FOFT

FEDERATION OF FREE TRADERS

MIRROR IMAGE

U.K. MANUAL

FEDERATION OF FREE TRADERS

FLIGHT MANUAL

TERRAN TRADE AUTHORITY AUTHORISED
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MIRRORIMAGE MANUAL BY DEFINITION

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1. INTRODUCTION

FEDERATION STRUCTURE

The Federation is a collection of individuals tied together by use of the Galnet. All the pilots receive their orders over the net and report on completion the same way, they are even paid over the net. The Federation has no uniform, but anyone over the rank of cadet can wear the Federation crest. Cadets wear an ID card so that any qualified pilots they meet will keep an eye on them. Although the individual pilots have a great degree of freedom, there is a rigidly enforced rank structure which affects the missions a pilot is given. The highly paid jobs go to the high ranks, and the cadets get what is left. The rank structure is shown below:-

Cadet
Initiate
Rookie
Pilot
Chief
Commander
Wing Commander
Admiral

There will only be one Admiral at any one time and he is the ultimate head of the Federation. At the present time Laserbaiter is the Admiral and the last three Wing Commanders who challenged for his position have vanished mysteriously.

PROGRESSING IN THE FEDERATION

Promotion is handled automatically. Head office monitors your progress via the net and will review your performance at the completion of each mission. If they consider you have earned a promotion, you will be notified over the net when you receive your next mission. The new mission will be one commensurate to your new rank.

2. GUIDE TO CADETS

A STEP-BY-STEP GUIDE: TO ACQUIRING YOUR FIRST MISSION

Stay in the space station for protection and access Galnet. To do this press F8 to activate EDI, the ship's computer. At the 'READY' prompt type NET and press RETURN. You should now see the welcome page of Galnet. Type **HELP** and press **RETURN.** You will now be asked to enter your name. Feel free to use a trading handle. You are next asked whether you wish to play a new game. Press Y for yes and N for no. If you have just loaded the game, your answer does not matter. If you are mid-game when you encounter this question, a 'YES' reply will result in your game being terminated in favour of a new one. When you have made your reply you will be given an ID number and allowed onto the net. The available commands are listed across the screen. Press H at any time for an explanation of the commands. They are also explained on page 9 of your manual. The option to download programmes from the net only works if you know the name of the file you wish to download. This information is only to he found by playing the game. To be allocated a mission, press T. The message 'ENTER USER TO TRANSMIT TO' will appear. Type FOFT and press **RETURN.** Federation HQ will now give you details of your mission. Note down all the details and keep the paper near you. The numbers will be useful when you access the navigation computer to plot your course. Now press Q to leave Galnet and type QUIT followed by **RETURN** to leave EDI and RETURN to your ship.

HOW TO SET A COURSE

Press F6 to activate the navigation computer. You will now see a view of the spiral Galaxy. If you have a mission to perform, a route will have been highlighted for you by your ship's systems. Press D. You now see a schematic of the system you are to visit. Useful information is presented on the left of this display. Make use of this if you intend to trade with the locals on your arrival. Pressing the **SPACE BAR** returns you to the view of the galaxy. Try moving the joystick. You will see that the view of the galaxy is three dimensional and you can adjust your position. Pressing the HELP key zooms in on the galaxy and pressing **UNDO** zooms out. To lock onto a course, press 5 on the numeric keypad. This will sometimes not be possible. If you cannot lock a course, look at the distance between you and your target. Either you don't have enough fuel or your engines are not capable of such a big jump. You can trade on the net to earn money for fuel or to buy a bigger engine. If you don't have enough money, cut your journey into several smaller stages. Use keys 2, 4, 6 and 8 on the keypad to move

the white cross hair on the galaxy display to another star. When you can lock onto a course press SPACE to look out of your cockpit, open the hangar doors by pressing **BACKSPACE** if you are docked and finally press H to enter Hyperspace .

LANDING ON PLANETS

Try this when you first begin a game. Press BACKSPACE to leave the satellite. Use the **ALTERNATE** key to reduce your speed (shown on the right of your head-up-display) from 020 to 000. You are now stationary! (a miuus number means you are in reverse). At the bottom left of the screen is your attitude adviser. The arrow heads show where the nearest docking station or planet is. There should only be one arrowhead, which is pointing down. Push the **joystick FORWARD** to tilt the nose of your craft down. In a short while you will be facing the planet. When the attitude adviser becomes a diamond you are on course. Increase your speed to 020 by pressing CONTROL and press the # key. Whilst this key is held, the hyperspace engines are engaged in pulse mode. Keep watching the attitude adviser in case you drift off course. Your screen will turn Red with the heat as you enter the atmosphere. Use the attitude adviser to line up with the runway and, when you are over it, point the nose down into a shallow dive. If everything is safe, the on board systems will take over and will land for you. To leave the planet simply pull the nose up and wait. Engaging the hyperspace engines in pulse mode (holding down the # key) acts as a time warp and speeds up your movements within a solar system. This option is not available while enemy spacecraft are in range. It is possible to engage full hyperspace within a solar system. Extreme care must he exercised to avoid crashing into a planet. Please note the use of hyperdrive is not economical on fuel.

RADAR (SUPPLEMENT TO APPENDIX 7)

The coloured stalks which are shown by the radar indicate what is at that location. The following key should help you identify friend from foe.

Radar Key
COLOUR MEANING

White	-	Satellite, space station or convoy memher.	**Red**	-	Hostile
Green	-	Friendly	**Blue**	-	Unknown

LOADING AND SAVING GAMES

You can only save a game to the programme disk. You cannot save a game whilst EDI the ship's computer, the navigation computer or Galnet are selected To save a game press S, to load back a saved game press L.

3. ATARI ST QUICK START

ST KEYBOARD CONTROLS

f1	Communications Mode
f2	Arm Primary Weapons System
f3	Arm Secondary Weapons System
f4	Arm Tertiary Weapons System
f5	Audible Threat Warning On/Off
f6	Navigation Computer
f7	Damage Control
f8	Ships Computer
f9	Radar Zoom
f10	Radar Zoom

BACKSPACE	Launch
HELP	Music Select
P	Pause
CONTROL	Accelerate
D	Dock
H	Hyperspace
K	Music Off Sound Effects On
#	Timeskip
M	Play Current Tune
ALT	Decelerate

LOADING

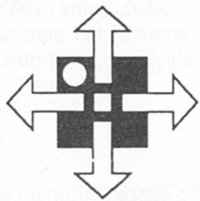
Important: You must turn off the power before loading this software.

To Load, insert PROGRAM DISK into drive and turn on your computer. Program will load and run automatically.

NAVIGATION

Joystick

Spin Galaxy
Help
Undo
Zoom in Galaxy



Keypad

8
4 **6**
2

5	Lock Course	**D**	Decode Planet Stats
S	Short Range Scan	**Space**	Exit

DAMAGE CONTROL

RETURN	Activate Selector
+	Add free droid to highlighted system
-	Take droid from highlighted system
↕	Move Highlight
SPACE	Exit

SHIPS COMPUTER

Type HELP for list of commands.

4. RECRUITMENT

To be recruited to the Federation of Free Traders, all you require is a ship fitted with a laser and a stardrive. Once recruited you need lightning reflexes, an ice cool mind and an ability to trade in some of the most dangerous markets in the known universe, if you are to survive. Young recruits are given low risk tasks such as delivering packages to distant planets, or escorting freighters in the more civilised areas of the universe, but, since the jobs are low risk, they are also badly paid jobs. To progress in the Federation the young pilot must use this time to trade in the goods on the planets that he visits and build up his capital for the difficult times ahead. As the new cadet progresses, it is vital that he spends some of his hard earned capital on enhancements to his ship. It is no good being rich when you still have shields that crumble at the first laser hit.

INITIAL EQUIPMENT

When you were five, a tragic computer failure caused the destruction of a space station on which your father worked. Although your memories of your father are very distant, you still have a few of his things to remember him by. One of the items you have treasured is his old Hartley MkII, one of the oldest starships still in service and as soon as you were old enough, you learnt to fly and took the old beast for joy rides around the solar system of your home world. Now the time for joy rides is over. This morning you received your papers and you are now a member of the Federation. Taking the earliest shuttle, you soon arrive at your ships berth in space station N3 and take stock of your belongings.

Although old, the MkII is equipped with type 3 ion drives that will make .5C in real space, and produce enough energy for a 50 light year jump in hyperspace. She also carries 2 type I lasers firing forward and four hard points, for the mounting of additional weapons. Cursing your lack of funds to buy these 'additional weapons' you turn to the ships defences. The type 1 shield generators will melt even under moderate fire and since the hull is not armoured that will mean a fast evacuation or an even faster death in the vacuum of space. Vowing to upgrade your shield as soon as possible, you board your ship to inspect the bridge. The familiar cockpit layout cheers you a little as you seat yourself in the pilot's chair. With expert ease you run your fingers over the controls and the panel springs to life. The 472 series Fedcomp springs to life on your left. Although as old as the rest of the ship, the 472 series are excellent computers and EDI will serve you well, handling all the communications

necessary for space flight and providing entertainment for your quieter moments. To the far left is fitted the passive warning radar, a warning device that will tell you that someone is trying to get a radar fix on you prior to launching a missile. To your right the navigation computer and the damage control system. Quickly you check over the systems and find that your three repair droids have been busy and the ship is in top condition. The pre-flight checks complete, you turn to the glowing screen of your radar. Although useless while inside the space station, this is your primary flight system, if damaged the ship is virtually blind, but the radar checks out O.K. and you are ready for launch

OUTFITTING YOUR SPACECRAFT

Turning to EDI, you decide to check for any messages on the Galnet. The Galnet is the nervous system of the universe, it provides instant communication with any point in the known universe through a network of specially trained telepaths. It is through the net that you will receive all your missions from Federation Headquarters, and also do all your trading. All commerce is regulated by the Office of Interstellar Trading and has to pass through their warehouses where hundreds of robots scuttle about loading and unloading craft of all shapes and sizes. The OIT charges a flat 1% handling charge on all transactions, but this is a small price to pay for the convenience of automated goods handling.

EDI has one message for you, so hit the display key. To your surprise it is not another unpaid bill or tax demand, it is a personal message. Eagerly you scan the screen.

"You don't know me, but I was a friend of your fathers, and ever since the accident I have kept my eye on you. Now I hear you have become a Free Trader. Your Dad's old ship will serve you well if you look after it and treat it right, but a ships only as good as the Pilot so keep your shields up and your lasers hot, boy.

"As I remember it, that old rust bucket could do with a bit of work, and no doubt you blew the last of your creds in the bar last night, so I've taken the liberty of dropping a little something in your bank account to help you along. Make good use of it.

L.B."

As you watch, the message fades from the screen and despite all your efforts, the file is lost. Wondering who

the mysterious L.B. is, you use the net to check on your bank balance and wonder turns to amazement when the screen shows 150 credits at your disposal. Whoever L.B. is he isn't short of money. Filled with excitment, you key up the space chandlers section of the net and check whats in stock. The full range of missiles, lasers, fusion guns, space drives and shields spring up on the screen but most are well out of your price range, Selecting a pair of class 1 missiles from the display takes care of 80 of your new found credits but greatly increases the strike capability of your ship. After spending 10 more credits on the hydrogen fuel for your ion drive, return to EDI's communications circuits.

YOUR FIRST MISSION

Keying in 'FOFT' at the transmit message prompt you wait patiently as the Federation central computer searches its records and reviews your past record. Then you find yourself staring at the screen in bewilderment. It's arrived. The orders for your first mission are on the screen.

RENDEZVOUS WITH CONVOY AT SYSTEM
273.12 DEFTEST
AND ESCORT TO SYSTEM
273.22 GREFTER

An escort job! Your first mission is to escort a convoy between two solar systems. The hardened space veterans would call it a milk run but to you its your first real challenge. Looking back to the message you carefully copy the co-ordinates onto your flight log and move to the navigation computer to decode them. The first three digits (273) designate the galaxy. As is usual with all cadets you are operating in your own galaxy for the time being. The next two digits designate the solar system within the galaxy, a quick dash to the nav comp soon finds 273.12, 25 light years away, one jump. Tapping the decode button on the panel forces the nav comp to search its records and soon all the information available is displayed on the screen. Since the system is only one jump away, a moment later the course is locked and you prepare to launch on your first mission for the Federation.

5. STARSHIP CONTROLS

FLIGHT CONTROLS

Pre-flight checks completed, you issue the order to launch and sit back while the huge space doors slide apart revealing the inky blackness of deep space. A short blast on the main motors is enough to jet your ship out of the space station and into orbit. You pull right on the joystick and eagerly the ship complies by rolling about its axis. When the planet is directly beneath you, you ease off the stick to stop the rotation and then pull back to rotate up into the desired flight plane. With the planet directly behind you, you open up the throttle and the planet slips away. 20 secs out you rendezvous with the convoy you are to escort. Three class 1 light transports and an eagle. Enabling communications mode you swing the ship round the waterline on your cockpit crosses the lead craft. The I.F.F. system built into the ships computer immediately prints the Galnet ID of the ship on the screen. Quickly you take a note of the number and enter the Galnet. Checking the messages pending reveals a greeting from the convoy leader, so you transmit a greeting back and give him the destination for the convoy before returning to flight mode. Taking your place slightly above and behind the convoy, you head for deep space.

WEAPONS SYSTEMS

A quick check on radar shows the area is clear of all other traffic, but you can never be too careful so you decide to check out your weapons systems. Arming your primary weapons system, always lasers, shows that the storage capacitors are at 100%. Every time you fire lasers energy is drawn from the capacitors; when you are empty your lasers are useless. Thankfully some of the energy from your ion drives is continually being diverted into the capacitors so a short wait will return the lasers to full power.

Satisfied with the condition of your lasers, you turn to your secondary weaponry, the two missiles you purchased earlier. The familiar circle appears in the centre of the screen and a message confirming that both your missiles are aboard. Once armed any craft in range that passes through the circle on your screen is locked into the missile targeting system. A box will appear on the screen showing his position. Get him in the centre of the screen and a 'shoot' prompt will appear. From then on a single press of the trigger will unleash one of your missiles on a deadly mission of destruction. To complete this mission, though, the missile will have to

fight its way through the maze of electronic defences automatically deployed by the target spacecraft. Misses are common with the cheaper missiles.

Suddenly the raucous sound of the defence siren cuts through the silence of space. A glance at the passive warning radar indicates a single unidentified target painting your craft with targetting radar, the dot on the screen shows it to be somewhere on your right flank, the only target on your radar in that quadrant is shown to be up in volume, from your position so you haul back on the stick and roll her round till you're head on to him. At this range its hard to tell what sort of craft you're up against and a missile lock is impossible so you stamp on the throttle and watch your speed build up. Any lingering doubts as to the intentions of the unknown craft vanish as a bolt of laser fire crashes against your shield. Nervously you eye your shield level indicators as the sky around you is lit up by laser fire; from the damage you're taking he must have type 3 lasers at least. You begin a series of roll manoeuvres in an attempt to dodge some of the incoming fire but your left shield is getting dangerously low. For a moment you toy with the idea of switching back to your own lasers and firing back but the range is closing fast and at last you can ID the target. It's an Asp. The Asp is a small, fast highly manoeuvrable strike craft bound to have good shields. By the time your lasers have smashed their way through his shields, you will be a molten lump of space debris.

Gritting your teeth, you hang on and wait for a missile lock, laser fire is still coming in but your opponent was too cocky, his capacitors are low and his fire rate is dropping fast. At last you slap the sights on him and are greeted with a missile lock. Levelling out, you bring him into a firing position and press the fire button. The ship shakes a little as the missile is blown away from your wing and streaks off into the distance . For a few heart stopping moments, you watch the missile veer off course as the ECM systems on the Asp begin to attack the missiles guidance systems. Suddenly your ship screams out in torment as the left shield gives way. Hauling the stick hard up and left you start a wide, spiralling roll in an attempt to avoid the incoming fire but relentlessly it follows you. Hit after hit is getting through now and desperately you throw your craft around space. Just when you think your time has come, the fire stops. Dragging your battered ship around you arrive in time to see the last of the Asp spinning to destruction. Your missile got him. It's your first kill.

DAMAGE CONTROL

The time has come to see what damage he has done to you, so you key up the damage control computer and look down the list. 20% damage to your hold is not serious on this trip as you are not carrying any cargo but

the 40% damage done to your ion drive is quite serious. You quickly allocate all three of your repair droids onto the task of repairing your drive which gives a repair time of some 13 centihours; not a good situation but it could have been worse.

6. NAVIGATION

TRAVELLING BETWEEN SOLAR SYSTEMS

Leaving the repair droids to continue their jobs, you return to the station by the convoy and prepare for the trip through hyperspace. A final check on your destination and you apply full power to the field generators; within a few seconds your ship accelerates to within a few percent of the speed of light, planets whizz by and even the stars move visibly as you approach the impossibility of faster than light travel. At ninety nine percent of the speed of light a hole opens up in the fabric of space time and like a bullet your ship flies through into the colourful world of hyperspace. The mighty hyperspace generators then bend the fabric of space time so that your destination is only a few million million kilometres away and at your current speed, that is only a few seconds flight. Once their job is completed, the generators shut down and your ship drops back into real space.

INTERGALACTIC FLIGHT

When you have engines powerful enough to make a jump of 100 light years, you have the option to jump to the nearest galaxy. By priming the field generators to full power, the next hyperspace jump you make will take you out of your present galaxy. This uses up 100 tons of fuel, but only a few seconds of real time. Even if you wanted to make the jump to another galaxy, with your engines you haven't a chance.

It takes you a few seconds to reorientate yourself, but a quick glance shows you have arrived at the correct solar system and the convoy is with you. The beacon on your target planet has been picked up by your guidance systems and a symbol has appeared in the bottom left hand corner of your screen indicating its relative position. Following the arrows soon has your destination in the centre of the screen. The condition lights on the top of your panel are shining pure green, indicating that there are no hostile forces in your immediate area, although a quick check on the radar indicates several at long range, so you give a quick pulse of power to the field generators. This has the effect of accelerating your craft to speeds very close to the speed of light for an

instant. The field generators will not work if hostile forces are nearby. If an energy weapon hits the field generator when it is running, the result will be a rift in the fabric of space time large enough to destroy an entire solar system, so all field generators are fitted with a failsafe preventing use when under fire. The manufacturers were also requested to make it impossible to pulse the generator in the vicinity of space stations to prevent collisions.

DOCKING WITH SPACE STATIONS

Using the pulsed field generators in this way you are soon within a short distance of the space station which is your destination. The ship's guidance system picks up the space traffic control computer's signals and so you engage the docking computer and sit back to watch the show. Long ago it was decided that it is far too dangerous to let any pilot attempt to dock with a space station manually so the largest and most powerful computers ever built were pushed into service as docking computers. All ships are aligned on the general area of the space station and allowed to close to within a few thousand yards of the docking arms. Then the ship is positioned by tractor beams and dragged into the docking bays. The computers can handle large numbers of ships at one time.

LANDING ON PLANETS

The alternative to docking with space stations is to land on the planet itself. To do this all that is required is to fly directly at the homing beacon on the target planet. Once through the upper atmosphere you once again follow the ship's guidance system on the screen until you find a place to put the ship down. This is usually a runway but at times may be a silo. If a silo is available tractor beams will grab any passing craft, and pull them in to safety.
In this case a planetfall is not necessary, so you log onto the net and contact HQ for further orders, your first mission is over!

APPENDIX 1

INTRODUCTION TO EDI SERIES 4 COMPUTERS

The EDI series of computers are reliable and cheap computers widely used as general control systems on small spacecraft. In the general case the computers operate at three levels. In the first level we have the SIMPLE COMMAND LINE INTERPRETER, (SCLI). At this level we can run other programs to perform various tasks. The 4 series come supplied with the following packs as standard.

DISK PACK

CAT	List the files on an external disk
ERASE	Remove a file from a disk
SAVE	Save the current buffer to disk
LOAD	Load a buffer from disk

COMMUNICATIONS PACK

NET	Connect the system to the Galnet

GENERAL PACK

SHIPS	Access the library data on various common spacecraft.
EDIT	Invoke the Simple Line Editor
NEW	Clear the current buffer
CLEAR	Clear the workscreen

The second level of operation is in operation whenever one of the packs above is invoked. This leaves the general housekeeping functions of the system running, but ties up the main memory and processor power in running the invoked programme.

The third level of operation is only available to system managers and above.

APPENDIX 2

THE SIMPLE LANGUAGE A SUMMARY

This document is a guide to the SIMPLE programming language as used by the EDI series of computers.

Below is a list of the SIMPLE instructions in the following format. The first line of the description gives the name of the command, below is a brief description of what the command does. This is followed by the syntax of the statement and a brief example of its uses.
The syntax of the statement is shown in the following form:-

STATEMENT {field One Parameters} {field Two Parameters}

Field parameters are;

imm	immediate data
num	immediate numerical data
str	immediate string data
var	variable name
#	access current array element
;num	string number

Valid string numbers are ;0 to ;9 and strings are 16 characters long. Valid variable names are 'a' to 'z' and variables are 16 bit signed integers. The array is of size 20 by 16 elements.

ADD

Purpose	Arithmetic addition of field two to field one.
Syntax	ADD {var} {var, imm, #}
Example	ADD A 1 - add 1 to variable A
	ADD B # - add the contents of the current array element to variable B.

AND

Purpose	Logical AND of field two to field one
Syntax	AND {var} {var, imm}
Example	AND A 255 and variable A by 255

BEEP

Purpose	start one of the system sound effects
Syntax	BEEP {var, imm}
Example	BEEP 1 start sound effect 1
	BEEP A start sound effect number A Valid sound effects are numbers 0 to 14.

CALL

Purpose	start execution of subroutine
Syntax	CALL {label}
Example	CALL L1 start subroutine at label 1

CHAR

Purpose	Print the specified ASCII character at the current cursor position.
Syntax	CHAR {var, imm}
Example	CHAR 65 print 'A' at the current cursor position

CLR

Purpose	Clear the screen and home the cursor
Syntax	CLR
Example	CLR

CRT

Purpose	Print the value of field one at the current cursor position.
Syntax	CRT {var, imm, ;num}
Example	CRT 1 - Print '0001' at the current cursor position.
	CRT A - Print the value of variable A
	CRT ;1 - Print previously defined string

DIV

Purpose	Divide field one by field two
Syntax	DIV {var} {var, imm, # }
Example	DIV A 16 divide A by 16 DIV A B divide A by B DIV A # divide A by the value in the current array element.

DRAW

Purpose	Draw a line from the last point plotted to the field one, field two [x, y]
Syntax	DRAW {var, imm } {var, imm}
Example	DRAW A B draw line to A, B

ENDCALL

Purpose	End the current subroutine and return to main programme.
Syntax	ENDCALL
Example	ENDCALL

ENDIF

Purpose	End all currently active tests
Syntax	ENDIF
Example	ENDIF

ENDPROG

Purpose	End the current simple programme and return control to the SCLI level.
Syntax	ENDPROG
Example	ENDPROG

EQU

Purpose	Execute the following block of code if the result of the last test instruction was equal to zero.
Syntax	EQU
Example	EQU

GT

Purpose Execute the following block of code if the result of the last test instruction was greater than zero.
Syntax GT
Example GT

JUMP

Purpose Transfer programme control to the labelled point in the programme.
Syntax JUMP {label}
Example JUMP L1

KEY

Purpose Scan the keyboard and return the Atari keynumber of the key pressed. Returns zero if no key is pressed.
Syntax KEY {var}
Example KEY A

LET

Purpose Assign value to a variable
Syntax LET {var, #,}{imm, var, #,}
Example LET A 200 assign value 200 to variable A
LET # 200 assign value 200 to current array element

LPRINT

Purpose Output to printer
Syntax LPRINT (;str, var, imm}
Example LPRINT A output the value of A to the printer.
LPRINT ;1 output the previously defined string number 1 to printer.

LT

Purpose Execute the following block of code if the result of the last test instruction was less than zero.
Syntax LT
Example LT

MOVE

Purpose — Move the cursor to the defined screen position.
Syntax — MOVE {imm, var}{var, imm}
Example — MOVE A B move the cursor to position A, B
MOVE 10 10 move the cursor to position 10, 10

MUL

Purpose — Multiply field one by field two and place the result into field one.
Syntax — MUL {var} {var, imm, #}
Example — MUL A 10 Multiply A by 10
MUL A B Multiply A by B

NE

Purpose — Execute the following block of code if the result of the last test instruction was not equal to zero.
Syntax — NE
Example — NE

NEWLIN

Purpose — Move the cursor to the left of the screen and one line further down the screen. Will scroll the screen if necessary.
Syntax — NEWLIN
Example — NEWLIN

PLOT

Purpose — Plot the destined point.
Syntax — PLOT {var, imm} {var, imm,}
Example — PLOT 20 20 plot the point 20,20
PLOT A B plot the point A, B

RND

Purpose — Generate a random number
Syntax — RND {var}
Example — RND A

RASTER

Purpose Waits for the start of a television frame.
Syntax RASTER
Example RASTER

SUB

Purpose Subtract the value of field two from field one.
Syntax SUB {var} {var, imm, #}
Example SUB A I subtract one from A
SUB A B subtract the value of B from the value of A

SETPOS

Purpose Set the current array element position.
Syntax SETPOS {var, imm{ {var, imm}
Example SETPOS A B current array element is element A, B
SETPOS 10 10 current array element is element 10, 10

SETSTR

Purpose Assign a value to a string variable
Syntax SETSTR {;num} {str}
Example SETSTR ;I hello there

TEST

Purpose Test the value of the defined field and store the result for later evaluation.
Syntax TEST {var}
Example TEST A

UNPLOT

Purpose Erase the point field one, field two to background colour.
Syntax UNPLOT {var, imm} {var, imm}
Example UNPLOT 10 10
UNPLOT A B

APPENDIX 3

THE SIMPLE LINE EDITOR

SLE THE SIMPLE LANGUAGE EDITOR VL.0

SLE is accessed from SCLI level by typing:

EDIT <RETURN>

Once in the SLE level you will be greeted by the system prompt and will have access to the programme in the temporary store. To change the programme in the temporary store, see the LOAD command and the NEW command in the SCLI manual.

SLE is a simple line editor and interpreter for the simple language. The command definitions are shown in the following form:-

COMMAND [parameter1]#(parameter2)

Any parameters shown in square brackets '[ ]' are required parameters and any shown in curved brackets are optional parameters. Any spaces are shown as hash ' # ' signs.
Important Note: to avoid repeated syntax errors do not use spaces that are not required.

SLE COMMANDS

POSITION COMMANDS

u[n] Moves the current line up the buffer n lines
d[n] Moves the current lines down the buffer n lines
g[n] Goto line number n

EDIT COMMANDS

i Insert a line AFTER the current line
r Replace the current line

With the two commands above, immediately after pressing return the editor will prompt with the line number of the line to be changed and will wait for the new line to be entered. This editor will then check the format of the new line and, if the line is legal, will then modify the buffer accordingly. If the line is illegal, an error message will be displayed and the buffer left unmodified.

- Delete the current line
1[n] Label the current line as label n

The label command is used with the SIMPLE JUMP and CALL commands. You can label a line at anytime, the editor does not require lines to be labelled before you can enter jump or call commands.

c[n] Insert Comment number n at the current line

The comment command allows you to add comments that will be ignored at run time but appear in all listings. After pressing return, you should type in one line of text as your comment. If you want to reuse a label at another place in the buffer, press return twice and the comment will appear at both positions.

OUTPUT COMMANDS

s#(n1)#(n2) Display the current buffer on the screen.
p#(n1)#(n2) Display the current buffer on the printer

The two optional parameters n1 and n2 are the start and end line of the block in the buffer that are to be displayed.

OTHER COMMANDS

e Exit the SLE level

This command returns you to the SCLI level, leaving the current buffer in the temporary store ready for use.

EDI Fedcomp Series 472—39

SIMPLE Language List Facility. Programme Size:- 320 Bytes

1	CLR			11	ADD	a	1
2	LET	a	20	12	LET	c	20
3	LET	b	5	13	SUB	c	a
L1	MOVE	a	b	14	TEST	c	
5	RASTER			15	NE		
6	CHAR	127		16	JUMP	L1	
7	RASTER			17	ENDIF		
8	CHAR	126		18	LET	a	0
9	RASTER			19	JUMP	L1	
10	CHAR	129		20	ENDPROG		

EXAMPLE SESSION

This example starts in the SCLI level.

NEW **SLE Language Editor v1.0**
edit
Ready

```
gl
1
r
1       clr
s
1       CLR

i
2       move a b
i
3       crt a
i
4       key c
i
5       sub c 28
i
6       test c
i
7       equ
s

1       CLR
2       MOVE    a   b
3       CRT     a
4       KEY     c
5       SUB     c   28
6       TEST    c
7       EQU

i
8       add a 1
i
9       jump 11
g2
2
11
s
1       CLR
L1      MOVE    a   b
3       CRT     a
4       KEY     c
5       SUB     c   28
6       TEST    c
7       EQU
8       ADD     a   1
9       JUMP    L1

g9
9
i
10      endif
i
11      endprog
s

1       CLR
L1      MOVE    a   b
3       CRT     a
4       KEY     c
5       SUB     c   28
6       TEST    c
7       EQU
8       ADD     a 1
9       JUMP    L I
```

```
10        ENDIF
11        ENDPROG
g1
1
i
2         let b 5
s

1         CLR
2         LET     b  5
L1        MOVE    a  b
4         CRT     a
5         KEY     c
6         SUB     c  28
7         TEST    c
8         EQU
9         ADD     a  1
10        JUMP    L1
11        ENDIF
12        ENDPROG
e
```

APPENDIX 4

INTRODUCTION TO GALNET

The Galnet is the central communication network used by all space-faring nations. It allows instantaneous communication over vast distances by use of specially trained telepaths.

Logging on to the Galnet is achieved by invoking the net from the SCLI by typing NET {return}.

You will be greeted by the net's title page and a request for identification. If you do not know your ID number, then entering 'HELP' will connect you with the library level and tell you your number. It will speed up the connection process if you remember this number, but if you ever forget this number, you can simply enter help again without destroying your accounts.

The Galnet recognises the following commands:-

H	{Help}	Displays the available commands
E	{Enter}	Enter the trading sublevel
T	{Transmit}	Transmit a message
P	{Print}	Print any mail pending
R	{Read}	Read any general messages
I	{Inventory}	Display the ships manifest
Q	{Quit}	Drop the line and return to SCLI

For details of the trading sub-level, please refer to Appendix 5.

When in flight communication mode, if a craft passes across the flight symbol you will be given the Galnet ID number of the craft. By entering the net and transmitting a message to this number you will be connected to the pilot of the craft and will be allowed to talk to him.

By transmitting a message to FOFT you will be connected to federation headquarters (see above).

The print command will display any personal mail pending and the read command will display any general mail.

The Inventory command gives a full description of your ship and its cargo.

APPENDIX 5

COMMERCE ON THE NET

The commercial level of the net is available by typing E at the net command level. Once in, you will be shown a series of menus. Pressing the indicated keys will take you to various sub menus, until you arrive at the item you are interested in. Watch the stock level carefully, if people are selling then the stock level will rise and the price fall. Careful timing is necessary to get the best deal from the market. Once you have made your purchase the funds are automatically withdrawn from your account and the goods loaded into your hold by the space station's short range matter transporters. Use the data available on the navigation library level to judge which items to trade in e.g. a planet with a high population needs food, but it is no good taking agricultural goods to a planet populated by robots.

To re-equip your ship you also use the net. Equipment is grouped into three basic levels on the net. Weapons, engineering and general equipment are available at the press of a key. Your ship is capable of carrying three weapon systems named as Primary, Secondary and Tertiary. The primary system is always lasers but you have the option of five different types of lasers for your ship. The better the lasers are, the faster they recharge after use and the more damage they do when a hit is scored.

The secondary and tertiary systems are a matter of taste. You begin with two missiles as your secondary system and no tertiary system, but any system can be replaced at will. When you purchase a new weapons system you will be given the option of replacing the Secondary or Tertiary weapons system. If you replace an existing system, then the old system will be removed and you will be credited with the value of the system, less 10% business tax, 1% handling charge, 5% depreciation and 24% workshop charges.

Please note, the weapon control system will not allow two similar systems to be fitted at the same time.

Weapons Statistics	Class 1	Class 2	Class 3	Class 4	Class 5	
Lasers x 2	2	4	6	8	10	Rapid fire
Gauss x 4	4	8	12			Rapid fire
Fusion x32	32	64	96			Difficult to use
Plasma x16	16	32	48			Slow Fire Rate
Missile	50	100	150			Expensive

APPENDIX 6

NAVIGATION SUMMARY

The Navigation System is very simple to operate:
To rotate the current galaxy view use the joystick.
To Zoom in on your current position press 'HELP'.
To Zoom out from your current position press 'UNDO'
To move the target destination cursor use Keys 4,6,8,&2 on the numeric keypad.

When the target destination cursor intersects a solar system, a line is drawn from your current position to the target system and the system name, designation and range are displayed on the screen.

If you have enough fuel (one tonne per light year jump), and your engines are powerful enough to make the jump, you may lock the course to the current target planet by pressing '5' on the keypad at the right of your keyboard.

To return to the main flight level press 'SPACE'

NAVIGATION LIBRARY LEVEL

Pressing 'D' will decode the stored information on the current target system and will display them on the screen in the following form.

The diagram displays the orbits and relative positions of the planets in the current system. The planet which supports life is indicated by the flashing ring.

Government level indicates how much personal freedom an individual has on the main planet. At level 0 there is total anarchy and at level 15 virtually no personal choice. In between you pass through democracies, balkanisations, bureaucracies, oligarchies and dictatorships.

Law level is slightly different from government level in that law level only relates to weapons. A planet with a law level of 0 allows open ownership of weapons and a planet with a high law level has heavy restrictions on weapon ownership.

Tech Index is a measure of how technically advanced the planet is. A low tech level indicates a poor level of technical knowledge. For example, interplanetary flight becomes available at tech level 7 and matter transportation at tech level 16.

To return to the main navigation level press 'SPACE'.

SHORT RANGE SCAN

Pressing 'S' from the main navigation level will display a short range scan of your current solar system. This shows the relative position of the planets only.

To return to the main navigation level press 'SPACE'.

NAVIGATION SUMMARY

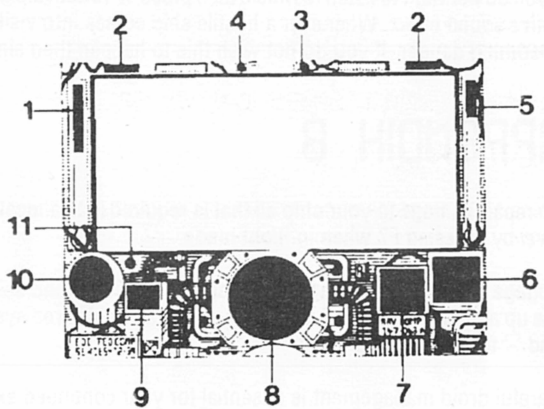
Drive	Class 1		Class 2		Class 3		Class 4		Class 5	
	Max Speed	Jump	Max Speed	Jump	Max Speed	Jump	Max Speed	Jump	Max Speed	Jump
Ion Drive	136	74	144	76	152	78	160	80	168	82
Plasma Drive	144	76	160	80	176	84	192	88	208	92
Fusion Plant	152	78	176	84	200	90	224	96	248	102
Photon Drive	160	80	192	88	224	96	256	104	288	112
Matter/ Antimatter/Drive	168	82	208	92	248	102	288	112	328	122
Star Drive	176	84	224	96	272	108	320	120	368	132

APPENDIX 6

FLIGHT CONTROL SUMMARY STANDARD PANEL LAYOUT

(Details may vary according to starship)

1. LEFT SHIELD
2. STATUS LIGHTS
3. ESCAPE POD STATUS
4. DOCKING SYSTEM STATUS
5. RIGHT SHIELD
6. DAMAGE CONTROL
7. NAVIGATION COMPUTER
8. RADAR
9. SHIPBOARD COMPUTER
10. PWR (PASSIVE WARNING SYSTEM)
11. NAVIGATION COMPUTER STATUS



RADAR

The radar appears in the centre of your ship's control panel. The image it displays represents a three dimensional model of the space surrounding you. You are shown as a white spot in the centre of the display.

The markings on the display show the plane of space in which you are oriented and the v-shaped field of view in front of you. Any objects which enter the space around your ship appear as a glowing dot on a colour coded stalk. If the dot is below the stalk, the object itself is beneath you.*

*If it appears above the stalk, the object is above you.
Function keys 9 and 10 control the magnification of the radar. The zoom factor is shown beneath the radar.

Remember: the greater the 200m factor, the shorter the visible range.

NOTES

If you do not want to listen to music then press 'K' to activate the sound effects. This key also kills the currently active sound effect. Whenever a hostile ship comes into visible range, a siren will sound to warn you of the oncoming danger. If you do not wish this to happen then simply turn ATW off using function key 5.

APPENDIX 8

To repair damage to your ship all that is required is to allocate your repair droids. Enter the damage control level by pressing F7 when in flight mode.

Engage droid allocation mode by pressing 'RETURN' and select the desired system by moving the box with the up and down arrow keys. When you are at the desired system, press '+' on the keypad to allocate a droid and '-' to de-allocate a droid.

Careful droid management is essential for your continued existence.

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