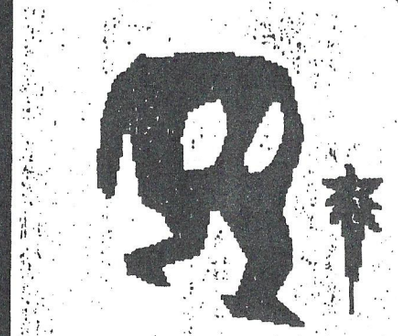
B1

sinclair

ZX Spectrum

HUNGRY HORACE



SOFTWARE BY PSION with MELBOURNE HOUSE — 16K or 48K RAM

sinclair HUNGRY HORACE G13/S

LOADING A PROGRAM

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5. Start the cassette recorder playing.
6. Press any key.

Psion cassettes for the Sinclair ZX Spectrum are designed to load over a very wide range of volume and tone settings on your tape recorder. If you have any difficulty, ensure that the head and pinch-roller of your tape recorder are quite clean. Cleaning kits for this purpose are widely available.

Made in U.K.

PSION software cassettes are manufactured by a fully automated process under the strictest quality control. Other Psion software cassettes for the Sinclair Spectrum include:

CHESS – a remarkable machine code program of the highest standard with 10 levels of play. Features include full graphic pieces and board, all legal moves allowed and advice on your move if requested.

VU-CALC – constructs, generates and calculates large tables for diverse applications including financial analysis, budget sheets and projections. Turns the Spectrum into an immensely powerful analysis chart.

VU-FILE – a general purpose information-retrieval program for lists, names and addresses, society memberships, catalogues and files of all kinds. Features include user-definable records, packed fields for maximum storage, list by any field, string search and many others.

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PLANETOIDS – An exciting, real-time, reactive machine code game in which you must destroy and avoid the passing planetoids. Beware of the lurking alien space ship which can destroy you with its cluster bombs.

Sinclair
Spectrum
16K or 48K RAM

HUNGRY HORACE
from PSION
with MELBOURNE HOUSE

Load and run by typing LOAD "HORACE"

Hungry Horace is a machine language game for the Spectrum. You are Hungry Horace, intent on devouring everying in your path. Horace will move along the paths, bridges and tunnels of the park by pressing the following keys: –

UP: "Q" key
DOWN: "Z" key
LEFT: "I" key
RIGHT: "P" key

Each flower in the park that Horace eats scores 10 points. But beware of the park guards who are out to catch Horace and throw him out of the park. If Horace is caught 3 times he will not be allowed back in the park and the game will end.

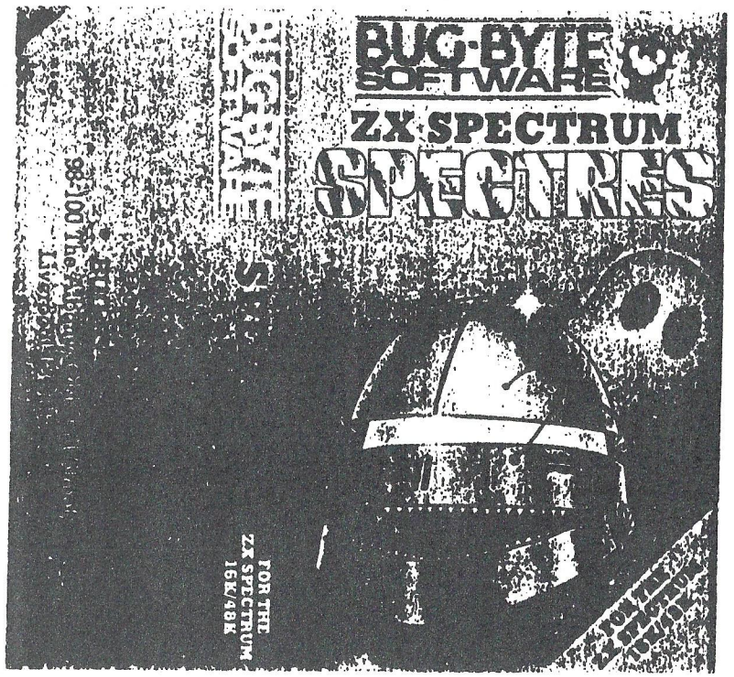
There are several alarm bells in the park. If Horace can ring one of the alarms, the guards will panic and Horace can catch them and throw them out of the park.

Look out for when one of the guards drops his lunch of cherries or strawberries. You will score 100 points if Horace eats the guards' lunch.

The park is divided into several sections and in each part there is an exit leading to the next section. Horace does not need to eat all the flowers or reach the alarm before entering the next section. Each section of the park is harder than the one before.

Hungry Horace includes sound effects. To amplify the sound from the Spectrum, insert the lead between the microphone socket of the Spectrum and tape recorder. Ensure that there is no cassette in your recorder. Try setting your recorder to record, or play, and in many cases the sound from the Spectrum will be amplified through the loudspeaker of the recorder.

Made in U.K.



- INSTRUCTIONS

THE GAME SPECTRES, IT'S PROGRAM CODE, AUDIO-VISUAL PRESENTATION AND DOCUMENTATION ARE STRICTLY THE COPYRIGHT OF BUG BYTE . (C) 1982

SPECTRES will work on any ZX SPECTRUM

LOADING: Place the cassette into the recorder and type one of the following:

LOAD "spectres" <ENTER>

or LOAD "" <ENTER>

Where <ENTER> means to press the key marked ENTER. Also note that there is no space between the two quotes in the second method.

If loading is sucessful a flashing message will appear on the screen after several seconds. The process is entirely automatic from there on.

If problems are experienced adjust your volume control and try again or re-read chapter six of your introductory manual.

PLAYING SPECTRES

Eddie the electrician has a new job. He has to rewire the old mansion on the edge of town. Unknown to Eddie the mansion is haunted by four wicked ghosts who don't like humans at all.

The ghosts all have different personalities. Speedy is red in colour and rushes around the house looking for someone to frighten. Spooky is green and has a special talent for finding humans wherever they may be hiding. Spiffy on the other hand is yellow in every sense of the word, and stays well away from intruders although he will, of course, scare them if he finds them. Sparky is a fairly normal kind of ghost. He wanders around, doing nothing in particular until he finds a live person. Living beings bring out the worst in him.

Eddie's job is to go around the house fitting light bulbs. When he has completed the entire floor he may move onto the next level through the central stair well. Unfortunately for Eddie the ghosts don't like light at all and will scare him senseless, driving him back into the stair well, if they catch him. Eddie will then be taken gibbering to the local happy home.

On each floor there are four old power generators and if Eddie gets to one it will switch on and all the bulbs he has placed so far will light up. The light makes the ghosts very weak. If they come into contact with it, and whilst in this condition, meeting Eddie will cause them to rush back to the stair well to recuperate. The generators only have a small amount of fuel and when this runs out they will break down and cause all the lit bulbs to short cicuit.

P.T.O.

In some of the darker corners of the house Eddie can find cans of petrol and can collect it so that the generator stays on for longer although he can't refuel a generator that is already on. Eddie being a strong lad can carry twelve gallons of fuel and each can holds a gallon.

The border around the screen will turn red when all the bulbs have been fitted into place. Eddie may then move onto the next floor through the central stair well.

THE TOP STATUS LINE

The top row shows from left to right:-

The amount of fuel being carried (in pints)
The number of lives Eddie has left
Eddie's score so far.
The highest score so far

Eddie starts with 3 lives and gains an extra one every time he scores two thousand points.

SCORE

Points are scored as follows:-

One point for each bulb placed
Ten points for each ghost sent back to the stair well
If two ghosts are caught in succession twenty points, three will score thirty, and four will score forty.
This cumulative scoring will reset after four ghosts
Twenty points for turning on a generator
Ninety points for each floor completed.

HOW TO CONTROL EDDIE

There are a large number of keys which may be used. You should choose the combination with which you feel most comfortable.

LEFT	The keys to move left are all on the lowest keyboard row. Beginning with CAPS SHIFT every alternate key may be used i.e. CAPS SHIFT, X, V, N, SYMBOL SHIFT.
RIGHT	The remaining keys on the bottom row may be used to move right i.e. Z, C, B, M, SPACE
DOWN	Any of the keys on the second row may be used to move down i.e. A, S, D, F, G, etc.
UP	Any of the keys on the third row may be used to move upwards i.e. Q, W, E, R, T, etc.

In addition if a key on the top row is pressed the game will "freeze". This allows you to answer the door or feed the dog whilst playing. Pressing any key not on the top row will restart the game.

B1

B1 (PLANETOIDS)
F1 (MISSILE)

PLANETOIDS
an exciting, real time reactive machine code game in which you must destroy and avoid the passing planetoids in space. Beware of the lurking alien ship which can destroy you with its cluster bombs. In full high-resolution colour with sound effects.

sinclair PLANETOIDS also MISSILE

G12/S

sinclair

PLANETOIDS
also MISSILE

SOFTWARE BY PSION — 16K or 48K RAM

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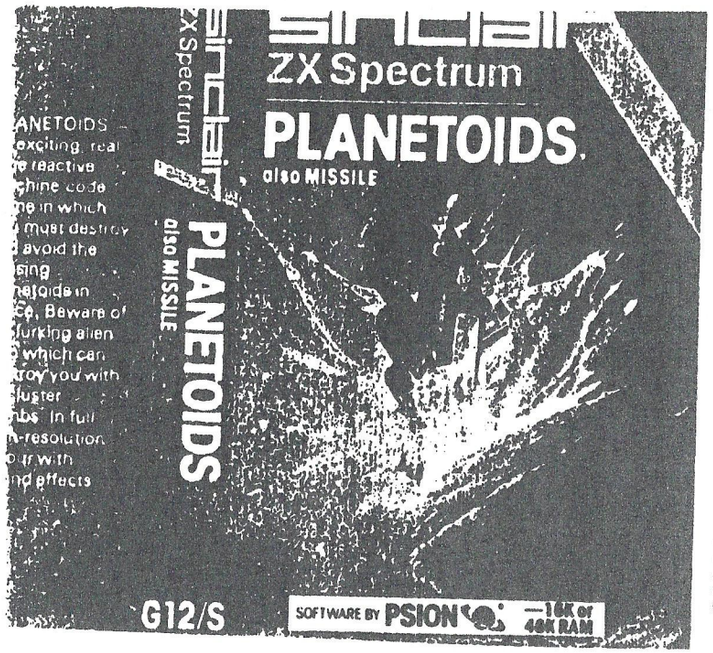

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3

Sinclair
ZX Spectrum
with 16K or 48K RAM

PLANETOIDS
also
MISSILE

from PSION

SIDE A: PLANETOIDS

Load and run by typing LOAD "PLANETOIDS"

CONTROL KEYS

ROTATE LEFT: "Z" key	ROTATE RIGHT: "X" key
FIRE: "Space" key	THRUST: "Enter" key
HYPERSPACE: "H" key	

Score for each hit.

Large planetoid	: 100 points
Medium planetoid	: 200 points
Small planetoid	: 300 points
Flying Saucer	: 500 points
Bonus at	20,000 points

SIDE B: MISSILE

Load and run by typing LOAD "MISSILE"

A ballistic missile is approaching. You must destroy it with your twin laser guns. Observing it telescopically, alter your aim with the cross-hairs before firing.

LEFT: "Z" key	RIGHT: "X" key
UP: "P" key	DOWN: "Enter" key
MAGNIFY: "M" key	REDUCE: "N" key
FIRE: "Space" key	

Move the telescope in the direction of the flashing dot on the instrument panel to locate the incoming missile

Planetoids includes sound effects. To amplify the sound from the Spectrum, insert the lead between the microphone sockets of the Spectrum and tape recorder. Ensure that there is no cassette in your recorder. Try setting your recorder to record, or play, and in many cases the sound from the Spectrum will be amplified through the loudspeaker of the recorder.

Made in U K

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B1/F1

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Sinclair
ZX Spectrum
with 16K or 48K RAM

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Made in U.K.

B1/22

SPECTRUM VOICE CHESS

Spectrum Voice Chess speaks to you from the built-in Speaker in the Spectrum. It is possible to amplify the speech by taking the output through the cassette port and connecting to an amplifier. For best results, use maximum Bass.

Before you start to play chess you will be asked a few questions.

The first question you will be asked is "PLAY ANALYSE OR LOAD". L N/L will load a previously saved game. If you answer 'A' you will be able to set up the board for analysis. However we shall now look at the normal situation, a reply of 'P'. You will then be asked your choice of colour. Answer 'W' or 'B'. Finally you may select the level of play for SPECTRUM VOICE CHESS. The levels range from Ø to 5:—

Level Ø replies in 2 seconds and is the easiest level.
Level 1 replies in 15 seconds and plays reasonably.
Level 2 replies in 40 seconds and is suitable for casual players.
Level 3 replies in 3 minutes and plays an above average game.
Level 4 replies in 5 minutes.
Level 5 and 6 are most suitable for correspondence chess but play a very strong game.

These timings are approximate and vary depending on the game situation.

You are now ready to play chess.

The pieces are represented on the board by graphic shapes. Each square is represented by a co-ordinate, A-H from left to right and 1-8 from bottom to top.

To move a piece, enter the co-ordinate of the square it occupies, a space, then the co-ordinates of the square you wish to move to, and finally Newline. e.g. E2 - E4 Newline. Providing this is a valid move, Spectrum Voice Chess will then move. If you make an invalid move, the INVALID is displayed and you must re-enter a valid move.

IF YOU WISH SPECTRUM VOICE CHESS TO RECOMMEND A MOVE TYPE 'M'

Spectrum Voice Chess will recommend a move on all levels except Ø, and at the beginning of game Spectrum Voice Chess will not be able to recommend a move. In both cases typing 'M' will be ignored. If you make a mistake while typing in your move, then you may use the DELETE KEY to correct it.

If you wish to castle, you should just type the KINGS move and Spectrum Voice Chess will know you wish to castle. When Spectrum Voice Chess castles, it displays O—O or O—O—O. You may also capture using En passant privilege and if Spectrum Voice Chess uses the privilege it displays PXPEP.

T will save the game at that position to tape, to be returned to at a later date.

Z prints a copy of the board onto the ZX printer.

O prints all moves so far either onto the screen or printer depending if the printer is present i.e. with no printer the moves are printed on the screen. If printed on the screen, the first 20 moves are shown; press any key to show following moves. Press N/L at the end of list to return to game.

IF YOU WISH TO RESIGN DURING THE GAME TYPE 'S' (Stop).

POSITION ANALYSIS

Suppose you answer 'A' to the first question, then the board will be displayed with all the pieces in the position they were in. You may now alter any square on the board as follows:— xxeee: Clears square xx where xx is the squares co-ordinate, e.g. E2 xx cpm: Puts piece 'p' of colour 'c' on square xx where c, p and m are as follows:—

c - colour 'W' or 'B'
p - piece, 'P' - pawn, 'R' - rook, 'N' - knight, 'B' - bishop, 'Q' - queen, 'K' - king, m - move flag 'Y' if piece has moved, 'N' if piece has not.

This is mainly important for pawns, kings and rooks.

'X....' will clear the board. This is ideal for end game analysis. When you have finished setting up the board, you exit by typing 'Q....' (Quit) You will then be asked your colour and level of play as at the start of the program. The game may then be played from the position you have set up. Another way of entering the position analysis routine is to type 'S' during a game. You will then be asked:—

"PLAY ANALYSE OR LOAD ?" Reply 'A'.

By this means you may alter the level of play or even swap colours during the game! The game is usually finished by Checkmate.

Spectrum Voice Chess will then wait for any key to be pressed before re-starting the program.

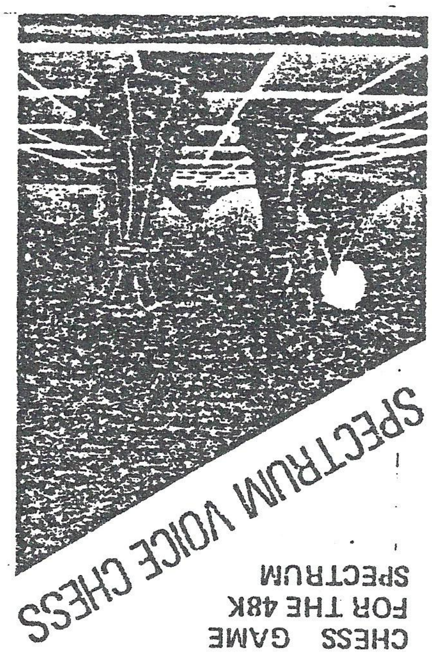
ARTIC COMPUTING LTD
396 JAMES RECKITT AVE
HULL N.HUMBERSIDE
HU8 0JA

SPECTRUM VOICE CHESS

GENERAL LOADING AND RUNNING INSTRUCTIONS

1 Assemble the cassette tape at the silent part before the program.
2 Connect the EAR socket on the SPECTRUM to the EAR or LOUD-SPEAKER socket on your cassette recorder.
3 Adjust the volume of the cassette recorder to ¾ maximum and the tone controls to maximum treble and minimum bass.
4 Press LOAD (the J key) and type the name of the program within quotation marks. Do not press ENTER yet.
5 Start the cassette recorder and now press ENTER.

ANOTHER GREAT CHESS GAME FOR THE 48K SPECTRUM



SPECTRUM VOICE CHESS

ARTIC COMPUTING LIMITED

B1

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Spectrum Voice Chess will then wait for any key to be pressed before re-starting the program.

ELECTRONICS

The programme is designed to enable you to draw an electronic circuit on the screen, using any of the wiring or circuit symbols listed (on last page) You may erase or modify the circuit as you progress until satisfied. You may then apply an earth and a power supply and activate the circuit. The computer will work out the state of all your circuit elements and display a "powered up" version of the complete circuit on the screen. You can then modify the diagram and re-activate until you have a network that functions as required. You have the option of printing the circuit, either raw or activated, if you have a printer, or a part completed system may be saved or tape for subsequent use.

SPECTRUM OWNERS ONLY - throughout these instructions for NEWLINE read ENTER. Do not use capitals for any input. Wherever the instructions mention the screen clearing, disregard - your display will remain.

OPERATION

1. LOAD the programme in the usual way. (It is called "cct" on tape) When LOADING is complete the screen will remain blank for approx. one minute after which the initial menu will be displayed, offering you:

   (A) The operating instructions
   (B) Start a new circuit
   (C) Continue existing circuit
   (D) Display the circuit symbols
   (E) Save the existing circuit on tape
   (F) Copy the existing circuit on your printer
   (G) Print the circuit symbols (SPECTRUM ONLY)

   Type the letter of your required choice.

   (A) Gives a condensed version of these instructions.

   (B) The display will change to a flashing symbol near the centre of the screen. This is your Cursor and is moved aroun the screen by depressing keys 5, 6, 7, or 8. The Cursor will move in the direction of the arrows marked on your keyboard. If you wish to move the Cursor without erasing anything passed over, press "1". The Cursor will stop flashing briefly and then continue but subsequent movement will have no effect on your circuit. To eras components press "0". Again the flashing will stop briefly befo continuing, but if the Cursor now passes over anything it will b erased.

   To obtain a symbol press any key (other than those already mentioned or (BREAK). The display will now alter - if you have part of a circuit drawn it will apparently turn into random symb (ZX81 ONLY) - ignore this, it will return to normal shortly. At the bottom of the screen you will be offered the following choices:

   Enter code or,
   L to LIST all the possible symbols (ZX81 ONLY)
   C copy to the printer (SPECTRUM ONLY)
   A to activate
   D to de-activate the circuit
   R to rotate the symbol
   M to revert to the initial menu display

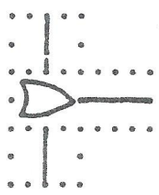
   Entering the appropriate 2 figure code (last page) followed by

NEWLINE, will result in the screen clearing briefly before your circuit reappears, with the selected symbol displayed at the bottom of the screen. Subsequent cursor movement will now leave a trail of these components across the screen until an alternative is selected. Cursor movement is sufficiently slow to enable single components to be easily positioned.

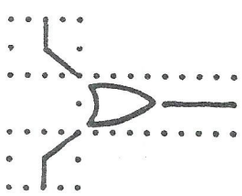
All the components up to and including the diodes are available in all possible positions and are therefore fixed but all other components may be rotated anti-clockwise in 90° steps through a full circle if required. All occurrences of a rotated component throughout the circuit will rotate so the logic gates and transistors are duplicated. In order to rotate a component select "R" from the above choice. The screen will again clear for a while then the circuit will re-appear but the symbol at the bottom of the screen will be seen to have turned through 90°. Continue in this manner until your circuit is complete, bearing in mind the following points:

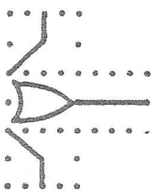
(1) Plugs, sockets and crossovers should not be positioned immediately next to wires or components, other than wires connected to them.
(2) Do not cascade components - you must have at least one piece of wire between each item.
(3) Do not position any components which have three connections at the edge of the screen.
(4) All components which have three leads must be connected in the following manner:

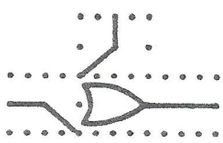
RIGHT



WRONG



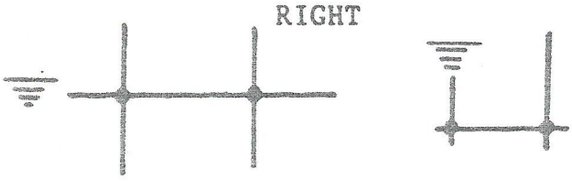




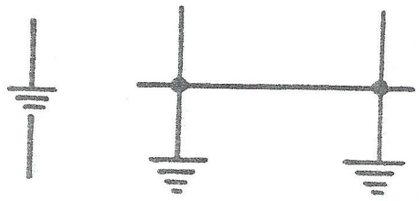
i.e. Connect only at right angles with the component, not from the corners.

When complete connect an earth and a supply. Use each symbol once only although it may of course be connected to anywhere within the circuit, and connect them only to the end of a wire. Press "1" to ensure that nothing will be removed during activation.

RIGHT



WRONG



Now activate by entering "A". This is a good time to make a coffee

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ard copy may be obtained by selecting "M" for menu, then the printer ption. (just press "C" on SPECTRUM).
In order to de-activate the circuit type "D". The screen will clear for approx 27 secs before the original circuit re-appears.

(C) The screen will clear for approximately 12 secs before presenting the circuit. Your tape has a demonstration circuit already loaded - if you ask for this option before asking for a new circuit, you will be able to watch an activation routine working.
(D) The two figure codes and component names will appear on the screen for 5 secs. These will then scramble but the relevant symbols will be displayed for 10 secs. (SPECTRUM - the components do not scramble) The sequence will repeat until a selection is made in response to the prompt at the bottom of the screen.
(E) The screen will clear for approx 37 secs. A prompt will then appear on the screen. Start your tape in the "RECORD" mode then press "NEWLINE".
(F) The screen will clear for approx 10 secs. A copy of your circuit will then appear on the printer.
(G) SPECTRUM ONLY - will produce a printed copy of the symbols and codes.

If at any time you accidentally get into command mode and the computer stops with a message at the bottom left of the screen, enter "GOTO 8000".

CONVENTIONS

The following conventions apply to the electronic components employed within a circuit.

1. A voltage positive or negative, will not be felt through: RESISTORS, CAPACITORS, COILS, LIGHT DEPENDANT RESISTORS, SWITCHES, THERMISTORS, DIACS OR METERS. In order to reverse this a by-pass may be wired round the component. The only exception is that an earth will be felt through a single resistor, but not two joined together - this is to allow biasing of sections to earth if required.

2. A voltage will not be felt through the winding of a POTENTIOMETER but if either end is connected to the supply the wiper will become positive.

3. A reverse voltage will not cause a ZENER to conduct in the reverse direction.

4. A TRIAC will conduct in either direction if the gate goes positive or negative.

5. A THYRISTOR will conduct in the normal direction if the gate goes positiv

6. A PNP TRANSISTOR requires a positive on the emitter and an earthed gate to trigger.

7. A NPN TRANSISTOR requires a positive on the base and an earthed emitter to trigger.

8. All logic gates require a positive on their inputs and drive their outputs positive. Unconnected inputs drift negative.

ELECTRONICS

The programme is designed to enable you to draw an electronic circuit on the screen, using any of the wiring or circuit symbols listed (on last page You may erase or modify the circuit as you progress until satisfied. You may then apply an earth and a power supply and activate the circuit. The computer will work out the state of all your circuit elements and display a "powered up" version of the complete circuit on the screen. You can then modify the diagram and re-activate until you have a network that functions as required. You have the option of printing the circuit, either raw or activated, if you have a printer, or a part completed system may be saved c tape for subsequent use.

SPECTRUM OWNERS ONLY - throughout these instructions for NEWLINE read ENTEI Do not use capitals for any input. Wherever the instructions mention the screen clearing, disregard - your display will remain.

OPERATION

1. LOAD the programme in the usual way. (It is called "cct" on tape) When LOADING is complete the screen will remain blank for approx. one minute after which the initial menu will be displayed, offering you:

   (A) The operating instructions
   (B) Start a new circuit
   (C) Continue existing circuit
   (D) Display the circuit symbols
   (E) Save the existing circuit on tape
   (F) Copy the existing circuit on your printer
   (G) Print the circuit symbols (SPECTRUM ONLY)

   Type the letter of your required choice.

   (A) Gives a condensed version of these instructions.

   (B) The display will change to a flashing symbol near the centre of the screen. This is your Cursor and is moved aroun the screen by depressing keys 5, 6, 7, or 8. The Cursor will move in the direction of the arrows marked on your keyboard. If you wish to move the Cursor without erasing anything passed over, press "1". The Cursor will stop flashing briefly and then continue bu subsequent movement will have no effect on your circuit. To era components press "0". Again the flashing will stop briefly befo continuing, but if the Cursor now passes over anything it will b erased.

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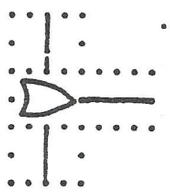
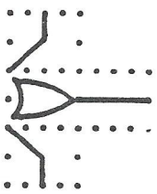
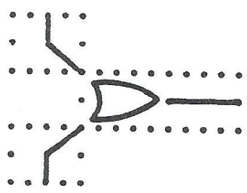
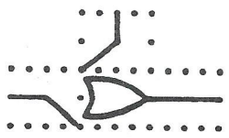
RIGHT





WRONG





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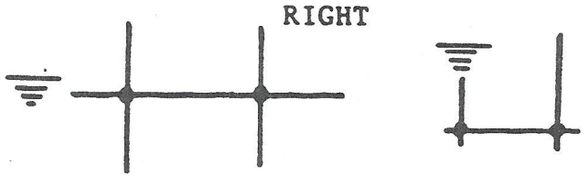
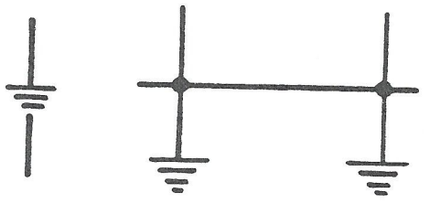


WRONG



Now activate by entering "A". This is a good time to make a coffee

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Hard copy may be obtained by selecting "M" for menu, then the printer option. (just press "C" on SPECTRUM).
In order to de-activate the circuit type "D". The screen will clear for approx 27 secs before the original circuit re-appears.

(C) The screen will clear for approximately 12 secs before presenting the circuit. Your tape has a demonstration circuit already loaded - if you ask for this option before asking for a new circuit, you will be able to watch an activation routine working.
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(E) The screen will clear for approx 37 secs. A prompt will then appear on the screen. Start your tape in the "RECORD" mode then press "NEWLINE".
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8. All logic gates require a positive on their inputs and drive their outputs positive. Unconnected inputs drift negative.

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EASYSPEAK

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EASYSPEAK

FOR THE 48K SPECTRUM

LOADING EASYSPEAK

You will find the procedure for loading a program in the Spectrum basic manual chapter 20. The procedure for loading Easyspeak is given below:

1. Connect the ear socket of the Spectrum to the ear socket of your cassette recorder.
2. Make sure the tape is wound to the beginning.
3. Set the volume control to a suitable level.
4. Set maximum treble, minimum bass on the tone controls.
5. Type LOAD "" CODE
6. Press ENTER
7. Start the cassette recorder.
8. The program will RUN itself once loaded and will provide instructions.

If the program does not load correctly try a different volume level.

SPEAKEASY © QUICKSILVA 1982

THIS PROGRAM CONVERTS AUDIO SIGNALS APPEARING AT THE 'EAR' SOCKET ON THE BACK OF YOUR COMPUTER INTO NUMBERS STORED IN MEMORY.

THESE NUMBERS CAN THEN BE STORED ON TAPE AND CONVERTED BACK INTO AUDIO AS REQUIRED.

TO GET STARTED,MAKE A TAPE RECORDING OF YOUR VOICE OR USE A MUSIC TAPE IF YOU WISH.

CONNECT THE TAPE RECORDER TO THE COMPUTER AS YOU DID TO LOAD THIS PROGRAM.PUT YOUR AUDIO TAPE IN THE TAPE RECORDER AND PLAY IT.

YOU SHOULD BE ABLE TO HEAR YOUR TAPE COMING FROM THE COMPUTER.

WHEN YOU HEAR THE BIT YOU WANT TO HAVE IN THE COMPUTER,SELECT OPTION '2' (record).

WHEN THE FLASHING RECORDING MESSAGE DISAPPEARS THEN IT'S FINISHED.STOP THE TAPE.

SELECT OPTION '3' (play).

REPEAT THIS PROCESS WITH DIFFERENT VOLUME SETTINGS TO OBTAIN THE BEST RESULTS.

NOTE:THE BETTER THE ORIGINAL RECORDING,THE BETTER THE DIGITISED VERSION WILL SOUND.

WHEN YOU ARE SATISFIED WITH THE SOUND,YOU CAN EXTRACT THE PART REQUIRED BY USING 'SET START' AND 'SET LENGTH'.

START IS FROM 32800 TO 65000.
LENGTH IS FROM 1 TO 16000.

NOTE:DATA IS ONLY STORED IN THE TOP 32K OF THE COMPUTERS MEMORY ('record' fills all of this!).

THE LENGTH IS IN PAIRS OF BYTES SO REALLY TAKES TWICE AS MUCH SPACE IN MEMORY.

SELECT OPTION '3' (play) AFTER EACH CHANGE YOU MAKE AND WHEN THE SOUND IS RIGHT MAKE A TAPE USING OPTION '6'.

A TAPE FILE MADE THIS WAY WILL HAVE THE FILE-NAME 'SPnnnnn' WHERE nnnnn IS THE START ADDRESS OF THE FILE.

TO USE THIS IN YOUR OWN PROGRAMS FIRST RESERVE SOME MEMORY WITH 'CLEAR 32767' THEN LOAD THE TAPE AND NOTE THE NUMBER IN THE FILE-NAME.

TO GET THE SOUND MAKE A 'USR' CALL TO THE NUMBER THAT WAS IN THE FILE-NAME.FOR EXAMPLE:

```
9010 CLEAR 32767
9020 LOAD ""CODE
9030 REM file-name was SP45000
9040 PRINT USR 45000
```

IF YOU WANT TO PUT IT ELSEWHERE IN MEMORY THEN YOU CAN RELOCATE IT BY LOADING AT THE NEW ADDRESS AND ALTERING TWO LOCATIONS.

FOR EXAMPLE:

```
LET addr=43085
LOAD ''CODE addr
POKE addr+1,addr-256*INT (addr/2
56)
POKE addr+2,INT (addr/256)
```

IF YOU FIND THIS RATHER COMPLEX READ THE INSTRUCTIONS AGAIN AND TRY IT OUT.YOU SHOULD BE ABLE TO DIGITISE SOME SPEECH AND PUT IT IN YOUR OWN PROGRAM.

Bicc 1/25

26

B1

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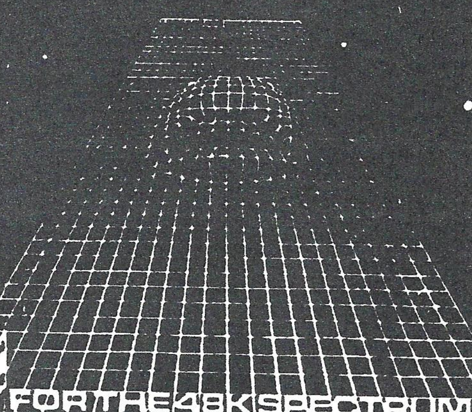

FOR THE 48K SPECTRUM

LOADING
Speakeasy
You will find the procedure for loading a program in the Spectrum basic manual chapter 20. The procedure for loading Speakeasy is given below:

1. Connect the ear socket of the Spectrum to the ear socket of your cassette recorder.
2. Make sure the tape is wound to the beginning.
3. Set the volume control to a suitable level.
4. Set maximum treble, minimum bass on the tone controls.
5. Type LOAD "" CODE
6. Press ENTER
7. Start the cassette recorder
8. The program will RUN itself once loaded and will provide instructions.

If the program does not load correctly try a different volume level.

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QS

Eg.
1010 Clear 32767
1020 Load "" Code
1030 REM Filename ... SP...
1040 Print Usr 45000

DLAN - Display Language - for ZX Spectrum 16K/48K by Campbell Systems

Summary

DLAN is a simple but powerful language to generate textual displays using a ZX Spectrum. Its uses range from advertising to education, or just for its own absorbing interest.

DLAN commands are entered as REM statements, so that all the facilities of the natural Spectrum editor are available. DLAN itself is pure machine code, invoked using a USR function. The commands are generally interpreted one after another in a cyclic fashion, so that it left to itself DLAN gives a never-ending sequence of effects.

A central concept is the WINDOW, defined as any rectangle of whole lines and columns within the 24 x 32 character display. Any number of windows can be defined, overlapping or otherwise. Effects such as text display and scrolling (four directions to choose from) operate within the currently defined window, leaving the rest of the screen unchanged.

Another major feature of DLAN is its repertoire of print styles or fonts, many of them large size and even some with proportional spacing. (i.e. the letters "I","A","M" can be of different widths in a font.) The 48K version of DLAN has a bigger choice of fonts than the 16K version.

DLAN is also a word processor: it maintains a clean left-hand margin when printing text, and minimises word breaks. Thus a professional display of text is possible with the minimum of effort.

Command Structure

DLAN commands are single letters or symbols, optionally prefixed with a number up to 255 which is a repetition factor. For example, 'S' means scroll up 1 line, and '15S' means scroll up 15 lines.

Most commands are followed by text or parameters. For example, '=HELLO' means print (command is '=' symbol) the phrase "HELLO". And '4SD' means scroll (command 'S') down 4 lines. 'D' is the Down parameter.

Commands are entered within Basic REM statements. You can have any number of commands in a REM statement, using semi-colon (;) as a delimiter. For example...

```
20 REM 3=HELLO;4SR;P
```

This prints the word "HELLO" 3 times; scrolls the window 4 columns to the right; and then pauses for 1 second (P) before continuing with the next command. Each command could have written as a separate REM, with identical result. But combining commands into fewer REMs can save space.

In general, DLAN interprets commands sequentially, but it also offers a facility equivalent to Basic GOSUB. This allows you to encode a labelled sequence of commands, and execute it from any number of places within the command list. 10 levels of nesting are supported. i.e. you can GOSUB to a sequence which in turn has its own GOSUB calls, etc.

Alphabetic DLAN commands, and alphabetic parameters, may be entered in upper case or lower case interchangeably.

One more general point : DLAN never stops because of user errors. Instead, it either ignores a bad parameter or command, or takes some default action. You will not make DLAN crash.

We will now describe each of the commands fully.

W: Define or recall a Window

```
Wraabbccdd
Waabbccdd
Wr
```

where 'r' is optional reference letter; you can recall a window defined fully elsewhere just by referring to its letter. Upper case and lower case are differentiated here,

and where 'aa' is start screen line (00 = top, 23 = bottom),
'bb' is number of screen lines (max = 24-aa),
'cc' is left-most screen column (00 to 31),
'dd' is number of screen columns wide (max = 32-cc).

Note that when aa,bb etc are less than 10, you must give a leading zero.

Before interpreting the first command, DLAN assumes the current window to be the full screen, as if you had started with a command:

```
W0024 0032;
```

The use of reference letter is highly recommended: you can define all your windows in one REM and then refer to them where needed with the short 'Wr' method. And if a window has to be changed (i.e. you want to define it elsewhere) then there is only one change to make to the DLAN commands. For example, suppose we have a window at line 5 for 6 lines, column 10 for 15 lines, we can define it as:

```
WA0506 1015;
```

Now, at any place in the DLAN command program, we can recall window "A" just by coding:

```
WA;     (or, wA; but not Wa; since the small "a" does not
         match the big "A".)
```

E: Edge the current window

```
En
```

where 'n' is a digit 1 to 9 denoting one of 9 styles in which to make a frame around the window currently defined. Further, after making the frame DLAN then shrinks the window by 1 all round, so that the frame is then not affected by subsequent scrolls etc. within the window. (If the window is already too small in one direction, this shrink is suppressed.)
Rather than list all the styles, we leave it to you to explore them.
Note that the use of repetition factor causes progressive shrinkage, e.g.:

```
5E8;
```

T: Type Font Select

Tn;

DLAN has a repertoire of different print styles and sizes, for use with the '=' and '<' commands. The 16K version of DLAN has four styles, selected by T1; T2; T3; T4; respectively - in addition to the standard Spectrum font. The 48K version has these plus a further seven via codes 5,6,7,8,9,A,B.

If the Type code is not matched, or if just 'T;' is given, then DLAN reverts to standard Spectrum font.

Most styles have upper case only, and one has lower case only. Any text character not matched is replaced with upper/lower case if possible to find a match. If this fails, the individual character is shown in standard Spectrum font. In the case of the normal-size fonts, this may look quite acceptable.

Some fonts have special proportional spaced letters, especially M and W which are wider than the rest, and l and i and period which are kept to single column width. The full set of fonts is as follows..

T1; a very pretty 1 x 1 Serif, upper case only, 0-9, £?.
T2; a clear 2 x 2 Serif, upper case only, 0-9, £?.
T3; a highly decorative modern font in 2 x 2, upper case only, 0-9, £?.
T4; a magnetic ink style in 1 x 1, upper case only, 0-9, £?.
T5; a chunky bold 1 x 1, upper case only, 0-9, £.
T6; full character set 2 tall x 1 wide in Sans Serif
T7; another 2 x 1, upper and lower case, very elegant
T8; Bold 2 x 1 in upper case only, 0-9, £?.
T9; beautifully clear 3 x 1 in lower case only, 0-9, £?.
TA; gracefully-proportioned 3 x 2 Serif, upper case only, 0-9,£?.
TB; strikingly effective 3 x 2 Shadow face, upper case only, 0-9, £?.

#: Set Command Delay

#; (no parameters)

DLAN waits for about 1/5th second between commands, or between repetitions of a command; but you can alter this interval at will to any number of TV frames between one and 255 (0-5 seconds) by giving # a repetition factor being the number of TV frames. So for the fastest pace, use just '#;' and for the slowest pace, use '255#;' Although the individual effects, such as scrolling, are at a predetermined pace, the use of # affects the overall pace of the sequence of commands. You can change pace with as many # commands as you like. DLAN starts off with an assumed value of 10 - about 1/5th second.

†: GOSUB equivalent

†x;

where 'x' is the one-letter label of a DLAN command subroutine. DLAN hunts for a command of '*x' and transfers its processing to that command if found. 'x' may be upper case or lower, and these are differentiated.

*: [illegible] Entry Point

*x;

where 'x' is the one-letter label to which a † command refers. You can have labels of any length, but only the first character is examined by DLAN.

R: Return to † caller

R;

This is analogous to the Basic RETURN statement. But since DLAN has no "GOTO" equivalent, you must also use 'R;' to seperate your top-level DLAN commands from any subroutines which follow. In other words, DLAN restarts at the beginning if there is no † corresponding to an 'R;'.

Notice that DLAN supports up to 10 levels of nesting. This means that a '*x;' routine can itself also call other routines using '†X;', and these in turn can call others - up to 10 layers deep.

Another noteworthy aspect of DLAN † command is that it can take a repetition factor. DLAN keeps track of the number of repetitions at all levels. An interesting application is to use 'nnn†A;R;*A;' etc. at the beginning, and '....;R;' at the end of the main sequence, so that DLAN very rarely goes back to the exact beginning. This may be of use to prevent DLAN's automatic re-definition of windows and colours at the start of each cycle.

A final note on subroutines: it is easy to forget the 'R;' at the end of the main sequence. If forgotten, the effect is to have DLAN drop into the first subroutine, and exit directly back to the start of the command list. Similar errors happen if 'R;' is omitted at end of subroutines.

Programming Tips

a) Write and test a little at a time.

b) If your text is not appearing, you probably forgot the '=' in front of it !

c) For a large job, it can get tedious waiting for the whole sequence to reach the bit you've just coded. So, temporarily use a '†X;R;' at the beginning, and '*X;' just in front of the piece being tested, or some earlier strategic point. You can easily remove these later.

d) Experiment with all the fonts, edges, colours, etc. and try deliberate overlap of windows - they can be quite pleasing.

LOAD/SAVE/RUN

Let us start with how DLAN sits in RAM:
DLAN machine code sits between RAMTOP (lowered using a CLEAR xxxxx) and the UDG set. Its entry point is some way beyond the start of the machine code, most of which contains font tables. Entry is made via the familiar USR function. DLAN16K and DLAN48K are of different sizes (due to less fonts in DLAN16K), and at different addresses.

Apart from the REM lines containing your DLAN commands, we suggest the following to complete your programs with SAVE and auto-load facilities.

```
16K.....    9990 RANDOMIZE USR 30335: STOP
            9995 SAVE "DLAN" LINE 9996: SAVE "DLANmc" CODE 26346,
                 6253: STOP
            9996 CLEAR 26345: LOAD "" CODE: RUN

48K.....    9990 RANDOMIZE USR 63190: STOP
            9995 SAVE "DLAN" LINE 9996: SAVE "DLANmc" CODE 50392,
                 14976: STOP
            9996 CLEAR 50391: LOAD "" CODE: RUN
```

Your cassette tape contains an example 16K program which auto-loads the DLAN16K machine code which follows. The third item on the tape is the DLAN48K machine code, which we leave for you to load if you have the 48K version of Spectrum.

To save a program, you can just SAVE "name". But if you want to save DLAN too and have it auto-run, code Basic as shown above and use GOTO 9995.

16K DLAN leaves you about 2K of REM space. 48K DLAN leaves you with about 26K of REM space.

To run your DLAN display, just: RUN.

Editing DLAN Commands

If 'f' key is pressed during DLAN processing, DLAN halts after completing the current command. It resumes when you press any key other than 'f' or 'r'. To exit from processing, press the 'x' key. (No need to hold keys down - DLAN remembers but always finishes its current command.). Upon exit, DLAN will have renumbered your REMS in tens, and also it sets the program cursor to the interrupted REM. Only lines below 9990 are renumbered - hence the choice of line numbers in previous paragraph. Resume DLAN with RUN at any time. (But it always starts at the beginning.)

User Basic

If you wish to add your own processing to the display, use a GOTO after the RANDOMIZE USR xxxxx, instead of STOP. Then you can make and print your own fancy invitation letters, etc. If you wish to suppress the renumber function, use an entry point 46 higher than that given in the USR function.

DLAN Command Summary

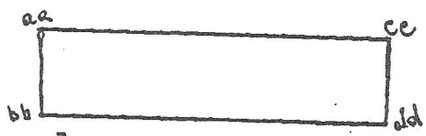
Command	Meaning	Parameters
A	Attribute	B (Bright) D (Dull) F (Flash) S (Steady)
B	Screen Border	0-7 colour code
C	Colour	Paper 0-7, or Paper and Ink 0-7
E	Edge window and if room shrink the window size by 1.	1-9 which is the style of border required.
F	Fill the window	Fill character, or space, or if no fill character then only colours are effected.
P	Pause for 1 second	(no parameters)
R	Return from subroutine	(no parameters)
S	Scroll window contents.	U (Up) D (Down) L (Left) R (Right) If no parameter, U (Up) assumed.
T	Select Type Font	1-9 for type size and style, or N to revert to normal Spectrum font. If no parameter, N is assumed.
W	Window select or define. (Use just Wr; to select window defined elsewhere in the commands.)	rnabbccdd or nabbccdd or r, where r = non-numeric reference label aa = start screen line bb = number of screen lines cc = start screen column dd = number of screen columns
-	Print text	text to be printed scrolled up from the lower part of the current window, and using word-processing logic.
<	Print text	text to be rolled right-to-left after initial up-scroll, in lower part of the current window.
↑	Subroutine call	One-character name of subroutine.
•	Subroutine entry point	One-character name of subroutine.
#	Tempo control	No parameters, but repetition factor is no. of TV frames pause between commands.

NOTICE

DLAN GVC

ALCUNI CHIARIMENTI ALLE ISTRUZIONI DI DLAN di GIAMMARIA VISMARA CURRO'

pag.2 : Per definire una finestra (w) tenere presente che i parametri 'aa' e 'cc' corrispondono ai valori x,y (rispettivamente) della PRINT AT, e che i parametri 'bb' e 'dd' indicano per quante righe in basso e caratteri a destra (rispettivamente) è dimensionata la finestra.
Dopo il comando 'w' si può mettere una lettera come etichetta (label) cui fare riferimento per stampare nella finestra precedentemente dimensionata, sono possibili 52 etichette in quanto maiuscole e minuscole vengono considerate diverse.



pag.3 :Il filling 'f' usato da solo non cancella ciò che prima era sullo schermo.
Dopo '=' (Print) eventuali spazi bianchi (space) posti prima della scritta non hanno effetto; per spaziare, usare il carattere grafico vuoto (modo G,8); gli spazi all'interno o dopo la scritta si possono inserire come al solito e hanno effetto.
ATTENZIONE :Le istruzioni non sono chiare, il ';' da usare per la programmazione è quello normale; quello UDG va usato solo all'interno di scritte. Lo stesso vale per i ':'.

pag.4 :B=BRIGHT 1, D=BRIGHT 0, F=FLASH 1, S=FLASH 0

pag.5 :Nei comandi di carattere 'tA' e 'tB' A e B devono essere Maiuscole

pag.6 :IL comando '*x' definisce una soubroutine dove la 'x' è un'etichetta; come per la 'w' ci sono 52 etichette possibili.
Ricordate che alla fine di una subroutine va sempre messa la 'r' (return)
es: 230 REM *a;=ciao;r

pag.7 :Un programma non può girare se non è presente l'appropriata RANDOMIZE USR (vedi riga 9990 sulle istruzioni); quando volete salvare su cassetta aggiungete anche l'appropriata 9996,per avere il caricamento (SAVE) del programma e dei bytes la 9995 può essere fatta anche in 'Direct mode' cioè non è necessario inserirla nel programma.
Queste istruzioni se hanno un numero inferioe a 9990 verranno rinumerate.

ALCUNI CONSIGLI
E' più pratico scrivere i comandi con le minuscole il programm a li riconosce validi ugualmente.
Se dimenticate di spegnere il Flash, tutto ciò che stamperete in seguito "fasherà".

B1

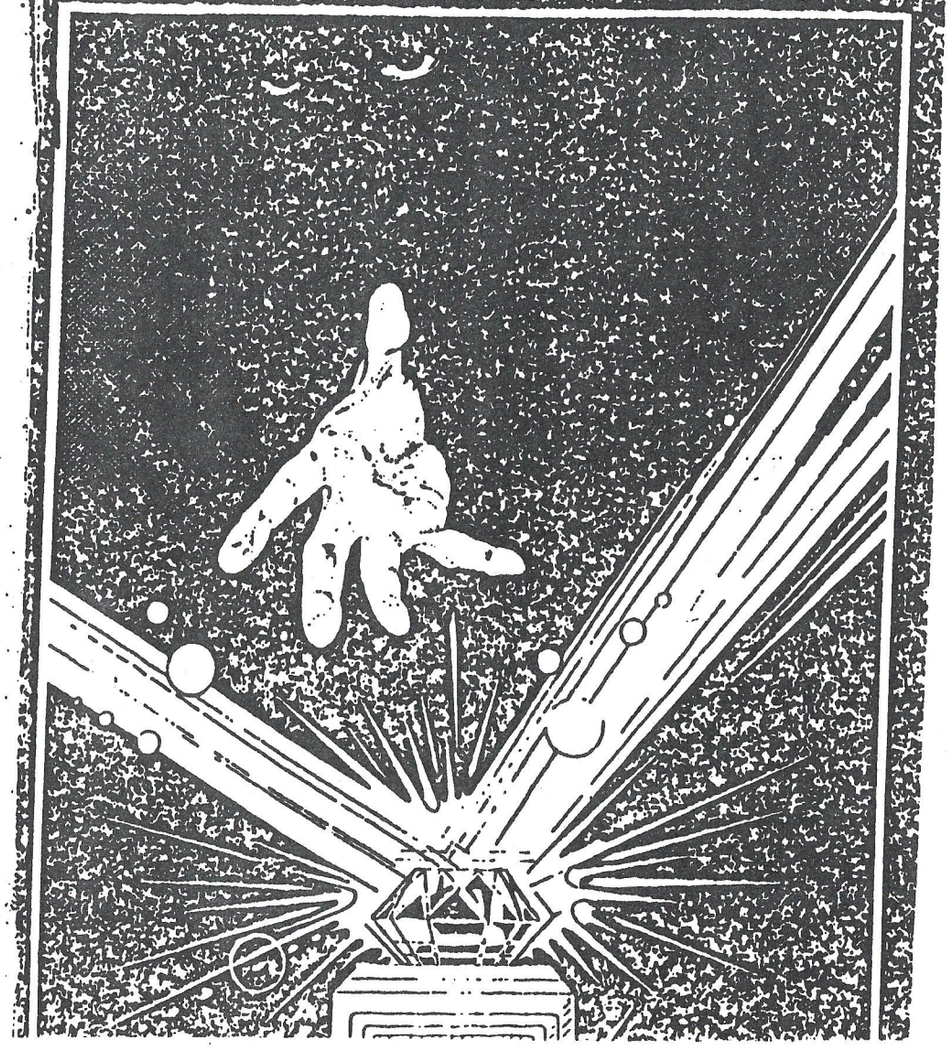
Per eliminare le scritte (equivalente del CLS) fate tanti scroll quanto è alta la finestra (eslusa la cornice) es: '24s' per una finestra a tutto schermo, '22s' per la stessa ma con cornice.
Malgrado un attento studio delle istruzioni e varî esperimenti, non sembra possibile uscire dal programma senza premere la 'x', cioè scrivendo una istruzione interna al programma o ingannando la macchina.
Le soubroutine vanno scritte tutte in fondo al programma,nella istruzione che precede la prima sub, cioè l'ultima del programma, va inserita alla fine una 'r'; se si omette di farlo il programma ricomincerà lo stesso ma prima eseguira la prima subroutine.
Un programma in ogni caso riparte da solo una volta arrivato all'ultima istruzone.

IL PROGRAMMA 48k (Dlan GVC)
Questo programma è stato scritto per mostrarvi tutte le cornici e i caratteri possibili. Dopo averlo caricato va' in Auto-run se lo volete fermare basta premere 'x'. Dopo aver riempito tutto lo schermo il programma si ferma per 20 secondi per fermarlo più a lungo senza uscire dal programma premete 'f', per farlo ripartire basta premere un tasto che non sia 'x' o 'f'.
Per vedere il listato premere 'x' e poi chiedere il List.
Gli utenti del I6k non possono far girare il programma ma possono vedere il listato, per far questo invece di caricare il programma con 'LOAD "" ' devono farlo con 'MERGE "" ', il computer dopo aver letto il programma si fermerà stampando il solito O.K.Oa questo punto basta chiedere il List.
Un piccolo esmpio di programmazione.

```
10 REM c07;e4;tI;<PROGRAMMA DIMOSTRATIVO(4 spazi);↑a
20 REM c07;22s;r
30 REM *a;IIs;c51;f;c37;f;c46;f;r
40 RANDOMIZE USR 63103:STOP  (per il I6k 30335)
```

Nella riga 10 definiamo la carta nera e l'inchiostro bianco 'c07' ,la cornice 4 'e4', il carattere I 'tI', i quattro spazi servono a stampare centrata la scritta che entrerà in basso da sinistra a destra.
poi viene il comando che fa saltare all sub.
Nella 20 ridefiniamo il colore (cambiato dalla sub), puliamo lo schermo e facciamo riprendere il programma da capo. Per la 30 fate un po' di sforzo per capire cosa accade. Va da se che per scrivere il programma, dopo aver caricato Dlan spingerete 'x' e darete il NEW.

BLACK CRYSTAL



7X 81	SPECTRUM
CASSETTE 1 SIDE A	CASSETTE 1 SIDE A
TEST MAP 1	MAP 1
CASSETTE 1 SIDE B	CASSETTE 1 SIDE B
MAP 2 MAP 3	MAP 2
CASSETTE 2 SIDE A	CASSETTE 2 SIDE A
MAP 4 MAP 4B	MAP 3 MAP 4
CASSETTE 2 SIDE B	CASSETTE 2 SIDE B
MAP 5 MAP 6	MAP 5 MAP 6

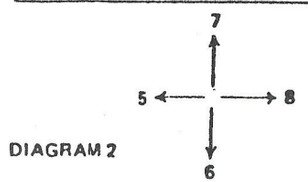


DIAGRAM 2

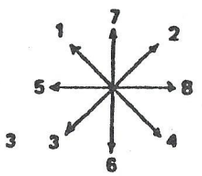
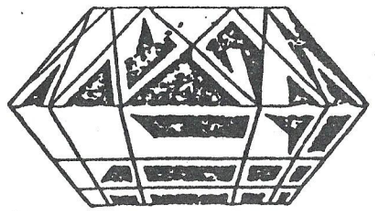


DIAGRAM 3

KEY Q	SWORD UP –	USES PHYSICAL POWER
KEY R	SWORD FORWARD –	" " "
KEY U	SWORD DOWN –	" " "
KEY A	SHIELD UP –	" " "
KEY L	SHIELD FORWARD –	" " "
KEY Z	LIGHTNING –	USES SPIRITUAL POWER
KEY B	POWER DRAIN –	" " "
KEY P	SWERVE –	

WHEN USED IN BATTLE IT PUTS YOUR PHYSICAL AND SPIRITUAL STRENGTH UP ONE POINT. BUT BEWARE, THE MONSTER MAY STILL KILL YOU.



Two to breach the barriers of Evil,
Four to hold them well,
Five together call the sixth.
Six the force of fire to quell.
Sings he now the hero brave.
Seven found,
Fought and won,
Seven shall vanquish,
Seven as one.

A brilliant apparition appears before you, it is one of the seven great Lords of light. He speaks:

"Before creation there existed a single sphere of energy afloat in a vast timeless void. Within this sphere developed an intelegence that was alone and without purpose. It set itself a task to forge the ring of creation but in so doing it created an imbalance. The sphere split asunder and the intelligence was parted into two egos, good and evil. Evil corrupted the ring and used it to give birth to seven angels of darkness, the Lords of Chaos. To lessen the corruption of the great ring the power of light separated it into seven rings. To wield the power of the rings seven Lords of Light were born. They took the rings and with them created worlds and on those worlds were sown the seeds of life. Evil followed creating its own bizarre life forms. On the planet of the first born, the planet Earth, the Lords of Chaos built a fortress named Ny'Ugal. To men it was known as the towers of dread. Within its dark walls evil took upon a form. It fed on hatred and fear, its shadow growing until it filled the fortress. None could withstand its power and both men and elves were enslaved.

Their task of creation completed, the Lords of Light returned to Earth and there met in battle with the Lords of Chaos. The dark Lords and their evil force were driven back into Ny'Ugal. Together, the Lords of Light removed their rings and hurled them at the fortress. An explosion followed that threw mountains asunder and created a valley that concealed the rings. The Lords of Chaos were banished beyond our universe and for a thousand years peace prevailed upon the Earth.

The valley was named Beroth by the elves. The land was gifted with the most fertile soil on Earth but the memory of Evil was etched into Elfin peoples hearts and none would settle there. Man was less sensitive and Beroth became the richest of his Kingdoms. It was famous as a place of learning and the council of the wise met regularly in the great hall of Monmouth, within the royal castle. In their keeping the council held five of the rings of creation. The sixth ring, the ring of time, was wedged in solid rock deep within an underground labyrinth. It was found by the leader of the Shaggoths, creatures brought to earth by the Lords of Chaos to fight in the battle of the Angels. He promptly claimed it as his and declared himself King Shaggoth and holds the labyrinth as his Kingdom to this day.

The seventh ring, the Ring of Fire, was worn by Mendas eighth King of Beroth.

Gora was twelve years of age when the Shadow returned to Beroth. He was apprentice to the Wizard Nemor, supreme councillor of the wise. Gora befriended Prince Tobias, son of Mendas and heir to the throne of Beroth. Tobias desired the knowledge that Gora had been taught.

He approached the council and requested entrance to the Brotherhood of Wizards but Nemor looked into his heart and saw that it was filled with a lust for power. Rejected, Tobias turned to Gora for help. Gora borrowed for him ancient books and manuscripts that held dark secrets which he knew nothing of. But soon Tobias tired of the weak magic that Gora could teach him and he experimented with ancient spells. One evening, as all creation slept an unatural sleep, he conjured to himself the Fire Demon. It taught him a formula that promised power and knowledge even the wise did not understand. Tobias, blinded against the dangers of meddling in the black arts, used the formula. It created for him a small crystal of concentrated evil. Tobias made sacrifices of small animals to it and the crystal began to grow. Little time passed before the cyrstal was large enough to influence the Prince's thoughts and movements. Like a puppet, under the cover of darkness, Tobias crept up to his father's bedside and thrust his dagger deep into the old King's heart. The crystal grew.

With the crowning of Tobias evil had indirectly gained control over Beroth and the ring of fire. Soon the crystal's influence was so widespread that it controlled most of the population of the castle. Foreseeing the danger Nemor summoned Gora to a meeting of the council and presented him with one of the rings of creation. To each of four riders awaiting in the courtyard, Nemor gave also a ring and the instructions to ride in different directions and take the rings from this land. To Gora he bade farewell and departed with the rest of his order. Tearfully Gora mounted his horse and fled the castle. It was a day's ride to the mountains in the south and once there Gora thought he would be safe but Nemor had not known the rings of creation call to each other and can only be separated by a small distance, in the hands of men. None of the rings could leave Beroth without the others.

Gora turned and headed home but the roads to the castle had already become dangerous. Armies of Trolls patrolled the roads killing and eating unwary travellers. Gora was forced to travel east to dispose of his ring in the swamp. The rings ever left the valley.

Tobias and a temple built in his honour. A great tower was built to house the Black Crystal and through the centuries it grew in strength. Prince Tobias and his followers lost their mortal bodies but their shadows still inhabit the castle and haunt the cursed land.

After leaving Beroth, Gora moved North to the palace of the Wizard of the ice mountain. There he completed his training and set upon a quest to find a weakness in the Black Crystal of evil. For five centuries he shrugged off age and wandered dark pathways seldom trod by mortal men.

Finally his travels took him to the Citidals of Mars where, engraved in runes on a diamond wall he found the tale of Creation and the War of Angels. He also found that which I tell you now and I bid you pay heed to what I say;

The rings of creation when placed in precise location around the force of evil will banish it from our universe. Gora awaits you, go now."

The apparition has gone.

LOADING:

Black Crystal is a multi-Program adventure. To begin your quest Load "map 1". This program is your doorway into the other map sections. When your screen display asks "Do you want to start a new adventure?" Press Key Y to answer yes. When you are successful in entering the Shaggoths lair, Castle, Temple or Tower you will be given a reference number and a Map number. To continue your adventure find and load the program with the file name that matches the Map number (see diag 1). When the next program is loaded the computer will ask you to enter your Map reference number. Now enter the reference number given to you by the previous program. Black Crystal is a delicately balanced game and interfering with the reference number could spoil your adventure. When you have a reference number for each map section you will be able to play favourite parts of your adventure over again without starting from Map 1.

At various times during the adventure you will be returning to Map 1. Each time it will ask you if you want to start a new adventure. Unlike the first time, you will now type N for no. The computer will ask you for a map reference number and you must repeat the procedure outlined above.

WARNING: ZX81 owners do not use RUN. Using run will clear important variables held in Memory.

PURITY: This is an important value. When you are killed the Wizard Gora can resurrect you by bringing you back to sanctuary, but only if your purity reading is greater than zero. You lose purity points by using spells that you might find on your quest or by using the help of the Oracle Zenobie.

PHYSICAL STRENGTH:	You need this to use your physical weapons (Sword, Shield)
SPIRITUAL STRENGTH:	You need this to Cast Spells (Lightning, Power drain etc). Using "Lightning" and "power drain" will not effect your purity level.

SAVE GAME ROUTINE: Each program contains a save routine which allows you to save the game part way through. To use the save routine with single-key sections of the program *(i.e. real-time sequences)*, you only have to press Key S on your computer. To use the save routine on Two Word Command sequences of the program you must type in "SAVE" then press "ENTER".

SPECTRUM USERS ONLY: After saving the main program the computer will repeat the instruction "START TAPE AND PRESS ANY KEY". Keep your tape recording and press a key, the SCREEN DISPLAY will now SAVE. When loading the first section will load the second (screen display) section automatically.

DETAILS OF EACH PROGRAM

MAP 1 This shows you a Map of the Kingdom of Beroth. Pressing arrow Keys 5 to 8 will allow you to move around the screen. *(Diagram 2)*. There are two reasons why your token may not respond to your key commands.

1) You are trying to enter an area in which you are not allowed.
2) You are being challenged by a monster. If your token stops, look to the bottom of the screen display to see if you are under attack. The monster battles are in real time so you must be quick. The computer does not wait for you to respond. You can respond by hitting Keys Q,R, U,P,A,L,Z,B *(see Diag 4)*.

   For Example: Key P allows you to swerve. Keep your fingers off the keys until you have decided which key to press. The computer reacts almost immediately to your input. Keep the key pressed until the computer reacts to it.

   Spectrum owners have the added feature of an audible Warning when a monster challenges them. They also have an ever changing difficulty level from Misfit to Demi-God.

MAP 2 This holds the three floors of the Castle of Shadows. The style of play is similar to Map 1 but this time you have the added difficulty of finding your way through secret passages and an Invisible Maze.

INSTRUCTIONS FOR SPECIFIC LOCATIONS

SEA OF SAND	Use Keys 1 to 8 to move *(Diag 3)*.
UNDERGROUND SWAMP	Use Keys 1 to 8 to move *(Diag 3)*.
GOLD MINE	Use Keys 5 to 8 to dig for gold *(Diag 2)*. Beware of fools gold and the terrible flesh eating rock snakes.
"BRIDGE OVER ABYSS" and "TEMPLE MAZE"	Use Keys 5 to 8 to move *(Diag 2)*. Use Key 0 to use your Sword. Use Key Z to fire lightning bolts. Fire breathing dragons hunt you down across the bridge through the Maze. Your strength and spiritual power will not be replaced until you make it through the maze.
ROOM OF PITS	Use Keys 1 to 8 to move *(Diag 3)*. Reach the exit on the other side of the room while trying to avoid the pits. To make it more difficult Sirens will appear and draw you off course. When a Siren appears only ONE Key will control your movements and that Key will be between 5 and 8. It's up to you to find which one before the sirens claim another victim.
LORDS OF CHAOS	Use Keys 1 to 8 to move *(Diag 3)*. This is a strategy game. You make your move and the Lords of Chaos make theirs. Use Key 0 to drop the fire ring. Use Key P for power search. You must lead the Lords of Chaos over the fire ring to banish them. If they see the ring they will throw it across the room. You can pick up the ring by passing it or using Power search which will pick it up from anywhere on the boards. Beware of Death do not move directly towards him or you might gaze on his face and no mortal will live after it.
THE BLACK CRYSTAL	Use Keys 1 to 8 to move *(Diag 3)*. Use C to drop a ring. Use T to pick up a ring. The Black Crystal is surrounded by pedestals. To destroy the crystal you must place a ring on each pedestal. The Black Crystal is not defenceless and can knock the rings off or kill you.

B1

CRISTALLO DELLE TENEBRE

Due per rompere la barriera del male
Quattro per farlo bene
Insieme a cinque chiamano sei
Sei la forza del fuoco per domare
Canta egli ora il nostro bravo eroe
Sette trova
Combatti e trionfa
SEtte sarà vincitore
Sette é uno .

Una figura brillante ti appare di fronte:é uno dei sette signori della luce
Egu dice:"Prima della creazione esisteva un solo tipo di energia.Quando svilup-
po'un'intelligenza questa fu sola e senza scope.Poi l'intelligenza si divise in
due Ego,uno buono uno malvagio.Il malvagio corruppe l'anello e lo uso'per far
nascere i sette angeli dell'oscurità,isignori del Chaos ;per diminuire il potere
del grande anelle ,il potere della luce lo separo'in sette anelli.
Per combattere il potere dell'anello erano nati i sette signori della luce.
Presero gli anelli e con essi crearono i mondi e diedero ad ogni mondo la propria
forma di vita.I malvagi crearono le loro proprie forme di vita.Nel primo pianeta crea
la terra,i malvagi costruirono una fortezza chiamata Ny'Ugal.Agli uommini nota
come la torre del terrore.Quando scese l'oscurita'il male prese forma e proietto'
la sua ombra fuori della fonte,nessuno poté resistere al suo potere.
Completata la creazione i signori della lucetornarono sulla terra e diedero battaglia
ai signori delle tenebre.i signori delle forze del male si ritirarono in Ny'Ugal.
Tutti insieme i signori della luce scagliarono i loro anelli contro la fortezza.
Un'esplosione spaccoʻ la montagna e produsse una valle che inghiotti'gli anelli.
I signori del Chaos furono ricacciati nel loro universo e per cento anni la pace
prevalse sulla terra.La valle fu chiamata Berot.Il suolo fu ricoperto con ilpiu'
fertile terreno della terra;ma la memoria del male era incisa nel cuore del popolo
degli Elfi e niente avrebbe potuto cancellarla.Gli uommini erano meno sensibili
e Beroth divenne il piu ricco dei loro regni.Divenne famoso come posto di appren
dimento e il consiglio dei maghi si riuniva regolarmente nella grande sala dei
MonMout,nel castello reale.Nelle mani del consiglio erano cinque degli anelli della c
creazione.Il sesto anello ,l'anello del tempo era dentro una solida roccia in fondo
ad un labirinto sotterraneo costruito dal capo degli Shaggoths creature chiamate
sulla terra dai signori del Chaos per combattere la battaglia co gli angeli.
Si proclamo're Shaggoths e dichiaro'il labirinto suo regno.Da quel giorno il
settimo anelle,l'anello del fuoco era portato da Mendas,ottavo re di Beroth.
Gora aveva dodici anni quando l'ombra ritornoʻ su Beroth.Egli era apprendista
del mago Nemor supremo consigliere dei maghi.Gora era amico del principe Tobias
figlio di Mendas ed erede al trono di Beroth,Tobias desiderava conoscere le nozioni
che Gora aveva potuto apprendere.Egli richiese al consiglio poterentrare a far
parte della confraternita dei maghi ma Nemor guardoʻ nel suo cuore e vide la brama
del potere.Respinto Tobias tornoʻ da Gora per farsi aiutare Gora ricercoʻper lui anti
libri e manoscritti che trattavano poderosi segreti che nessuno conosceva.Ma presto
Tobias si stancoʻ della magia che Gora cercava di insegnarli e sperimentoʻ un antico
incantesimo,una mattina mentre tutto il creato dormiva un sonno naturale egli
congiunse a se stesso il demone del fuoco.Egli aveva scoperto una formula che
prometteva potere e conoscenze che un mago non poteva neanche capire.Tobias avanzoʻ
verso le pericolose arti oscure,usoʻla formula e fu creato per lui un piccolo
cristallo di malvagità concentrata.Tobias gli sacrificoʻpiccoli animali e il pic
colo cristallo cominciaʻa crescere.Passoʻ poco tempo e il cristallo l'aspetto e
i movimenti del principe come un burattino sotto il manto delle tenebre

Tobias si precipito' di fronte a suo padre e pianto'un pugnale nel vecchio cuore del Re,intanto il cristallo cresceva.Presto l'influenza sprigionata dal cristallo fu cosi'forte che riusciva a controllare gran parte degli abitantidel castello; presagendo il pericolo Nemor invito' Gora ad un'incontro con il consiglio e gli consegno'uno degli anelli della creazione.Diede anche uno anello ad ognuno dei quattro cavalieri presentia corte e le istruzioni di cavalcare in diverse direzioni e portare via gli anelli da quella terra.Augoro'buona sorte a Gora e parti'con il resto dei cavalieri.Pieno di lacrime Gora sali' sul suo cavallo e lascio' il castello Ma Nemor non sapeva che gli anelli in mano agli uommini non potevano essere separati da grandi distanze.Nessuno degli anelli avrebbe potuto lasciare Beroth senza gli altri.Gora torno'verso casa ma la strada per il castello nel frattempo era diventata pericolosa,le armate di Trolls presidiavano la strada e catturavano e mangiavano ogni viaggiatore.Gora fu costretto a nascondere l'anello nelle paludi per poter lasciare quelle terre.Una grande torre fu costruita in onore del cristallo e attraverso i secoli esso crebbe.Il principe Tobias e i suoi aiutanti persero i loro corpi mortali ma le loro ombre facevano rimanere inabitabili il castello e le terre circostanti.Dopo aver lasciato Beroth Gora si mosse verso nord nel palazzo dei maghi tra leMontagne ghiacciate .Qui'completo'i suoi studi e cerco' di capire il punto debole del cristallo ,per cinque secoli esso aveva fatto strage di uommini nell'oscurita' Finalmente il viaggio di Gora tocco'la città di Mars dove nascosto fra le rune, in un muro di diamanti trovo il talismano della creazione e della guerra degli angeli Egli ha trovato anche quello che ti ho detto e spero che tu terrai in conto quello che ti dico:gli anelli della creazione disposti in una precisa locazione intorno alle forze del male le possono ricacciare via dal nostro universo.Gora ti aiuterà,vai ora ,l'apparizione svanisce.

DIAGRAMMA 2

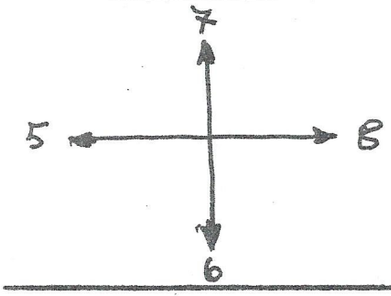
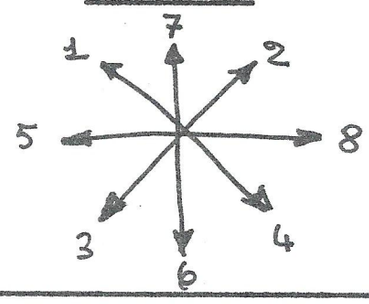


DIAGRAMMA 3



CHIAVE Q	LAMA SU	USA L'ENERGIA FISICA
" R	" DIETRO	" " "
" U	" GIU'	" " "
" A	SCUDO SU	" " "
" L	" DIETRO	" " "
" Z	LUCE	USA ENERGIA SPIRITUALE
" B	SCARICA DI ENERGIA	" " "
" P	DEVIAZIONE	QUANDO USATA IN BATTAGLIA ALLUNGA DI 1 PUNTO LA TUA ENERGIA MA ATTENTO IL MOSTRO PUO ANCORA UCCIDERE

DIAGRAMMA 4

CARICAMENTO

CRISTALLO NERO é un multi-programma di avventure.Per iniziare carica:"MAP 1" quando ti verrà chiesto:DO YOU WANT START A NEW ADVENTURE? rispondi "Y" .Quando sarai entrato con successo nel regno dei Shaggoths o nel castello o nel tempio o nella torre dovrai dare il numero della mappa e il numero di riferimento.Per continuare cerca e carica il programma con il numero della nuova mappa.Quando il programma sarà caricato ti sarà chiesto il numero di riferimento di mappa tu dovrai rispondere con il numero di riferimento avuto nel precedente programma.BLACK CRISTAL é un gioco delicatamente bilanciato e interferire con il numero di riferimento puo' rovinare la tua avventura. Quando avrai avuto tutti i numeri di riferimento di ogni sezione della mappa potrai iniziare la tua avventura dalla parte che preferisci e non sempre dalla mappa 1 Diverse volte durante l'avventura vorrai tornare alla mappa1 ogni volta ti verrà chiesto se vorrai iniziare una nuova avventura,diversamente dalla prima volta tu dovrai rispondere"N" Il computer ti chiederà il numero di riferimento della mappa e tu dovrai rispondere come sopra.

PUREZZA (PURITY)

Questo é un valore importante quando vieni ucciso Gora puo resuscitarti portandoti nel santuario ma solamente se la tua purezza é maggiore di zero.Tu perderai purezza usando l'incantesimo che propabilmente troverai,oppure consultando l'oracolo di Zenobia.

ENERGIA FISICA (PHYSICAL STRENGTH)

Ne hai bisogno per le prove fisiche(Sword shield)

ENERGIA SPIRITUALE (Spiritual strenght)

Ne hai bisognio per gli incantesimi del castello (ligh nigg,power drain ecc.)

Per salvare la routine del gioco :Ogni programma ha i comandi per salvare la parte del gioco in cui sei passato.Per usare la routine con singola chiave del programma (per esempio le sequenze a tempo reale)tu devi solamente premere il chiave Per usare la routine di salvataggio sulle sequense con chiave doppia (2parole)tu devi impostare "SAVE" e premere "ENTER"
Dope aver salvato il programma principale il computer ripeterà"START TAPE AND PRESS AN KEY" lasciate stare il registratore e premete un tasto.

DETTAGLI DI OGNI PROGRAMMA

MAP 1 Ti mostra il regno di BEROTH premendo le frecce 5 8 ti puoi muovere per lo shermo .Ci sono 2 ragioni per cui i comandi potrebbero non rispondere
1)Stai andando incontro ad un mostro.Se il cursore si ferma guarda sul basso del video per vedere se sei sotto attacco.I combattimenti con i mostri sono in tempo reale,tu devi essere veloce .Il computer non aspetterà la tua risposta,tu puoi rispondere con i tasti Q R U P A L Z B (vedi progr.4)
Per esempio il tasto P ti farà deviare metti le dita sul tasto che hai deciso di premere,il computer risponderà immediatamente al tuo input.Mantieni il taste spinto fino che il computer reagisce.Un suono ti avvisa dell'arrivo dei mostri si puo' ombiare il livello di difficoltà da infimo a semidio

MAP 2 Questa mostra i tre piani del castello delle ombre .Lo stile del gioco é come quello della mappa 1 Ma questa volta avrai maggiori difficoltà per trovare la strada attraverso passaggi segreti e un labirinto invisibile.

ISTRUZIONI PER LOCAZIONI SPECIFICHE

SEA OF SAND tasti 1 - 8 diagramma 3

UNDERGROUND SWAMP tasti 1 - 8 diagramma 3

GOLD MINE tasti 5 - 8 diagramma 2 usa i tasti per scavare l'oro ma guardati dal terribile serpente mangiatore di rocce.

ROOM OF PITS tasti 1 - 8 diagramma 3 per muoversi.Raggiungi l'uscita dall'altra parte della stanza evita le voragini per aomentare le difficoltà appariranno delle sirene che ti faranno funzionare un solo tasto o 1 oppure 8

BRIDGE OVERABYSS
E
TEMPLE MAZE

usa i tasti 5 - 8 per muoverti (diagramma 2) usa il tasto ø per usare la tua spada il tasto 2 per la luce la tua energia non sarà rinvigorita fino che sarai nel labirinto.

LORDS OF CHAOS

usa i tasti 1 - 8 per muoverti (diagr.3) Questo é un gioco strategico tu fai la tua mossa e i signori del caos fanno la loro usai il tasto ø per posare l'anello di fuoco usa il taste P per ricaricarti di energia devi condurre i signori del caos oltre l'anello di fuoco per distruggerli se loro vedono l'anello lo scanseranno attraverso la stanza.Puoi riprenderti l'anello o passandoci sopra o usando l'energia di ricarica.Attento a non morire,non muoverti di fronte a LEI nessun mortale é mai sopravvissuto.

THE BLACK CRYSTAL

Usa i tasti 1 - 8 per muoverti ø per posare un'anello,T per prenderlo . Il cristallo é sorretto da piedistalli .Per distruggerlo devi mettere un'anelle ogni piedistallo, il cristallo puo' difendersi ti puo' uccidere o allontanare gli anelli.

SALES OFFICE

60A, St. Mary's Street, Wallingford,
Oxfordshire OX10 OEL.
Telephone: (0491) 36307.

SOFTEK METEOROIDS

LOADING INSTRUCTIONS:

JUST TYPE IN: LOAD""

and then let tape run until the game auto-starts

YOUR CONTROLS:

- ↑ - THRUST
- 9 - FIRE
- 8 - HYPERSPACE
- 7 - ROTATE RIGHT
- 6 - ROTATE LEFT
- Y to P - STOP THE MOTION
- H to L - SHIELD
- S - START/RESTART GAME

METEOROIDS is a fast moving exciting game written in machine code for 16K or 48K ZX Spectrum. You are in a sector of space where there are hundreds of meteoroids everywhere. Your only chance to get through is to blast your way out. But as soon as one wave is passed more and more are on the way.

You have total control of the ship's movement, and can fire lasers, move and rotate all at the same time. Each volley of shots sends a group of 4 laser blasts out, but beware of hitting a large meteoroid when it is too near you.

There are three sizes of meteoroid, and an alien ship which appears occasionally trying to ram you. Each size of meteoroid and the alien ship are worth differing points:

Large meteoroid	-	20 points
Middle sized one	-	50 points
Smallest one	-	100 points
Alien ship	-	200 points

If you get into real trouble there are three ways out - fire rapid volleys, use the SHIELD or enter HYPERSPACE. The shield puts a protective force around you stopping the meteoroids from hitting you. But beware, if you hold on to it too long or use it again too soon you'll blow up! Going into HYPERSPACE puts you back somewhere else on the screen at random.

This game works with JOYSTICKS too. We recommend those made by Kempston electronics (write to us for details) but any which work in a similar manner will do. On the joystick forward is THRUST, left is ROTATE LEFT, right is ROTATE RIGHT, back is HYPERSPACE. The fire button activates your laser.

SCORING:

A score of 2000 is beginner's level; 5000 is average; and above 20,000 means you're a master.

***EXTRA LIFE AT 10,000 POINTS

SOFTEK SOFtware cassettes are manufactured by the best modern methods under strictest quality control. All our software is confidently guaranteed for 12 months. Other Spectrum software in our range includes:

SUPER-C SPECTRUM COMPILER: This program is almost magical to most people as it converts a program written in BASIC into a super fast professional machine code version - all at the press of a button! It will compile almost all Spectrum BASIC (excepting strings, and integer only) and will suit most people's needs for excellent program writing. However, an enhancement to SUPER C will be available soon which will enable it to Compile all Spectrum BASIC and even add a few commands that Spectrum BASIC lacks!

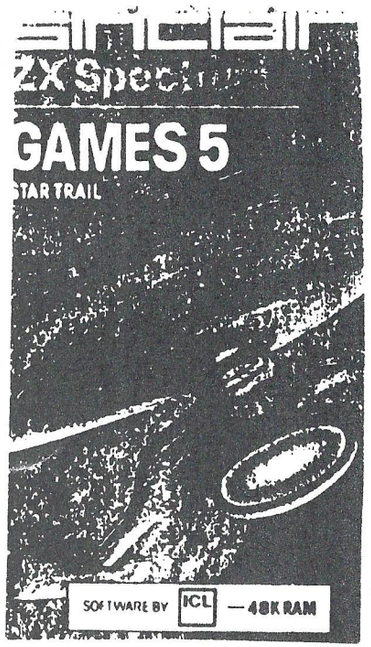
SOFTIME: Now with SOFTIME - you can add a continuous digital clock to your ZX Spectrum. It will keep near perfect time and remain on display even while you are writing or running another program!

3D-MAZENTURE: A fascinating adventure game and maze game in one. More than a hint of Dungeons and Dragons, and machine code animated monsters chasing you. A best seller. (48K Spectrum)

THE ZOLAN ADVENTURE: A full adventure for the 16K Spectrum! Yes we've managed to cram a full adventure game into the 8.5K of memory available on the 16K Spectrum. You are on a distant planet searching for the famed treasure of ZOLAN, once ruler of the galaxy. Not easy!

We also stock a number of TOOLKITS and SCREENKITS - send for details.

Write to us for further details of our software for the Spectrum and for almost any other micro computer



General loading and running instructions

1 Assemble your ZX Spectrum as described in your ZX Spectrum handbook.

2 Load a program by typing:

LOAD (the J key) "program name" or LOAD ""

3 Start your cassette player and press ENTER.

4 When the program has loaded, start it with RUN (and press ENTER) or GOTO 1 (and press ENTER).

5 Full instructions for playing the game are included in the program.

Star Trail	Program Name "S"	Loading Time 3 min 50 secs

STAR TRAIL
OPERATING INSTRUCTIONS

LOADING

Load the program using LOAD "" or LOAD "S" Loading will take about 4 minutes and the program will then start automatically.

If you need to start the program again later, use GOTO 1 Do NOT use RUN or CLEAR

PLAYING INSTRUCTIONS

GENERAL

You, as Captain of the UK spaceship Endeavour, have to rid the galaxy of the Klingon and Romulen menace. The game is played in a galaxy divided into 16 quadrants

SOLARA	NAGRO	CRAB	SIRIUS
VIRGO	GEMINI	ORION	VEGA
TRAAL	LEO	SPICA	DRACO
RIGEL	OSIAN	ANGEL	PLUTO

Each quadrant is divided into 4 sectors

1	2
3	4

So the entire galaxy is like a chessboard — 8 rows by 8 columns. Your position is given either as a name and number (eg Solara 3) or as a row and column (eg 2 1)

Furthermore, each of the 64 sectors is split into 64 (8 x 8) locations)

Very frequently, the TV screen will display the 64 locations making up the sector currently containing the Endeavour

initially the spaceship has 5000 units of energy available Energy is used by defence and attack systems and also for manoeuvring

You command the Endeavour in its defence of the galaxy and the game ends when

- all of the aliens are destroyed, or
- you run out of energy, or
- you are drawn into a black hole, or
- you are destroyed

COMMANDS

There are ten major comends available to help you control the Endeavour You indicate which command you wish to have obeyed by typing a two character code when the message "Enter command (HP HELP)" appears near the bottom of the TV screen The codes and commands are

nv — navigation
ss — short scan
ls — long scan
ph — phasers
to — torpedoes
sd — shields
dm — damage
cm — computer
rs — resign
in — instructions

The two-character code may be typed in upper or lower case letters Any other values will be ignored and the "Enter command" message repeated.

NOTE Nearly all the typing required from you needs to be ended by pressing the ENTER key The exceptions are in COMBAT MODE described later and certain introductory screens when a suitable message states that pressing any key will continue the flow of the program

Typing IN for instructions will enable you to have printed on the TV screen an explanation of each of the commands A similar description follows in this leaflet Typing any other command will cause you to be asked further questions before the command is obeyed

A useful point to remember is that when your path in the game effectively stops until you use one of the other commands This means not only can you 'unwind' yourself of the game tales without risking attack from the aliens but also you can break from the play perhaps to answer the phone and return to find the state of the game unaltered

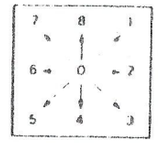
Different commands give different TV displays It is possible to move directly from one display to another by typing in an appropriate command Few displays include a list of the major commands If you need reminding of them use the HP for HELP command

It takes one star date to perform each of your commands The initial TV displays will indicate how long you have to complete your mission

NAVIGATION (NV)

You move within the galaxy by entering two numbers These are

- a course or direction
  This is given as a number between 0 and 8
  Zero means don't move and will abandon the command
  The other directions are represented as follows



  Decimal numbers may be used eg 0.5 will be between North (8) and North East (1)
- a warp factor or distance
  This may be a whole number or a decimal number
  A warp factor of 2 moves the Endeavour 2 sectors
  A warp factor of 2.2 moves the ship 2 sectors [illegible]

If the destination is outside the galaxy, your mission is doomed since the Endeavour will be drawn into a black hole

Travelling across each square within each sector uses 10 energy units

Travelling through Klingons, Romulens, stars or starbases shows poor navigation and is not allowed!

Local Navigation

If your navigation system is damaged, some movement is still allowed Using local navigation you may move between one and three squares per star date

SHORT SCAN (SS)

A short scan displays the contents of the 64 squares making up the sector containing the Endeavour

Status information is also shown on the screen This includes the CONDITION status

During condition ALERT nearby aliens may attack
In condition OK, the ship is currently safe
In condition DOCK the ship is adjacent to a starbase and manual docking can be used to replenish supplies of energy and torpedoes and to carry out repairs

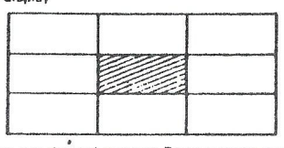
The short scan display board (of 8 x 8 squares) uses the following symbols

- a Klingon
- an injured Klingon
- a Romulan
- a starbase
- the Endeavour
- a star
- empty space

LONG SCAN (LS)

This indicates the contents of the sector containing the [illegible] and the eight surrounding sectors The

current sector containing the Endeavour is in the centre of the display



Each square shows 4 numbers These indicate in order

- the number of Klingons
- the number of Romulens
- the number of starbases
- the number of stars

in this sector

PHASERS (PH)

Phasers are a broad-band weapon They don't require aiming Phaser power can be set to any whole number between 0 and 100 The greater the phaser power, the more likely they are to hit the aliens Phasers travel through obstructions to reach Klingons They do not affect Romulens

Firing phasers causes your total energy to be depleted by the current phaser power setting

If you leave a sector having damaged but not destroyed a Klingon, by the time you return to the sector it will have been repaired

On setting your phasers, you enter COMBAT MODE This is explained later.

TORPEDOES (TO)

Torpedoes are an accurate weapon requiring aiming They will destroy the first object in their path — a Klingon, a Romulen, a star, or even a starbase!

Torpedoes don't use energy but you are restricted to having only 10 on board per flight However, docking renews your supply

When using torpedoes, you will be asked for a course or direction This is given in the same way as for navigation (0 to 8) Zero will abandon the command

[illegible] fired a torpedo, you will be asked for another [illegible] until

- there are no more Romulens in the sector or
- there are no torpedoes left or they have been damaged, or
- you enter a course of zero

Klingons are in this sector, you will then enter COMBAT MODE (see later) If all the aliens in the sector have been destroyed, you will be asked to enter a new major command

SHIELDS (SD)

Defence against alien fire power can be improved by setting shields to an energy value between 0 and 500 This must be a whole number

The higher the shield setting, the better your defences!

Docking sets your shields to zero Reset them later!

DAMAGE (DM)

Warning messages appear on the TV screen as equipment is damaged by alien fire The damage command will give you a list of all the equipment used in the game and an indication of its status For damaged equipment, the time to repair is given in star dates Remember, one command takes one star date to obey

Docking with a starbase will repair all equipment

RESIGN (RS)

By means of the resign command, you may abandon your efforts to save the galaxy. You will be given a chance to start a new game if you so wish

COMPUTER (CM)

Typing CM for computer gives you a list of computer commands Select the command you want by means of its two letter code

Having obeyed a computer command, note that you stay in computer command mode This is indicated by the message "Enter computer command (HP-HELP)"
To leave computer command mode and return to major commands, you *must* type HP (for help)

The following sections describe the computer commands

Captain's Log (lg)

This simply informs you of the time remaining in which to destroy the aliens and how many aliens and starbases exist

Galaxy Map (gm)

This display represents as much as is currently known of the contents of all 64 sectors A 3 digit number is displayed for every sector that would have been shown if long-scans had been done at all stages on your journey Flashing numbers show the sector you are now in

The 3 numbers represent

- total aliens
- starbases
- stars

in this sector

Galactic Guide (gg)

This describes the galaxy layout and the symbols used on the displays and explains your mission

Compute Course (cc)

The computer will compute a course and warp speed for you to travel between any two sectors in the galaxy The start and end points are specified by typing the row and column values for the two locations All four numbers must be entered separately

Torpedo Course (tc)

This will provide you with the course information you need to hit each Romulen in the sector you are in

However, the aliens may be attacking whilst you use the computer So use this aid with care - it is cheating a little bit!

NOTE To dissuade you from using the computer to calculate courses too much there is a built in inaccuracy factor. Beware particularly when your destination is near the galaxy edge - you may end up in a black hole!

Manual Docking (md)

When the Endeavour is next to a starbase, the condition becomes DOCK By using manual docking techniques you must guide the ship into the starbase where repairs are carried out, torpedoes and energy are replenished and you are returned to orbit around the starbase Failing to dock successfully will use up some of your fuel

To dock use the direction keys (5 to 8) to move the ship from above the starbase into the hole beneath the starbase

Having started moving in one direction you will continue to do so until you press the key for the opposite direction Pressing the same key twice doubles your speed

You must dock at slow speed and must not touch any red areas or move off the screen

COMBAT MODE

Reference has been made in the descriptions for phasers and torpedoes to Combat Mode

During combat mode a short range scan is displayed and you are requested to press

- p to activate phasers
- t to fire a torpedo or
- s to leave combat mode

NOTE You should not press ENTER following the letter you choose

If you press p your phasers are fired

If you press t, you will be asked for a torpedo course

If you press s to leave combat mode then the aliens may attack whilst you are attempting to leave the area

The only other way to leave combat mode is to destroy all the aliens in the sector

SCREEN MESSAGES

Informatory messages such as damage reports are shown on the screen for 2 to 3 seconds before the program continues

You may speed the game up by pressing ENTER when you have read the message The prompt will then continue straight away