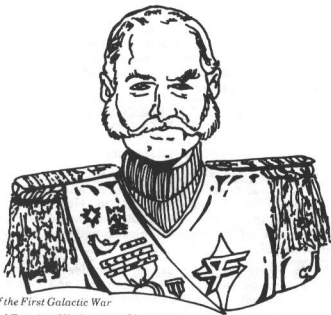
STRATEGY AND TACTICS FOR HIGH RANKS

NOTE: *This is an excerpt from UGA Technical Memorandum SFC-F0-M001 written by Admiral Emeritus R. H. Waibel, Chief of Fleet Operations*

The following suggestions are intended to help Star Fleet personnel advance beyond Vice Admiral (rank 9) and even achieve commendations for missions completed at these ranks. Not all of these techniques must be implemented on every mission, but ignoring all of them will reduce your chance for a successful mission to well below 50%. Implementing all of them will improve your probability of success to more than 95%. The suggestions are listed in decreasing order of importance. The first and second are nearly mandatory; the remainder may be implemented as personnel see fit on a particular mission. The list is not inclusive; there are other techniques that are not deemed critical to a successful mission.

1. Select long missions. Even though the ratio of aliens-to-stardates (A/SD) is nearly the same for all mission lengths, success in long missions is easier. After the "overhead time cost" for finding the Starbase (see below) is "paid," this ratio is best for long missions. Medium length missions may be attempted but short ones should not be selected. Also, the increased number of aliens for long missions means a higher likelihood of them attacking starbase, thus reducing this cost.
2. Find starbase early and avoid combat until you do. If you have to rescue starbase, you must have about one-third your original power remaining. Use probes and movement to explore the region. Do not make long warp movements or go into unscanned quadrants. Be systematic in your exploration.
3. Monitor starbase's quadrant throughout the mission. Keep track of the number of Krellans with starbase at all times. Do not let your power get too low to destroy them. Remember that starbase probably cannot survive more than three attacks per mission.
4. Return to starbase for repair/replenishment before you absolutely need to. There is always the possibility of an alien entering the quadrant with starbase at the same time you do. How closely you budget your power during each sortie from starbase should be determined by how well you are doing during the mission and what efficiency rating you are aiming at.
5. Keep Primary Life Support repaired. Intruders and ion storms can damage backup life support without combat, and you never know when a Zaldron will enter the quadrant adjacent to a lowered or weakened shield.

6. Ignore Zaldrons except when absolutely necessary. Zaldron hunting is not cost effective. It takes more power and time than destroying Krellans. You may wish to practice your techniques, if time allows, since you do need to destroy Zaldrons that are attacking starbase.
7. Attack quadrants with multiple alien vessels early. Aliens are more confident (they move less) when there are several of them in the same quadrant. They move between quadrants and it may be impossible to find more than three together late in a mission. Consider firing two torpedoes at aliens on the edges of the quadrant. They tend to move less but can deflect torpedoes.
8. Do not try to eliminate every last alien in a quadrant. Single aliens move around a lot and a Zaldron will eventually enter the quadrant. Avoid singles except to capture them late in a mission. "There's always one more Zaldron" if you want to practice your search and capture techniques.
9. Use torpedoes as much as possible to destroy aliens. Energy is needed primarily for shields, movement, life support, and repair. Torpedoes are a "cheap" means of destroying aliens. Phasers should be used to disable them for later capture.



*Hero of the First Galactic War
Admiral Emeritus Vladimir von Clausewitz*

SECTION I - PART C

ACADEMY LESSON 3 A SAMPLE MISSION



LOG OF CAPTAIN WALLACE

The following is the ship's log of Captain Wallace during one of his missions while in command of the U.G.A.S. *Prince of Wales*. This mission was selected because it illustrates the challenges facing a starship commander and shows how experience can be combined with the awesome power and capabilities of an *Invincible* Class heavy cruiser.

Author's Note: *This log contains expressions which reflect the feeling and thoughts of the captain, in addition to those parts which illustrate the capabilities of STAR FLEET I.*



UNITED GALACTIC ALLIANCE CAPTAIN'S NOTES - SHIP'S LOG

STARSHIP: Prince of Wales
 CLASS: Invincible Class Heavy Cruiser
 REG. NO.: NSF-512
 IN COMMAND: Captain Wallace
 MISSION RANK: 6
 STARDATE: 8100.0
 MISSION: Assigned to PROCYON II Region. 37 enemy vessels of the invading fleet of Krellans and Zaldrans are to be destroyed or captured in 45 days. Three starbases for resupply and support are located in this region.

DATE	REMARKS
8100.0	DEPARTED STAR FLEET HEADQUARTERS AND EMERGED FROM HYPER-SPACE IN QUADRANT 4,3 WITHOUT INCIDENT. CONDITION: RED. THREE KRELLAN VESSELS PRESENT IN QUADRANT. RED ALERT. DEFENSIVE ENERGY SHIELDS AUTOMATICALLY RAISED BY SHIP'S COMPUTER. THIS IS A COMPUTER ENTRY.
8100.8	<i>Arrived in Quadrant 4,3 without incident. We encountered three Krellan warships and destroyed them all. A Zaldran appeared, hit us, then left the quadrant. Guess their commander did not have the stomach for a fight. We will begin our search for a starbase.</i>
8102.8	<i>We have located Starbase 1. It is in Quadrant 1,1. The quadrant also contains one Krellan destroyer. No problem. However, the quadrants surrounding starbase contain four enemy warships each. It will be a battle on the way there. Signal RED ALERT. We're going in...</i>
8104.1	<i>We have been unable to destroy all four Krellan warships in Quadrant 1,2. In getting three of them, we have nearly expended all our torpedoes. Two Zaldrans have appeared, hit us, then left before we could get a shot off. I am breaking off this attack while we have enough power to attack the Krellan in Quadrant 1,1 prior to docking with Starbase 1.</i>
8108.0	<i>Have successfully captured the Krellan destroyer in Quadrant 1,1. My marines suffered 16 casualties and took 24 prisoners. I have just received a congratulatory message from Star Fleet concerning our successful delivery of the Krellan ship to Starbase 1. Resupply is complete and we are leaving to resume our normal mission.</i>
8109.1	<i>Got him!!! While engaging the Krellans in Quadrant 2,1, we destroyed one Zaldran vessel. I bet we surprised their commander.</i>
8109.4	<i>We finally destroyed the fourth Krellan vessel in Quadrant 2,1. We will now go after the one Krellan destroyer in Quadrant 1,2. We had to leave this one earlier. Two Zaldrans hit us in that quadrant, and we got one of them. This is just the beginning.</i>
8112.7	<i>We have captured the Krellan destroyer in Quadrant 1,2 and have moved to Quadrant 1,1. While attempting capture, a Krellan agent beamed aboard and damaged our primary life support system and torpedo control. Engineering is doing repairs. The Krellan agent was killed while resisting capture on deck 3. A Zaldran ship is present and taking shots at us and starbase. We have been unable to capture the Krellan ship in tow. Because of the ship in tow, I cannot lay mines to damage or destroy the Zaldran.</i>

DATE	REMARKS
8113.0	<i>We have finally captured the Krellan destroyer. We will now dock with starbase for resupply and repair our damaged systems.</i>
8113.7	<i>Another Zaldron has appeared and the starbase commander will not lower their shields and let us dock. We will try again. They better let us in or I am going to be very upset.</i>
8114.4	<i>Resupply is complete and all systems repaired. I will leave the Zaldron alone and resume our normal mission.</i>
8116.0	<i>We have fired five torpedoes at the five Krellans in Quadrant 1,3. Three torpedoes were deflected and two missed. Nuts!</i>
8116.2	<i>A Zaldron has joined us. We have just destroyed three Krellans warships. It cost us ten torpedoes. Two Krellan destroyers remain. The battle is getting more difficult.</i>
8117.1	<i>We have destroyed the Zaldron vessel. Using manual mode, I fired a spread of torpedoes hoping one would hit them, and one did. One Krellan destroyer remains.</i>
8117.4	<i>We finally got the last Krellan destroyer. It has taken us fifteen torpedoes to destroy five Krellans and one Zaldron vessel. I am going to engage three Krellan destroyers in Quadrant 1,4 prior to returning to starbase for resupply. The Krellans' battle tactics are improving.</i>
8117.9	<i>Have expended all torpedoes in Quadrant 1,4. We will now use phasers to destroy the remaining Krellan ship.</i>
8118.6	<i>We have destroyed the last Krellan ship. I am getting the hell out of here and going back to Starbase 1 for resupply.</i>
8120.1	<i>During our trek amongst the stars we encountered another Zaldron. In fact, we rammed her in Quadrant 1,2. We took a very hard hit on shield one and it buckled. Fortunately, only minor structural damage was incurred, but 16 crew members died. The Zaldron moved before we had a chance to fire upon them. We are continuing to head for Starbase 1.</i>
8121.4	<i>We have docked with Starbase 1 and resupply is complete. A much deserved rest was ordered and we are ready to leave.</i>
8121.6	<i>I have just received word from engineering that the ship's sewage system has backed up and overflowed into my stateroom. I am ordering my Chief Engineer to report to his new quarters -- my stateroom. That should get him to clean up the mess. In the meantime, I will use his quarters.</i>
8123.2	<i>After resupply at Starbase 1 we proceeded to Quadrant 1,4 to attack five enemy warships. We have destroyed four of them plus one Zaldron. That makes three Zaldrons this mission. Prior to destroying the Zaldron, he hit us at point blank range. Fortunately, no damage was sustained, but our shields took a beating.</i>
8123.7	<i>I was forced to use phaser fire to destroy the last Krellan ship. We will head to Quadrant 3,2 to capture the Krellan destroyer there.</i>
8124.9	<i>Have arrived in Quadrant 3,2. A Zaldron arrived and hit us at point blank range. I do not know if we have enough power to take this Krellan destroyer. Torpedoes are not very effective against a single enemy vessel. They tend to be much more evasive when they're alone.</i>

DATE	REMARKS
8125.7	<i>We destroyed the Krellan ship when a spread of torpedoes was fired in the hopes of hitting the Zaldron. I will fire a couple more torpedoes before leaving the quadrant.</i>
8127.0	<i>In attempting to destroy the Zaldron, we used all our remaining torpedoes. On top of that, he left the quadrant when we had him zeroed in. We will now head for Starbase 1 for resupply.</i>
8129.4	<i>Have completed resupply at starbase 1. My engineer has reported that he has finished cleaning up my stateroom, so I am sending him back to his quarters. It sure feels good to be back in my own quarters. Now, to go after more Krellans.</i>
8130.1	<i>Have arrived in Quadrant 4.1 to attack five Krellan destroyers. Upon arrival, one Krellan hit us at point blank range and two more hit us very hard. Fortunately, our shields were at maximum.</i>
8130.6	<i>We have just destroyed the last Krellan ship in this quadrant. My ship's sensors show no enemy vessels in the neighboring quadrants. We are forced to seek out the enemy.</i>
8131.3	<i>While searching for more aliens we encountered a severe ion storm in Quadrant 5.3. Our long-range sensors were damaged and will be out for 3.0 days. I also lost 34 crewmembers. This ends our search for Krellans and finding a starbase for a while. Prior to the storm, sensors showed two Krellan ships in Quadrant 6.1. We will attack.</i>
8132.7	<i>Have destroyed one of the Krellan ships in Quadrant 6.1. We will attempt to capture the other one. I have ordered my marines to stand by for boarding. No Zaldrons have showed up yet.</i>
8132.9	<i>A Zaldron has arrived. We will lay mines in an attempt to damage their ship. Capturing the Krellan destroyer must wait a while.</i>
8133.4	<i>My science officer has informed me the Zaldron has left the quadrant. I shall leave the mines where they are in case another Zaldron arrives. We will now capture the Krellan destroyer.</i>
3133.8	<i>While attempting to capture the lone Krellan destroyer, shield 4 was penetrated. Shield control was damaged and will be out for 2.2 days.</i>
3134.3	<i>I have just received word from damage control that the long-range sensors have been repaired. My Chief Engineer was successful in rigging a bypass circuit, and shield 1 was lowered. We will take the disabled Krellan ship in tow and get out of here before a Zaldron arrives.</i>
8135.5	<i>After capturing the Krellan ship, one of the prisoners escaped and has wreaked havoc on decks 9 and 10. He has knocked out our navigation computer and torpedo control for 0.58 and 2.7 days, respectively. We are low on power and I have lost too many crewmembers. I am placing deck 9 under maximum security alert. It will be a long, hard journey to Starbase 1 and safety.</i>
8135.9	<i>I have just received an emergency message from Starbase 1 that they are under attack by Krellan forces. A most undesirable situation because that means there are at least three Krellan destroyers in the quadrant. Hopefully, the Krellans will concentrate their fire on starbase, but I know they will not completely ignore us. Since we do not know the location of another starbase, nor have enough power to search for another, we must continue to Quadrant 1.1. I am most concerned.</i>

DATE	REMARKS
8136.2	<i>Good news! Damage control personnel have completed repairs to our torpedo control systems, and the intruder was killed while resisting capture on deck 12. Good work, crew!</i>
8137.2	<i>Have arrived in Quadrant 1.1. We have less than 200 units total power and there are four Krellan destroyers present. I hope starbase lowers their shield and lets us dock.</i>
8139.6	<i>Starbase let us dock! Resupply is complete and now we can rescue starbase.</i>
8140.1	<i>We have destroyed two of the Krellan ships and starbase destroyed the third. Eliminating the last Krellan ship will complete our mission.</i>
8140.6	<i>Starbase is rescued!</i>

*** MESSAGE RECEIVED FROM STAR FLEET COMMAND:
CONGRATULATIONS, Captain Wallace
FOR COMPLETING YOUR MISSION SUCCESSFULLY.

YOU HAVE ELIMINATED 37 ENEMY VESSELS IN 40.63 DAYS

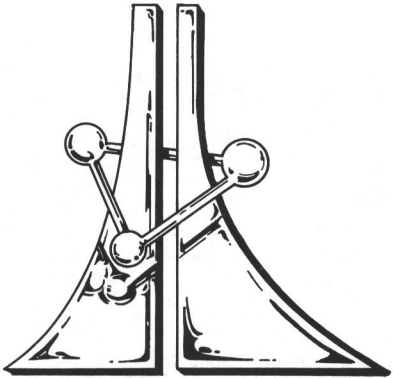
The following statistics have been noted by Star Fleet Command:

NUMBER OF ZALDRONS ELIMINATED	:3
NUMBER OF STARBASES RESCUED	:1
NUMBER OF FAILURES TO RESCUE STARBASES	:0
NUMBER OF ENEMY VESSELS DELIVERED TO STARBASES	:4
NUMBER OF ENEMY PRISONERS DELIVERED	:65

Your mission rating was 88.41% at rank 6

*** CAPTAIN'S LOG CLOSED ***





SECTION II - PART A

THE ALLIANCE AND STAR FLEET COMMAND

AUTHOR'S NOTE

Section II is provided as background material only and is not directly related to **STAR FLEET I**. However, some of this material will be useful in **STAR FLEET II** and subsequent games in the **STAR FLEET** series.

WARSHIPS OF THE ALLIANCE

Star Fleet consists of ships of many different types to perform the myriad and diverse tasks that are assigned to it. TABLE II lists the major ship types and their primary functions.

TABLE II
Star Fleet Ship Types

Ship Type	Power Capacity (Units)	Crew Size (Incl. Marines)	Primary Function	Remarks
Battleship	10,000	800	Defense	Under construction
Heavy Cruiser	5,000	500	Exploration, defense	
Light Cruiser	3,000	400-430	Exploration, defense	Being phased out
Destroyer	2,000	250	Patrol	
Frigate	1,000	200	Escort	
Scout	500	150	Exploration, intelligence	Lightly armed, fast
Freighter	500-1000	70-180	Cargo, troop transport	Many varieties

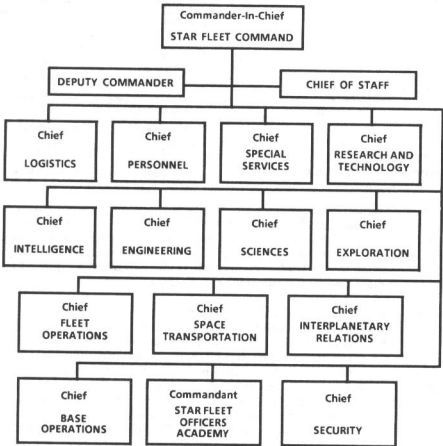
The ships designated as light cruisers were originally just called cruisers. When the new, advanced and larger *Invincible* class cruisers became operational, they were designated as heavy cruisers, while the original cruisers of the *Patton* class were redesignated as light cruisers. The very successful *Invincible* class cruisers were intended to gradually replace the older *Patton* class cruisers as the new ships became operational.

However, the onset of Galactic War II has kept many of these obsolescent ships in service. The war has also resulted in a crash program to develop a new and extremely powerful warship designed specifically for space combat and battle superiority. This ship has been designated by Star Fleet Command as the *Warlord* class battleship. Several of these ships are currently under construction, and will probably lead the Alliance counter-attack into the Krellan Empire. In the meantime, the *Invincible* class heavy cruiser is providing the backbone of the Alliance defense, to blunt the enemy invasion and buy time to allow completion of the battleships.

ORGANIZATION OF STAR FLEET COMMAND

The central headquarters of Star Fleet Command are located on the planet Cygni Epsilon Three. This is one of four habitable planets surrounding the star Gienah, located on the left arm of the imaginary cross formed by the constellation Cygnus. Gienah is an K0 type star of magnitude 0.7, and is approximately 74 light years from Earth. Because of the shape of the Cygnus star group, it was named the "Northern Cross" by early Earth astronomers. Gienah is the fourth brightest star in this constellation.

A simplified command structure organization chart of Star Fleet Command is presented for your information. Star Fleet Command is a flexible organization, and new sections may be created to satisfy special needs.



The overall duties and responsibilities of each section are briefly described in the following paragraphs.

Commander-In-Chief

The Commander-In-Chief is the highest ranking officer in Star Fleet. He is responsible for the overall organization and operation of Star Fleet Command and reports directly to the Alliance Senate.

Deputy Commander

The Deputy Commander assists the Commander-In-Chief in all aspects of the operation of Star Fleet Command. In addition, the Deputy Commander is director of the Alien Exchange Program. In this position, he oversees the assignment of aliens (all non-humans) in Star Fleet and recommends Star Fleet officers who request or would be suited for temporary or permanent assignments in non-Earth forces.

Chief of Staff

The Chief of Staff directs all administrative tasks within Star Fleet. He ensures proper procedural adherence, sees that orders are distributed to the appropriate person(s), keeps Star Fleet records, etc. Traditionally, the Chief of Staff has acted as curator of the Star Fleet Museum, but no formal assignment has ever been made.

Chief of Logistics

The Star Fleet Logistics Officer is responsible for the procurement, distribution, maintenance, and placement of material throughout the forces of Star Fleet. In this capacity he ensures all Alliance starships and bases are properly supplied and maintained, a task which grows more crucial as the Alliance spreads throughout the galaxy.

Chief of Personnel

The Chief of Personnel maintains the records of all officers, enlisted personnel, space marines, and civilians in Star Fleet. This section also keeps records of those who attended the Academy but did not graduate or chose not to accept an assignment within Star Fleet.

Chief of Special Services

This is a special assignment to take care of miscellaneous matters of concern to Star Fleet. This section makes preparations for visiting dignitaries, arranges transportation for Alliance and Star Fleet Command officials, publishes and distributes all Star Fleet documents, maintains communications, electronic bulletin boards, etc.

Chief of Research and Technology

This section oversees all Star Fleet research, development, testing, and integration of all scientific projects. The chief of this section is responsible for scheduling, funding, and prioritizing individual projects. All equipment and software is thoroughly tested before being passed to the Chief of Engineering for inclusion into the design of Star Fleet's many spaceships and facilities.

Chief of Intelligence

The Chief of Intelligence assigns specially equipped fleet scout ships to their patrol regions, directs all outposts along neutral borders, correlates all intelligence data, and distributes classified information about the Alliance's adversaries to the appropriate officials.

Chief of Engineering

The Chief of Engineering is responsible for the maintenance, construction, and upgrading of all Alliance starships and bases. All projects that originate in the Research and Development section must pass through this office prior to incorporation into Alliance starship designs. The assignments of all engineering and technical personnel requesting starship duty originate from this section and are passed to the Chief of Fleet Operations for approval.

Chief of Sciences

This section assigns science personnel to space exploration, including the *Invincible* Class heavy cruisers. The assignments of all science personnel to space duty, including civilians, originate from this section and are passed to the Chief of Fleet Operations for approval.

Chief of Exploration

The Chief of Exploration oversees the exploration of the unknown regions of the galaxy. All star systems, planets, and astronomic phenomena within the known regions of the galaxy are charted. This section is also responsible for placement and maintenance of all navigational aids for Alliance starships.

Chief of Fleet Operations

The Chief of Fleet Operations directs the military side of Star Fleet. All military assignments, orders, and promotions are approved in this section. In wartime, this section is responsible for the combat strategy and placement of all forces, including space marines. In addition, the assignments of civilian personnel to military and non-military vessels are coordinated through this section.

Chief of Space Transportation

The Chief of Space Transportation is responsible for the transport forces of Star Fleet. All freighters, troop transports, and luxury entertainment spaceliners are directed and supervised by this office.

Chief of Interplanetary Relations

This office directs all diplomatic missions of the Alliance. When potential conflicts arise between neighboring star systems, planets, or alien races within the Alliance, the Chief of Interplanetary Relations assigns an Alliance diplomat and staff to act as a neutral third party to help settle the dispute. In certain situations, the Alliance has offered its services to help settle disputes outside the Alliance. This has resulted in three new races joining the United Galactic Alliance.

Chief of Base Operations

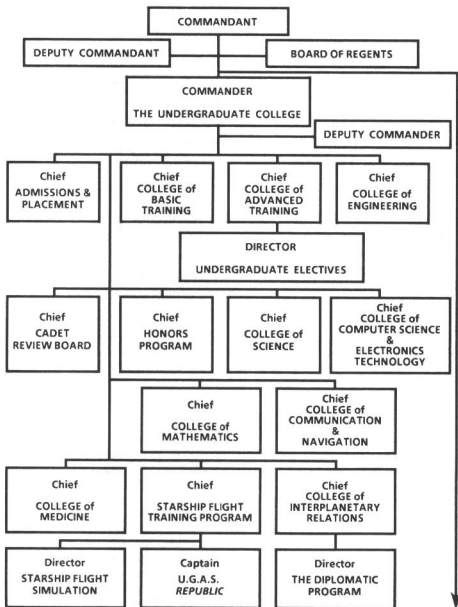
The Chief of Base Operations directs all starbase and space station operations throughout Alliance space. The assignments of all starbase personnel originate from this section, and are passed to the Chief of Fleet Operations for approval.

Chief of Security

The Chief of Security is responsible for maintaining security for all of Star Fleet. This includes internal security for all Star Fleet ships, facilities and bases, as well as counter-intelligence and anti-guerrilla functions. The space marines are trained by this office and a strategic reserve is maintained. However, operational control of the marines is conducted by the Chief of Fleet Operations.

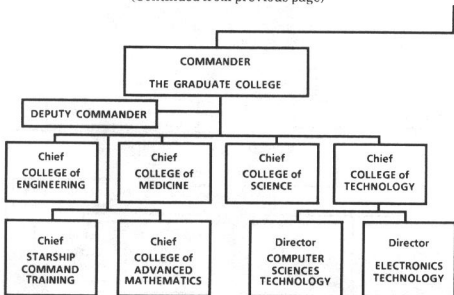
ORGANIZATION OF THE ACADEMY

A simplified organization chart of the Star Fleet Officers Academy is presented below for your information.



ORGANIZATION OF THE ACADEMY

(Continued from previous page)



The Star Fleet Officers Academy is located within special facilities adjacent to Star Fleet Headquarters. The Academy campus includes dormitories, laboratories, classrooms, research facilities, simulators, physical training, and recreational facilities.

Those persons wishing to join the space marines complete their training at one of four military academies located within the Alliance. The space marines' primary training facilities are located in Camp Pendleton, California, United States of America, Earth.

The Academy Curriculum

After being accepted into the Star Fleet Officers Academy, all cadets enter the Basic Training program. This program consists of two years of general study, providing the foundation for future studies. Some of the subjects required during this time are:

Astronomy	History	Starship Recognition
Physics	Basic Planetology	General Starship Engineering
Chemistry	Alien Life Forms	General Starship Operations
Propulsion	Marksmanship	Navigation
Mathematics	Cosmology	Computer Science/Robotics
Weaponry	Electronics	Survival Training

In addition, cadets are encouraged to complete studies in their field of interest and other general electives (Botany, Geology, Law, History, Security, etc.). Medical students complete their first two years within the College of Medicine, and many of the subjects listed previously are not required.

Near the end of the second year, all cadets go before the Cadet Review Board to determine if they will be permitted to continue or must return to reinforce those subjects in which they did not do well. Some cadets leave the Academy at this time.

After passing the Cadet Review Board, cadets move to advanced study in their particular field of interest. Some of these areas include the Sciences (Chemistry, Botany, Geology, Physics, etc.), Weaponry, Navigation, Communications, Engineering, Security, Computer Sciences, Electronics, Medicine, Alien Cultures, and Interplanetary Relations. Many of these have their own colleges within the Academy, while the remaining fall under the College of Advanced Training. All cadets requesting starship duty must complete the Starship Flight Training Program. Because not all cadets want a flight assignment, the second part of their stay in the Academy usually varies between one and three years. The Starship Flight Training Program is discussed in more detail in the next section.

Several of the advanced areas of study are shown below with a listing of some of the courses required for each.

Science

Astronomy
Astrophysics
Physics
Computer Science
Computer Systems Technology
Starship Sensors

Biology
Botany
Zoology
Chemistry
Planetology
Plus other sciences

Engineering

General Starship Engineering
Computer Science
Computer Systems Operations
Life Support Systems Technology
Electronics

Defensive Shields Technology
Propulsion
Weaponry
Sensors
Plus other topics

Communications

Cryptography
Communications Systems Technology
Computer Systems Operation

Alien Languages
Communications Procedures
Plus other topics

Navigation

Astronomy
Celestial Mechanics
Propulsion
Starship Guidance, Navigation, and Control

Astrophysics
Navigation Sensors
Computer Systems Operations
Plus other topics

Medicine

Gross Anatomy
Neurology
Biological Chemistry
Medical Physiology
Internal Medicine
Infection and Immunity

Medical History
Pathology
Surgery
Ethics and Medical Law
Diseases
Plus other topics

Those cadets interested only in ground assignments must study Planetary, Starbase, and Alliance Operations in much more detail than other cadets. These courses give the cadet the basic skills necessary to work in any of the Alliance's facilities.

Near the end of a cadet's advanced studies, he/she must once again go before the Cadet Review Board. At this time, the prospective graduate is asked what assignment he/she prefers (usually ground or flight), specialty, and location. A general interview is also conducted to further determine the cadet's character, suitability for assignment, eligibility for command, and overall knowledge of their specialty. The board then makes recommendations to the Chief of Fleet Operations and approves the cadet for graduation. However, if the board feels the cadet is not ready, graduation will be disapproved and notice sent to the Academy Commandant with the board's reasons.

The Starship Flight Training Program

Prior to accepting a flight assignment, all cadets must successfully complete this program. The only exceptions are those with specialties in Medicine, Alien Cultures, Interplanetary Relations, and other areas where general knowledge of starship flight operations is not essential. Although not everyone with a flight assignment is required to complete this program, cadets may elect to do so.

The following subjects are required study in this program:

Officers' Duties and Responsibilities
Communications
Helm Operations
Weapons
Sensors
Shuttlecraft Operations
Propulsion Technology
Food Processing Technology
Waste Disposal and Recycling
Computer Systems Operations

Defensive Shields Technology
Life Support Systems Technology
Engineering and Transport Systems
Transporters Systems Operations
Electronics and Circuitry
Power Generation and Requirements
Cargo Manifesting and Requirements
Science Laboratory Procedures and Equipment
Medical Laboratory Procedures and Equipment

Depending upon the cadet's specialty, some of the subjects listed above will require much more detailed study.

The Starship Command Training College

Officers who are of command grade, or in positions where they could be placed in command of a starship, are required to attend the Starship Command Training College. This college is attended only by commissioned officers of Star Fleet, not by cadets. The officers most likely to attend are:

Captain
First Officer
Chief Science Officer
Chief Navigation Officer
Chief Communications Officer
Chief Engineering Officer
Chief Weapons Officer

During the officer's one-year stay, the following subjects are required:

Leadership
Administration
Starship Security
Space Combat Strategy
Starship Combat Tactics

In addition to potential starship commanders, potential space marine commanders are also required to successfully complete a similar program, but with Ground Operations and Strategy replacing Space Combat Strategy.



Krellan Emperor Henri Zae IV

SECTION II - PART B

THE ENEMY EMPIRES



Krellan Priest uttering the War Prayer at the Four Moons

THE EMPIRE OF HENRI ZAE IV

In the years since his inauguration, Henri Zae IV has expanded both the power and territory of the Krellan Empire. With a strong and well-disciplined military, Zae has led his followers into another galactic war; a war that has restored both the dignity and pride of the Krellan people. War, to the Krellans, is conquest--a prime ingredient in Krellan life. To better understand the Krellan people and their ruthless dictator, Star Fleet Command ordered its Intelligence Division to study the military, political, and social structures of Krellan society. Alliance leaders hoped that this study would reveal weaknesses within the barbaric dictatorship. The following are excerpts from the final report, entitled "The Empire of Henri Zae IV."

The Krellan Empire extends its control to 1356 planets in 318 star systems. Of these systems, a total of 24 habitable planets in 18 star systems are occupied. Each star system is ruled by a governor, appointed by Zae himself. Each stellar governor is assigned his own military detachment, whose purpose is to maintain control over the local population, stifle resistance efforts, and maintain terror. The Krellans control five alien races within the Empire - the Tisans, Groceans, Endorans, Vamorians, and NASA contractor engineers. These races provide slave labor in their own star systems.

TABLE III lists the star systems under Krellan rule, and gives a brief description of what is known about the occupied planets

On the planets Grenns, Vamore, and Rasor there is an active underground resistance. These planets have only become part of the Empire in the past two years. The prison planet Amin is the most inhospitable place in the Empire. The planet is locked forever in an ice age and its inhabitants (prisoners and guards) live in domed structures protecting them from the bitter cold. It is rumored that Zae wanted to poison the planet's atmosphere, but his aides convinced him that the cold would be adequate protection from attempted escapes. Prisoners are routinely tortured for information about resistance efforts against the Empire, and political prisoners are often executed to help maintain control on occupied planets. Sometimes these executions are public, and entire families are known to have been wiped out.

The nucleus of the Empire is the planet combination of Krella, Kree, Kaum, and Kamic. Only the most loyal Krellans live on these worlds.

TABLE III
OCCUPIED PLANETS OF THE KRELLAN EMPIRE

System Number	Total Number of Planets	Occupied Planet	Responsibilities
I	7	KRELLA KAMIC KREE KAUM	Mother planet, political center, military bases, and Military Academy Agriculture and water supply, Political Science Academy Sensor station, military base, industrial center Military base, scientific research and Science Academy, education facilities
II	3	ZAT	Mining planet for triindium and iron ore, storage facilities
III	14	ATTI	Industrial center, Agriculture and Industry Academy, military base
IV	6	DORAN	Agriculture
V	3	CORIFF	Military base, medical research
VI	4	TORACK	Agriculture, water supply, and petroleum processing
VII	7	BASHAR	Minerals mining, industrial center
VIII	5	AMIN	Prison planet
IX	11	BOCT	Minerals mining, industrial center
X	9	LASIM LASUM	Military base, water supply, minerals mining Military weapons test center, scientific research base
XI	8	SPIRIN	Sensor station, military outpost, mineral mining
XII	5	BADE	Recreation planet, high food production
XIII	7	TISE	Minerals mining, storage facilities, industrial complex
XIV	6	MATCI	Military headquarters
XV	10	GRENN HELLAN	Military outpost, industrial center Food production, water supply research center
XVI	11	MAGNA	Triindium mining and military base, storage facilities
XVII	10	NOVIM	Agriculture and mining, petroleum processing, military base
XVIII	9	RASOR VAMORE	Industrial center, military base Iron ore and precious metals mining, military base

All children, even those of the Zae's family, must be sent to Kaum at the age of six (Earth years) for career placement. The school on Kaum will test and place the children in one of the following programs:

1) The Military Academy

Entry into the military ranks is the most elite social status a Krellan can acquire. Only Krellans of superior physical and mental abilities are enlisted in the Krellan space forces.

2) The Political Science Academy

Those children with above-average mental abilities but less than excellent physical strength become the political advisors of the Empire. Each governor is assigned a political staff to assist him in non-military matters. It appears their advice is very rarely taken, as Krellans consider a hand blaster the best diplomatic tool.

3) The Science Academy

Children who demonstrate exceptional aptitude to science and engineering are assigned here. This Academy trains all the Empire's scientists, engineers, and technicians.

4) The Industrial and Agricultural Academies

All remaining children are sent here. After training, these children grow up in the working class, laboring all their lives for the Empire.

Once placed in a school, the children are completely separated from their parents (except Zae's), and rarely see their family again for the rest of their lives.

Krellan Breeding

Marriage exists only in the working class, and even then the breeding is organized. Potential parents are told when they can have children and how many. Military and political leaders may mate as they wish, but marriage is frowned upon; concubines and mistresses are approved. A special science division was created by Zae to study breeding results and this division recommends which subjects should be allowed to mate. Only the Emperor himself and his immediate family and staff are omitted from the division's scrutiny.

Krellan Religion

The Krellans' inhospitable disposition is directly related to their religion. They worship ZAGAR--their God of War. Dying in battle is the ultimate glory for a Krellan, and all non-military Krellans are doomed to eternal sleep after death. Warriors who die in battle will rise as servants of war to Zagar, and relive victory after victory. Retired warriors are also assured of a place at Zagar's side when they die, if they were worthy and valiant warriors in life and were fearless of death.



THE ZALDRON EMPIRE

Very little is known about the Zaldron Empire. Their empire includes 27 star systems with a total of 96 planets, eight of which are inhabited. The Zaldrons are reptiloid, and the origin and age of their species is completely unknown. Despite their appearance, Zaldron mental abilities are advanced. Many Alliance scientists believe the Zaldrons achieved space-flight about 120 years ago, but they have never ventured very far from their home world, that is, until their alliance with the Krellan Empire.

TABLE IV lists the solar systems and names of the occupied planets in each. The specific uses and responsibilities of each planet are not known. Zald, the home planet, is surrounded by four moons. Intelligence reports state the moons are barren but do contain military defense installations. The other seven planets in the Zaldron Empire apparently supply food, water, minerals, and other necessities to the home planet.

TABLE IV

OCCUPIED PLANETS OF THE ZALDRON EMPIRE

System Number	Total Number of Planets	Occupied Planets
I	6	ZALD, ZIN
II	8	OGAT
III	4	SALEM, SAMOIR
IV	8	KROTA, TAILESE
V	7	MAZZE

The Zaldron social structure is one of total female domination. Females produce about 150 eggs a year, and 50 percent of the females hatched are killed in order to maintain the elite female status. Males are automatically involved in the military. Only a selected few are spared and used as slaves by the Queen and her court.

Zaldron cities are located beneath the surface of the planets, since this provides the maximum protection from sudden changes in heat and light levels. Being cold-blooded, Zaldrons are sensitive to large climatic changes and their eyes are better suited to low light levels.

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