

## Loading Instructions

1. Connect the power supply lead to the 9 volt input socket at the back of the Spectrum. Connect the aerial lead from the TV UHF socket at the back of the Spectrum to the aerial input jack of your colour TV. Switch on the power of the TV and of the power supply. Tune your television to channel 36 until you see the Sinclair sign appear at the bottom of your screen.
2. Insert the Horizons cassette into your tape recorder with side A on the top. Connect the ear-phone cable from the ear-phone socket of your tape recorder to the earphone socket at the back of the Spectrum. Adjust the volume and tone controls of your cassette so that they are roughly in the middle to upper-end of their range.
3. With the cursor on the TV screen showing a flashing K press key J on your Spectrum. The command LOAD will now appear at the bottom of the screen. With the symbol shift key pressed down press key P to give " after the instruction LOAD. Now type the letters sidea followed by " (symbol shift held down then press P). The line you have just entered should appear at the bottom of the screen as: LOAD "sidea". Now press the Enter key to give this instruction to the Spectrum.  
The spectrum will respond with a blank screen on the television. Start the tape recorder and press any key. After a short time fluctuating lines will appear in the border region of your screen. If a short message appears entitled Program: sidea do not adjust anything and thereafter follow the instructions that the Spectrum gives you. If no message appears after 30 seconds change the volume setting on your tape recorder and wait for a further 15 seconds. Continue this procedure until a message appears on the screen. If nothing has appeared after 2 minutes, re-wind the cassette and repeat the above procedure with a different volume setting. Thereafter follow the instructions the Spectrum gives you. Load and run Side B by typing LOAD "sideb" followed by ENTER key.



**sinclair**  
ZX Spectrum

**HORIZONS**  
C2

An introductory software cassette for the ZX Spectrum. Includes a comprehensive keyboard trainer and an entertaining and illuminating range of programs.

# HORIZONS<sup>2</sup>

from PSION 

Horizons is a large introductory software cassette which contains many programs. It has been designed to introduce you to the Spectrum, to describe some of the hardware and systems features of the Spectrum, to teach you how to use the keyboard of the Spectrum and to entertain, amuse and enlighten you to the possibilities of the use of your personal microcomputer. Side A includes a simple interactive description of the Spectrum and an interesting sequence of lessons to enable you to get used to the complex features of the Spectrum's keyboard. Side B contains a range of interactive programs including games, numerical experiments, the use of the Spectrum for draughtsmanship, programs to illustrate sorting and filing and utility routines which you may find useful later in writing your own programs.

## Side A

Load and run by typing LOAD "sidea"

1. INTRODUCTION and simple explanation of the hardware components of the ZX Spectrum.
2. KEYBOARD TRAINER - LESSON 1. The typewriter mode of the Spectrum illustrating lower case and upper case letters and including tests.
3. KEYBOARD TRAINER - LESSON 2. Describes the user of Sinclair keyboards whereby commands are entered with one key stroke.
4. KEYBOARD TRAINER - LESSON 3. The cursor modes of the Spectrum keyboard are demonstrated. Shows how to obtain different modes and apply them for different purposes.
5. KEYBOARD TRAINER - LESSON 4. Extended mode entry is illustrated followed by a comprehensive overall test.
6. KEYWORD DICTIONARY. A small call-up database containing all the Spectrum keywords, their meanings and applications.

## Side B

Load and run by typing LOAD "sideb"  
1. THRO' THE WALL The classic game using bat and ball. Try and knock the coloured bricks out of the wall to gain maximum points. An interactive real-time program which demonstrates the speed, colour and graphics capability of the SPECTRUM. This program is written in simple BASIC and illustrates how you can write your own games.

2. BUBBLESORT This program illustrates how a computer can sequence or sort a randomly ordered set of objects. In this interesting and amusing example a bridge hand of 13 playing cards is dealt on to a green baize table. The program demonstrates how, by considering pairs of cards, it gradually orders the hands according to number and suit.
3. EVOLUTION or Foxes and Rabbits This program shows in simple BASIC how complex mathematical differential equations can be solved on even a microcomputer like the Spectrum. Such non-linear equations apply to many problems in science and engineering. In this example equations are introduced for an ecological balance between two species of animals in the same environment. Numerical solutions are obtained and shown graphically demonstrating the high resolution of the Spectrum.
4. LIFE A machine code program giving fascinating and amusing patterns in time and describing the growth and evolution of an imaginary colony of beings.
5. DRAW A substantial program which shows the graphics capability of the Spectrum. With the aid of a cursor and a simple set of commands this program allows you to draw and paint complicated diagrams and figures in different colours.
6. MONTE CARLO illustrates the study of how stochastic or statistical events can be recorded and demonstrated on a computer. The program builds a bar chart or histogram for the distribution of throws of a pair of dice. What are your chances of throwing a 12 or a 7?
7. CHARACTER GENERATOR One of the unusual and powerful features of the Spectrum is to allow the user to define his own characters or symbols. This small program sets up a large grid of pixels on the screen and with the aid of a cursor allows the user to easily generate his own characters.
8. WAVES Demonstrates the phenomena of "beating" in music and elsewhere.

# ZX Spectrum

## HORIZONS

Software Starter Pack

Side A load and run by typing LOAD "sidea"

1. Introduction and hardware description.
2. Keyboard — Trainer. Lesson 1-typewriter mode.
3. Keyboard — Trainer. Lesson 2-keywords.
4. Keyboard — Trainer. Lesson 3-Cursor modes.
5. Keyboard — Trainer. Lesson 4-Extended mode and final test.
6. Keyword Dictionary.

Side B load and run by typing LOAD "sideb"

1. Thro' the Wall.
2. Bubblesort.
3. Evolution or Foxes and Rabbits.
4. Life.
5. Draw.
6. Monte-Carlo.
7. Character generator.
8. Waves.

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