STARFLEET

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A Galactic battle game for the H100/H89 with optional Vorlax
TYPE-N-TALK. Includes optional color for H8/H89 with HA-8-3,
HA-89-3, or THE ENTERTAINER.

Requires: ZDOS, CP/M85 or CP/M. 128k for Z100 or 64k for H89.
Disk cap: 1 or 2 disk drives with 180k or more.

STARFLEET
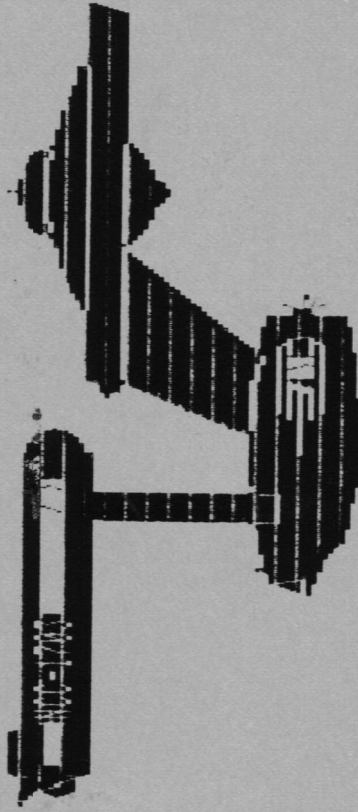## Copyright Ralph W. Boyd
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STARFLEET is a real-time interactive video graphics starwars game for the H8/H89/Z100. You begin as a star vessel commander for the United Federation of Planets. The Klingon Empire has infiltrated the Federation and captured your colony planets. You must search out and destroy the Klingon ships before they can destroy you or capture your Home Planet. Based on the popular Startrek game, you must use your cunning and daring to determine the outcome of the war. As you return to a Starbase after a successful mission, the Starfleet Command may promote you and assign you to a new ship in the fleet. If you are good enough, you may even be promoted to Fleet Admiral.

Features include 32 different Starships, 6 levels of rank, Klingon & Romulan Empire zones, blackholes, colonies, outposts, TYPE N' TALK option, and color options for Z100 and H8/H89 with HA-8-3, HA-89-3 or THE ENTERTAINER.

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STARFLEET

A real-time starwars game for the H8/H89/H100. As commander of a
Star vessel you must destroy the Klingon invaders to save the
Federation.   An advanced version of the popular Startrek game
STARFLEET includes many new features. There are 32
different Starships in 4 classes, 6 levels of rank, Klingon &
Romulan Zones, colonies, blackholes, outposts, TYPE 'N TALK
option, and color options for the H100 & H8/H89 with the HA-8-3,
HA-89-3, or THE ENTERTAINER color graphics cards. The standard
black & white mode will work on all H8/H89 systems without the
color cards. An 18 page instruction manual is included.

Requires: ZDOS, CP/M85 or CP/M80. 128K for H100 or 64K and a Z80
CPU for the H8/H89. 180K of disk capacity is required. Price is
$39.95 and all disks are shipped in soft-sectored format. The
hard-sectored format is shipped by special order only.

SUBMARINE

A World War II combat simulation between a submarine and
a destroyer. You are in command of a destroyer and your
video screen is your attack console. Using the information
on your sonar/radar screen you must intecept an intelli-
gently evasive submarine and destroy it. The game includes
depth charge attacks, torpedos, oil slicks, sonar sounds,
surface combat, and other special events.

Requires: HDOS, CP/M80, CP/M85 & MBASIC or ZDOS & ZBASIC.
64K for H8/H89. The ZDOS version is in full color. Each
disk contains the complete source code and instructions
for only $24.95.

HURRICANE TRACKING

A color database program for tracking Atlantic Hurricanes on the
H8/H89 with an HA-8-3, HA-89-3 or THE ENTERTAINER color graphics
cards. This program lets you plot the track of Atlantic Storms
and compare them with the tracks of over 100 previous Hurricanes.
You enter the location, speed, pressure, and wind speed of the
Tropical Storm and the program displays it on a high resolution
map on your color monitor. Watch the storms change shape and move
through their tracks across the color map.

Requires: H8/H89 with 64k, HDOS or CP/M and an HA-8-3, HA-89-3 or
THE ENTERTAINER color graphics cards. Price $39.95.

BLAST

A color graphics flying saucer game for the H8/H89 with an
HA-8-3 or HA-89-3 graphics card & 1 analog joystick. Your
mission is to destroy all the cities on a alien planet.
Using your joystick, you must position your saucer over an
enemy city and blast it with your laser. The enemy will
fight back with photon torpedos. You must quickly destroy
each city before they can charge up their masers. If you
fail you will be blown into space dust.

Requires: HDOS or CP/M, 64K & an HA-8-3 or HA-89-3 color
graphics card with an analog joystick. Price: $19.95.

ORDERING INFORMATION

When ordering please indicate which operating system and disk format you will need. For the color H8/H89 color graphics programs, be
sure to indicate which color card you are using so that I can send you the proper version of the program. Joysticks may be ordered
separately from WEITZMAN ASSOCIATES, 580 NW 99th Way, Pembroke Pines, FL 33024. For the software make your check or money order
payable to RALPH W. BOYD.

***************** IMPORTANT - READ THIS FIRST ********************

STARFLEET requires special set-up and configuration. You must
read the INSTALLING THE GAME section of this document and follow
the instructions explicitly. **DO NOT TRY TO RUN THIS PROGRAM
WITHOUT FIRST INSTALLING THE SOFTWARE PROPERLY.**

The installation procedure will require that you CONFIGUR a CP/M
or ZDOS disk for the correct I/O structure. This must be
performed whether or not you have the color and/or TYPE 'N TALK
options. Read the installation procedure and set-up your system
disk for the correct I/O configuration. If you try to skip this
set-up, you may find that STARFLEET will not run correctly or not
at all.

STARFLEET has been tested only with a Votrax TYPE 'N TALK for the
speech synthesis routines. If you will be using some other speech
device, the following information may help you to configure your
system for that device.

The talking option of STARFLEET uses the standard LST: device in
CP/M or PRN: device in ZDOS. You must set your talking device to
properly read data from this device as if it were being sent to a
printer. STARFLEET sends an ASCII stream (sometimes misspelled)
to force the Votrax T-N-T to pronounce each sentence. If your
device can produce speech in this manner, then you may be able to
configure it to the program. If your device needs special
character streams (such as phonemes) then you will not be able to
use the speech routines. In that case follow the set-up procedure
to disable the T-N-T feature.

****************** CORRECTION FOR ZDOS SETUP ********************

The documentation contains an error in the configuration
procedure for STARFLEET. If you are installing the game for ZDOS
and you do not have a Votrax T-N-T, you should still select the
TYPE 'N TALK option "G". All ZDOS versions will only work
properly if the T-N-T selection is made. **DO NOT INSTALL THE H-
14/WH-24 OPTION IF YOU ARE USING ZDOS. DO INSTALL THE T-N-T
OPTION WITH ALL ZDOS VERSIONS**

INTRODUCTION

STARFLEET
Ralph W. Boyd
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STARFLEET is a video graphics starwars game for the H8/H89/Z100. You begin as a commander of a Star vessel for the United Federation of Planets. The Klingon Empire has infiltrated the federation and has captured your colony planets. You must search out and destroy the Klingon ships before they can destroy you or capture your home planet. Based on the popular Startrek game, you must use your cunning and daring to determine the outcome of the war. As you return to a starbase from a successful mission, the Starfleet Command may promote you and assign you to a new starship in the fleet. If you are good enough, you may even be promoted to fleet Admiral.

INSTALLING THE GAME

Before you begin to play the game of STARFLEET, make a backup copy of the distribution disk. **THE DISTRIBUTION DISK IS NOT BOOTABLE. DO NOT TRY TO RUN THE PROGRAMS FROM THIS DISK.**

STARFLEET has a built in option for the Votrax TYPE 'N TALK speech synthesizer. Whether or not you own a TYPE 'N TALK, you must follow the instructions under the "TYPE 'N TALK option" section. All systems must be properly CONFIGURed before attempting to run this game.

The PIP.COM and CONFIGUR.COM files mentioned below are not on the STARFLEET distribution disk. These files are supplied on your CP/M (or ZDOS) distribution disk.

STARFLEET is a very large game and will require more than 90k of disk storage space. If you are using a soft-sectored disk drive you will be able to copy all of the programs from the distribution disk onto your own bootable disk. If you are using the 40 track hard-sectored disk drives, you will need at least 2 disks to run this game. Follow the instructions below for your particular system.

For soft-sectored disk formats

Make a bootable CP/M or ZDOS disk and copy the following programs from the distribution disk onto your bootable disk. Refer only to those sections pertaining to your particular system.

For Z100 CP/M85 or ZDOS copy these files:

FLEET.COM	FLEET.OV1
STARSHIP.DAT	FLEET.OV2
CONFIGUR.COM	

For H8/H89 CP/M copy these files:

FLEET.COM	STARFLET.PIC
FLEET.OV1	CONFIGUR.COM
FLEET.OV2	PIP.COM
STARSHIP.DAT	ASCII.LTR
PLAY.COM & HA83.PRE	PLAY893.COM & HA893.PRE

For hard-sectored disk formats

Make a bootable CP/M disk and format another disk but do not SYSGEN the second disk. STARFLET includes a structure for users with more than a single drive. When STARFLEET trys to load a file from the disk, it will first search Drive A:. If the file cannot be located on A: it will search Drive B:. You are therefore at liberty to put any of the files from the distribution disk onto either one of the 2 disks you have just made. It is recommended, however, that you copy the files onto these disks as given below. This structure will keep the file search mechcanism to a minimum.

For disk A:	For disk B:
FLEET.COM	FLEET.OV1
ASCII.LTR	FLEET.OV2
STARSHIP.DAT	
STARFLET.PIC	
PIP.COM	
CONFIGUR.COM	
PLAY.COM & HA83.PRE	
PLAY893.COM & HA893.PRE	

TYPE 'N TALK option

STARFLEET contains routines which will use the optional Votrax TYPE 'N TALK speech synthesizer. If you do not have this optional device you must CONFIGUR your system to properly disable the T-N-T. The T-N-T is addressed by the program as your LST: device in CP/M or your PRN: device in ZDOS. You may have to disconnect your serial printer and connect your T-N-T to this port. If your T-N-T is connected to some other serial port, you may have to change the port number for the LST: device in the CONFIGUR program. Refer only to the section below which describes your particular system:

For Z100 ZDOS: Type the command CONFIGUR and hit RETURN

You will see a 3 option menu. Type "A" to configure the PRN device. You will now see a long list of printer options. If you have a Votrax TYPE 'N TALK, select option "G". If you do not have a T-N-T device, then you must choose option "D" the H-14/WH-24 printer.

After selecting the proper option above, you will be returned to the final menu. Make your changes permanent by entering "F". You

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may now skip ahead to the STARTING THE GAME section.

For H8/H89/Z100 CP/M: Type the command: CONFIGUR and hit RETURN

You will see the following message on the screen:

Standard System (Y or N?) <Y>:

If you do not have a TYPE 'N TALK then simply hit "Y". Your disk will be set to disable this feature. You may now skip ahead to the STARTING THE GAME section.

If you have a T-N-T device then type "N" and refer to the table below to make your keyboard entries. Enter only the capitalized keystrokes as indicated under "You Type".

For H8/H89 CP/M:

You Type	Excerpt or discription on display
A	Set Terminal and Printer Characteristics
C	LST: baud rate
4	LST: baud rate: 4800 Port:
340	LST: baud rate: 4800 Port: 340Q
M	Serial Printer Ready Signal Polarity: HIGH
none	Serial Printer Ready Signal: RTS (pin 4)
Y	Finished, make changes and return
C	Change the Default I/O Configuration
D	LST: =
LPT	LST: = LPT:
Y	Finished, make changes and return
Y	Configure, making changes to memory & disk

For Z100 CP/M85:

You Type	Excerpt or discription on display
P	Printer Configuration
either 8	Votrax TYPE 'N TALK (only if you have one)
or 3	H-14 or TI-810... (if no T-N-T)
X	Exit
P	Make changes permanent...

STARTING THE GAME

STARFLEET requires a special loading sequence. You must follow the next instructions explicitly. **DO NOT TRY TO RUN FLEET.COM BY ITSELF.** Be sure that you have power on your optional color monitor and/or TYPE 'N TALK devices. If you are not using the optional T-N-T, be sure your printer is off. Should you have a non T-N-T device powered up and connected to the T-N-T port, STARFLEET may hang in a waiting condition or send some garbage to the device. Now reset your computer and re-boot. This will insure that the proper BIOS is loaded. Failure to do so, and the game may not function properly. To start the game type:

	PLAY893 FLEET	(for H8/H89 with HA-89-3)
	PLAY FLEET	(for H8/H89 all others)
or	FLEET	(for Z100 versions)

This program is written in LUCIDATA PACAL. For H8/H89 systems you must always invoke the proper PLAY.COM (PLAY893.COM) file to begin the game. PLAY.COM (PLAY893.COM) is a special program which will load up the color graphics routine in the HA83.PRE (HA893.PRE) file. Once these routines are in memory, FLEET.COM will be loaded and executed.

If you are using a Z100, you will be asked if you have a color monitor. Type "Y" if you want the color turned on. For monochrome screens you must type "N".

If you are using an H8/H89, you will be asked if you have an HA-89-3 color graphics card. If you do type "Y". If you have no color card at all or are using an HA-8-3 or ENTERTAINER, simply hit the RETURN key to enter the default "N" as indicated.

FLEET.COM will now set up the H19/H89/Z100 graphics screen (by reading STARFLET.PIC and drawing the optional color screen for the H8/H89). If you are using an H8/H89 without the color graphics cards, you will not see the color screen. Only systems with the HA-8-3, HA-89-3 or THE ENTERTAINER will be able to use the color screen. Nevertheless the proper HA???.PRE file must be on one of your disks as previously described. Z100 versions do not need these files.

Once FLEET.COM has set up the graphics screen it will overlay in the FLEET.OV1 file. This overlay will initilize a new game. You will now see a message in the lower third part of your H19/H89/Z100 screen. If you are starting a new game, type an "N". If you want to play an old game which you have previously saved on one of your disks, type "O".

If you chose to play a new game you will be asked to enter your skill level. There are 1-4 levels of difficulty. Level 1 is for beginners and level 4 is for experts. Selecting a low level will let you begin a game with a Captain's rank and a large Star Cruiser. The higher levels will assign you to lower ranks and smaller vessels. You will have to earn your promotions to get

into the larger ships in the fleet.

If you chose to play an old game, you will be asked to enter your name. This is the file name under which your old game was saved. In either case, old or new, FLEET.OV1 will re-condition the galaxy and overlay itself with FLEET.OV2. This file is the actual game portion of STARFLEET.

Lastly, STARSHIP.DAT is the data file containing the information on the 32 starship vessels. Routines in FLEET.OV2 will read this file to assign you to a new ship.

STARFLEET COMMAND CONSOLE

STARFLEET turns your H19/H89/Z100 screen into a Starship Command console. You will see several graphic displays in the upper part of your screen. The lower part is for displaying messages and entering your commands. Each of the graphic displays will be described below:

The Galaxy

The Galaxy is made up of 100 quadrants numbered from 00-99. The center display is your Galactic Map. The map is formed by rows and columns of paired digits. Each of the rows (horizontal) and columns (vertical) are numbered. The quadrant number is determined by the row-column number pair.

```
                         GALACTIC MAP
          0     1     2     3     4     5     6     7     8     9
       ----------------------------------------------------------
    0  !  --    --    --    00    00    10    01    --    --    --  !  0
    1  !  --    00    10    12    D0    A1    00    --    --    --  !  1
    2  !  --    00    B0    00    23    F2    00    --    --    --  !  2
    3  !  --    01    00    00    10    20    00    01    00    00  !  3
    4  !  --    --    --    --    01    00    20    02    B3    00  !  4
    5  !  --    --    --    --    00    EE    00    20    03    01  !  5
    6  !  --    --    00    22    03    00    00    --    P1    --  !  6
    7  !  NZ    NZ    NZ    B0    00    --    --    P2    NZ    NZ  !  7
    8  !  KK    KK    NZ    NZ    10    --    --    P0    NZ    RR  !  8
    9  !  KK    KK    KK    NZ    --    --    --    --    NZ    RR  !  9
       ----------------------------------------------------------
          0     1     2     3     4     5     6     7     8     9
```

The above figure is a typical display for a Galactic Map. The paired digits under the row/column numbers shows the contents of the objects in that quadrant. The right hand digit (units) of each pair indicates the number of Klingons in the quadrant. The left hand digit (tens) shows either the number of planets or special objects in the quadrant. Refer to this figure for the following description of its symbols.

SYMBOL	DESCRIPTION

-- Unknown quadrant. This region of space will remain unknown until your ship places it within the range of your long range sensors.

KK The Klingon Empire. These quadrants will be displayed in inverse video. A "K" in the lower left corner labels this section as Klingon. Long range sensors will not work in these quadrants.

RR The Romulan Empire. (See above description).

NZ Neutral Zone. Your long range sensors will not work in these quadrants.

02 The right-hand digit shows the number of Klingon ships in the quadrant. In this example there are 2 Klingons in the quadrant.

10 The left-hand digit shows the number of planets in the quadrant. In this example there is 1 planet in the quadrant.

F2 The "F" shows the location of your HOME PLANET.

A1 The "A" shows the location of the ANTARES star system.

D0 The "D" shows the location of the DENEB star system.

B0 The "B" shows the location of a Starbase.

P2 The "P" shows the location of an Outpost.

EE This quadrant is the location of your ship. It will be displayed in inverse video. The normal information for this region will be displayed showing you the contents of the quadrant. If your ship is within either neutral zones or foreign Empires, you will not see your ship's quadrant on the map.

To determine the quadrant number for any location on the map refer to it by the row-column number pair. The row numbers are displayed along the left-right edges of the map while the column numbers are along the top-bottom edges. For example the HOME PLANET is in quadrant 25 and is displayed by the symbol F2. There are currently 2 klingons attacking the HOME PLANET.

Long Range Scan

The upper right corner of the display shows your long range scan. This section will show you all the quadrants adjacent to your position. The paired digits indicate the contents of each quadrant. The left hand digit of each pair is the number of planets while the right hand digit is the number of Klingons in the quadrant. You will have to look at the Galactic Map to see if there is a special object in any of the quadrants.

If you are in a neutral zone or an enemy Empire, the information in the adjacent quadrants will be blanked out by the unknown "--" symbol. The enemy Empire is jamming your long range sensors when you are in these quadrants. You will also see the unknown symbol if you are near the edges of the Galaxy. All regions outside of the Galactic boundaries are unknown. Do not travel into these sections or you will be lost in space. You will always be able to see the contents of your current quadrant location. Below is a sample of the long range scan as based on the previous Galactic Map.

```
        LONG  SCAN
     -------------
     ! 01 11 20 !
     ! 00 EE 00 !
     ! 03 00 00 !
     -------------
```

The EE quadrant will be displayed in inverse video and show you the current contents of your location.

Short Range Scan

The short range scan is displayed in the left upper corner of the screen. Each quadrant is sub-divided into 64 smaller regions called sectors. The sectors are numbered in a similar manner like the quadrants. The sectors are numbered in the range of 00-77. The short range scan is a detailed view of the arrangement of objects within your quadrant location. Below is a sample figure for a short range scan. Assume that in your quadrant there are 4 Stars, 2 Klingons, 1 Romulan, 1 planet, 1 Starbase, and a blackhole.

```
                SHORT RANGE SCAN

         0  1  2  3  4  5  6  7
       ------------------------
     0 !  .  K  .  .  .  .  . ! 0
     1 !  .  .  .  .  .  *  . ! 1
     2 !  .  P  .  .  K  .  o ! 2
     3 !  .  *  .  .  .  .  . ! 3
     4 !  .  .  *  .  #  .  . ! 4
     5 !  .  .  .  .  .  B  . ! 5
     6 !  .  R  .  .  .  .  . ! 6
     7 !  .  .  .  .  *  .  . ! 7
       ------------------------
```

Below is a description of each of the graphic symbols on the short range scan:

SYMBOL	DESCRIPTION
. (dot)	An empty sector.
K	A Klingon ship.
R	A Romulan ship.
*	A star.
#	Your ship's sector position.
B	A starbase.
o	A blackhole. This will be symbolized by an inverse video square with a blackhole in the center. (magenta circle for Z100 color)
P	A planet. This will be symbolized by a large white dot. (red dot for Z100 color)

Just like the quadrants the sectors are referred to by their row and column numbers. For example the starbase is in sector 56.

Information Displays

Below the Short Range Scan you will see a display giving your present quadrant and sector number locations, the number of enemy Klingons in the galaxy and your current heading. Below the Long Range Scan is displayed the amount of energy in your shields, engines and phaser banks. You will also see the number of photon torpedos (if any), your warp or impulse speed, and the status of

your deep space probe. To the left of this information, you may see a large white dot (green, yellow, or red for Z100 color) from time to time. This is your status light for that system. When this light is on (white or red), that system is out of action. You will have to repair the system before you can use it. A yellow dot is a low energy warning and green is an active system.

At the very bottom of the screen you will see the commands on the 25th line. You need only type the number of the command and hit RETURN to invoke the command sequence. These commands will be described in the next section.

THE COMMANDS

In the bottom third of your screen is the command display area. When you see the word "Ready..." you may enter your command for the next turn. This game is running in real time. You have only a short time to enter your command or the game will move all the ships including yours and perform any combat where necessary. You must be aware of your present course and speed at all times. After every command, all motion and combat will take place. To invoke a command, simply type its number and hit RETURN.

1.) HELM

Command #1 will let you enter a new speed and direction to change your course. Your ship is equipped with 2 engine systems. Warp drive is mainly used to travel long distances across quadrants. Impulse drive is used mostly within a quadrant to travel across sectors. Each system, however, can be used in either case. This will be necessary whenever one of your engines systems is out of action due to damages. Each drive system will be individually described.

Warp Drive

Warp drive ranges from factor 0-8. The galaxy is made up of quadrants and sectors. Each warp factor will move you in a straight line through the number of sectors equal to the square of the warp factor. At warp speeds time will also dialate by slowing down. The table below gives the number of sectors moved for each warp factor. Also shown is the amount of energy taken from your engine banks and the time of travel in Stardates.

Recall that there are 8 sectors/side in a quadrant and there are 10 quadrants/side in the Galaxy. The Galaxy then contains 80x80 sectors. At warp speeds you will move a exact number of sectors crossing quadrants where necessary. You should keep this Galactic size in mind when you select a warp factor. You do not want to warp beyond the Galactic boundaries.

WARP TABLE

Warp Factor	Sectors moved	Energy lost	Time
0	0	0	1.0
1	1	5	1.0
2	4	20	0.5
3	9	45	0.3
4	16	80	0.2
5	25	125	0.2
6	36	180	0.2
7	49	245	0.1
8	64	320	0.1

This information has been summarized in the table for your convienence. It can be calculated using the following equations:

$$Sectors = Warp\ factor * Warp\ factor$$
$$Energy = 5 * Sectors$$
$$Time = 1\ /\ Warp\ factor$$

Impulse Drive

Impulse drive ranges from factor 0-8. Each impulse factor will move you that same number of sectors each turn. Impulse factors are sub-light so the amount of time will always be the same. The following table summarizes the energy lost, distance traveled in sectors and time of travel in Stardates:

IMPULSE TABLE

Impulse factor	Sectors	Energy lost	Time
0	0	0	1.0
1	1	2	1.0
2	2	4	1.0
3	3	6	1.0
4	4	8	1.0
5	5	10	1.0
6	6	12	1.0
7	7	14	1.0
8	8	16	1.0

The energy expended is given by:

$$Energy = 2 * Impulse\ factor$$

With this information in mind you must choose which engine system and factor you wish to use. After selecting command #1, you will be asked to enter your "Engine & power factor....". To do this type either a "W" or an "I" followed by the desired factor number. For example:

You Type	Description
I 4	Impulse engines at factor 4
W2	Warp engines at factor 2

Once you have entered your selected engine and factor you now must choose a direction of travel. Your H19/H89/Z100 keypad will be used to select a direction. The keypad numbers 1-9 are oriented in such a manner as to be equivalent to the direction of travel. For example assume you wish to move upward on the screen. Any of the keys 7-9 on the top row of the keypad will cause your ship to move upward on the display. Simply hit the key for the desired direction. You do not have to hit RETURN. The table below summarizes the possible directions of the keypad. Key 5 is special since it will stop your motion in case you have accidently selected an undesired engine and/or speed factor.

```
                    Direction Keypad
-----------------------------------------------------------
!      7       !      8      !       9         !
!   Up-left    !     Up      !    Up-right     !
-----------------------------------------------------------
!      4       !      5      !       6         !
!    Left      !    Stop     !     Right       !
!---------------------------------------------------------!
!      1       !      2      !       3         !
!  Down-left   !    Down     !   Down-right    !
-----------------------------------------------------------
```

2.) HEADING

Command #2 will let you change your direction of travel while keeping the engine drive and factor unchanged. After selecting this command you will be asked for a new "Direction....". Use the keypad as described above to choose your new direction.

3.) WEAPONS

Command #3 is for choosing a weapon system during combat. Depending on the size and type of your assigned ship, you may have 3 kinds of weapon systems. After selecting command #3 you will be given the following display:

        P)hasers, T)orpedos, D)eep space probe....

Choose which system you want by typing only the first letter (ie. "P", "T", or "D") and hit RETURN. If you selected "P", you will be asked how much energy you wish to fire. You may fire only as much energy as you have in your Phasers Banks. Just enter the amount to fire and hit RETURN. If you chose "T" you will be asked for a direction of fire. Use your keypad as described below. For the "D" selection you will be asked for the target quadrant number.

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Phasers

Phasers are a source of plasma energy that will radiate outward from your ship in all directions in space. It will pass around stars, planets, blackholes and starbases. When this plasma encounters and enemy vessel, it will cause damages to its shields. If the enemy's shields drop to zero, the ship will be destroyed. The amount of phaser energy absorbed by the enemy ship will depend on how far away it is from your sector. Phaser energy will drop off by the inverse square law. Below is a table showing you the multiplying factor which you may use to determine how much of the phaser energy will reach the target:

Distance in Sectors	Energy factor
1	1.0
2	0.25
3	0.11
4	0.0625
5	0.04
6	0.0277
7	0.0204

To use this table assume you decide to fire 500 units of phaser energy. From the short range scan screen determine the range in sectors to each target and multiply the proper energy factor by the total amount of phaser energy fired. In our example, any enemy ship which is 2 sectors away will be hit by 125 units of energy (ie. 0.25 * 500 = 125).

Photon Torpedos

If you are in command of a destroyer or a heavy crusier, you will have photon torpedos on board. Photon torpedos are fired one at a time in a straight line direction. Look at the short range scan screen and select an enemy ship which is in a direct line of sectors from your position. You will only be able to fire a photon torpedo along a vertical, horizontal or diagonal line of sectors. Once you have decided which ship to fire at, you simply use the keypad to pick the proper direction of fire. The keypad directions are identical to those for normal heading selection. Refer to the HELM section for a full description.

Deep Space Probe

You only have 1 deep space probe to use in the entire game. The probe may be launced to any desired quadrant. After its travel time it will reach the selected quadrant and explode. The probe is an anti-matter device. It will destroy all objects in that quadrant. The only residue left after the explosion will be a blackhole. You must be careful not to be in that quadrant when the probe reaches it or you will be destroyed. To fire the probe, just enter the target quadrant's number when prompted on the screen. After entering the target quadrant number, the screen will display the time to detonation.

4.) ENGINEERING

From time to time you will find it necessary to move energy between your 3 storage banks. You may put energy in your shields, engines, or phaser banks. The purpose of your shields is to absorb the hits from the enemy's phaser fire. If your shields drop to zero further enemy fire will reduce your engine banks. Should your engine banks drop to zero you will not be able to move your ship. Additional hits will now reduce your phaser banks. Once all your energy levels are gone, you will be destroyed.

Command #4 will let you move energy between any two systems. After selecting #4 you will see the following display:

> Engineering...E)ngines, P)hasers, S)hields...
> Remove energy from system....
> Store energy in system.......
> Amount of energy transfer....

In the first 2 prompts you must select the system by typing either "E", "P", or "S" and RETURN. After choosing the 2 systems involved in the transfer, enter the amount of energy to move. You may only move as much energy as is contained in the system from which the energy will be taken.

5.) COMMUNICATIONS

Command #5 is used to communicate with the repair section, the Romulans, and the score keeper. After selecting #5 you will see the following menu on your screen:

> R)epair, N)egotiate, S)core.....

Select the desired function by entering only the first letter followed by RETURN.

Repair

During combat if your shields are down, you may sustain damages to your weapons or engine drive systems. These damages may be repaired by your repair section. By selecting the "R" sub-command you will see a damage report on your screen. This report shows you the number of damage units for your Phasers, Torpedos, Warp and Impulse drives. If the system has zero damage units, then it is active. If the system has a value greater than zero, then it is inactive and will require that many units of energy to repair.

Your repair crew is always trying to repair the damaged systems. Each game turn they will repair each damaged system by 50 units. If you wait long enough, the system will eventually be repaired and you will be informed that it is once again active. Letting the repair crew fix your system in this manner will not reduce your energy banks.

If you decide that you must repair the system quickly without returning to a Starbase (see Docking), you can inform your repair crew to make a special effort on a particular system. However, the number of repair units will be deducted from your energy banks. To repair a system, just select its number. The system will be immediately repaired and the number of damage units will be taken from your energy banks. If you do not wish to repair any system, then just type the RETURN key.

Negotiate

During the game you may find it necessary to enter the Romulan Empire to find and kill a Klingon. You may not enter the Romulan Empire without first negotiating permission from the Praetor of Romulan. If you enter Romulan without permission, you will violate the treaty between the Empire and the Federation. Romulan will then declare war on the Federation and you may be demoted in rank.

To negotiate free entry into Romulan, type "N". You will receive a message on your screen (and hear one via the T-N-T option). The Romulan Praetor will grant you a number of stardates for free entry into his zone. You must leave the Romulan Empire before that time has expired. Failure to do so, and you will invoke a war.

Once inside the Romulan Empire, you may encounter some Romulan ships. If you attack and destroy any of the Romulans, you will start a war. Be careful! Kill only the Klingons and exit the Empire before your time has expired.

Score

Selecting the "S" sub-command will display your current score. This is the same display which is automatically shown to you when your ship is docked at a Starbase. The display also shows you the last stardate and time remaining. If you fail to kill all the Klingons before the last stardate, you will lose the game.

6.) TRANSPORTER

Command #6 has only one purpose. It will let you save a game on your disk so you may end a playing session. Later you will be able to read the saved game from the disk and pick up where you left off. This command will only work when you are docked at a starbase. After selecting this command, you will be asked if you wish to take a shore leave. If you want to save the current game on a disk, then type a "Y" to the question. Any other response will return you to the game without saving it. If you typed a "Y", you will be asked to enter your name. The game will be saved in a file by the name you enter to this question. Normally you will just enter your own name. Enter only 8 letters. The name you type must adhere to the standard filename conventions for CP/M (ZDOS). The file will be saved on the default disk drive. If you

want to save the game on a different disk drive, then enter a
legal CP/M (ZDOS) drive and filename. For example, to save the
game under the name JOHN you may enter either of the following:

                What is your name Captain? JOHN
        or
                What is your name Captain? B:JOHN

In the first form, the game file will be saved on the default
disk as JOHN. The second form will save it on Drive B:. Any other
file with the same name will be overwritten so be sure you have
used a unique name. Only the first 8 letters will be used in the
filename (6 if you specified a drive name).

After saving the game, STARFLEET will ask you if you want to play
again. If you enter a "Y", you will be returned to the normal
entry point for a new or old game. If you enter an "N" then the
game will return you to the system prompt.

Whenever STARFLEET is at its normal entry point, the following
message will be displayed:

                N)ew game or O)ld game......

Enter the first letter only. To play an old game which you have
previously saved via command #6, enter an "O". You will then be
asked once again for your name. Use the same name that you used
when you saved the game. STARFLEET will then load the old game
and return you to the point at which you were last playing the
game. If STARFLEET cannot find your old game on the disk, it will
start a new game.

SPECIAL FEATURES

Docking

STARFLEET is played in stages. You will need to return to your
Starbases to recharge your energy banks and make repairs. Docking
at a Starbase is a simple matter of moving your ship so that at
the end of its move it will be at a docking port. The docking
ports are the "empty" sectors on the left, right and above the
Starbase. You must maneuver your ship so it will end its turn of
motion in one of these 3 sectors.

Whenever your ship docks at a docking port, your engines will be
automatically shut down. All enemy vessels in the quadrant will
flee since you are protected by the Starbase's shields. Your
energy banks will be recharged and all systems repaired. If you
have attained a high enough score, you might even be promoted to
the next rank and assigned to a new starship.

Rank and Starship classification

There are 6 levels of rank and 4 ship classifications in the
game. The ranks are Lieutenant, Lieutenant Commander, Commander,
Captain, Commodore, and Admiral. The ship classifications are

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Transport/Tug, Scout, Destroyer, and Heavy Cruiser.

You will begin a new game as a Lieutenant (at level 4) in command of a Transport/Tug vessel. Lieutenant Commanders are assigned to Scout ships. Commanders are always assigned to Destroyers. Only Captain, Commodore and Admiral ranks can command a Heavy Crusier.

Transport/Tug and Scout ships have no photon torpedos. Destroyers have more photon torpedos than Heavy Crusiers but less phaser energy. The larger the ship the more firepower it possesses.

Life Support

Each game turn your energy banks will be reduced by your life support systems. For each full stardate, 100 energy units will be taken from your energy banks. Using Warp speeds can reduce the amount of energy lost to life support by causing time to dialate. To determine how much energy is lost for life support use the time factor from the warp table and multiply it by 100 units. For example at Warp 2 the time factor is 0.5 so life support costs only 50 units of energy (ie. 0.5 * 100 = 50).

Taking life support into account, the most efficient travel speed is Warp 3. At this speed your ship will travel the most distance at less total energy in the minimum time. If you use higher speeds to reduce the time loss, you will expend more energy. Travel too slow and life support will cost you more.

How to win

The object in STARFLEET is to destroy all of the Klingon vessels outside of the Klingon Empire within the time limit. Fail to kill all the Klingon ships in time and you will lose the game. Also, if your ship is destroyed by the enemy, runs out of energy, collides with a star or planet, or is lost beyond the galactic boundaries, you lose.

To win you must kill all the Klingons outside of the Klingon Empire. This includes all the unknown, neutral, Federation, and Romulan zones. You can also win by entering the Klingon Empire and destroying the Klingon Planet, if you can find it. You must discover for yourself how to destroy Klingon. It won't be easy.

If 6 Klingon ships enter your Home Planet's quadrant, they will destroy the Star Fleet Headquarters of the United Federation of Planets. You will have failed in your mission and lose the game.

Points

STARFLEET uses a point system for promotion of rank and ship assignment. Klingons in a quadrant may destroy Antares, Deneb, Starbases, or Outposts. You will lose points if these objects are destroyed. You will gain points for destroying Klingons. You can gain extra points by re-capturing your colony planets. If you eliminate all Klingon ships in a Federation quadrant with a

planet, you will get an extra 25 points per planet added to your score. Destroy Romulans or start a war with Romulan and you will lose points. Below is a table describing the point system. The table also indicates how many Klingons are needed to destroy your special objects.

Object	Points		Enemy ships required
Starbase	~150		6
Antares	~250		6
Deneb	~250		6
Outpost	~50		4 or more
Romulan war	~500		
Romulan ship	~50		
Klingon ship	+25		
Colony planet	+25	(for re-capture)	
Colony planet	~100	(for destroying)	
Klingon planet	+100	(for destroying)	

Color Screen Option (H8/H89 only)

STARFLEET has built in routines for displaying color graphics for the HA-8-3, HA-89-3 and THE ENTERTAINER graphics boards for the H8/H89. The color display will be seen on those systems which have one of these boards and an external color monitor or TV. The Z100 users will not see the additional color graphics screen described in this section.

If you have one of the above color graphics boards, you will be presented with a special color display on your color monitor. The top portiion of your screen will show you a view through the front window of your star ship. You will be able to watch the enemy ships move about against the star field, fire their phasers, and be blown into space dust by your weapons. When your shields are hit the whole sky will flash in fiery red. When docked at a Starbase, you will see the base in front of your ship. Planets will appear as red cirles, blackholes as violet donuts, and Starbases as blue objects with docking ports. Romulans will be displayed by inverted "V" shaped objects in gray and Klingons will appear as gray arrow like objects.

On the bottom of your color monitor you will see information about the amount of energy in your systems, your current position, and the number of Klingons remaining. There are several status indicator lamps along side the energy banks (SHD, ENG), warp (WF), impulse (IMP), Torpedo (PT), and Phaser (PHR) displays. When these lamps are green the system is active. Yellow indicates a low energy level and is a warning. Red is for a disabled system or a zero energy level. DSP is your Deep Space Probe status. The stardate is also shown on this screen.

A duplicate of the short range scan is also displayed on your color screen. In the light green area, you will see white stars, blank sector dots, blue Starbases, red planets, black arrow like Klingons, black inverted "V" Romulans, and violet blackholes. A

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special white object is your ship indicator. Your ship looks like 2 horizontal lines connected by a vertical line. Compare your color screen with the black and white short range scan on your H19/H89. You will be able to indentify all the objects on your color screen.

There are other special color effects that will occur on your color screen as you play STARFLEET. These will give you the feeling that you are actually commanding a star ship.

CONCLUSION

These instructions have given you all the necessary information for playing STARFLEET. There some features in the game that you are left to discover for yourself.

STARFLEET has been based on the official Startrek Handbook. All of the ship names and numbers were taken directly from this book. The map of the Galaxy, the locations of the three Empires and two neutral zones are also from the Handbook. So are the ship types and weapon systems.

The ZDOS version of this program is running under ZP/SIM. This is a CP/M emulator program from The Software Toolworks. This program provides the ZDOS user with an invisible environment into CP/M.

Special thanks go to Richard Morgan, Doug Lynn, and Raul Rodriguez for game testing and evaluation of this program.

STARFLEET has taken a great deal of time and effort to develop. Please do not make copies for any other purpose than use on your own computer system.

STARFLEET will give you many hours of intelligent game competition. I hope you will enjoy it. Good luck, commander!

CREDITS

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