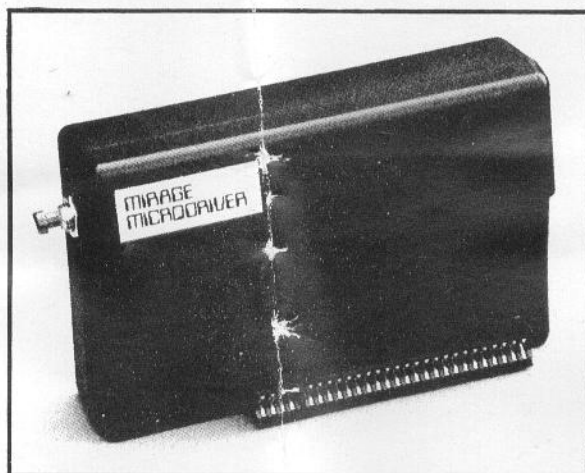


INCREDIBLE!

TRANSFER ANY PROGRAM TO MICRODRIVE CARTRIDGE

The full potential of your microdrive can be realised with the

MIRAGE MICRODRIVER



The most revolutionary and exciting peripheral yet for the Spectrum 48K and the Spectrum +
Now with even more exciting features

Features:

- ★ NEW Even faster loading from cartridge.
- ★ NEW Optional saving of screen display.
- ★ NEW Copy function for screen dumps to ZX printer.
- ★ NEW Dump function for program hacking.
- ★ Consists of hardware only no additional software required.
- ★ Transfers any program to Microdrive in one simple operation.
- ★ Extremely easy to use.
- ★ Freeze any game at any point, save it, and restore it later.
- ★ Compacts program for efficient use of cartridge.
- ★ Through connector for other peripherals.
- ★ "Poke" facility for infinitive lives etc.
- ★ Also save to cassette.

AT LAST THE FULL POTENTIAL AND SPEED OF THE ZX MICRODRIVES
CAN BE REALISED. A TYPICAL 48K PROGRAM WHICH TAKES 5 MINUTES
TO LOAD FROM TAPE CAN NOW BE LOADED FROM MICRODRIVE IN AS
LITTLE AS 20 SECONDS.

"If you have a microdrive the Microdriver is the most important piece of hardware you could buy."

JOHN LAMBERT — Sinclair User

"...an essential buy for the spectrum owner who has converted to microdrive..."

IAN SINCLAIR — Author

"I much preferred the Microdriver for speed and ease of use."

IOLO DAVIDSON — Your Spectrum

"Using the Mirage is a dream...this device is a must for the serious microdriver."

CRASH MAGAZINE — August

Note This unit is intended for software owners to transfer programs onto microdrive cartridges for speed and ease of access.
Programs saved using the Mirage Microdriver are Unreadable unless the Microdriver is present.

Your Local Stockist





MIRAGE
MICRODRIVER

For Spectrum 48K and Plus Models

MIRAGE MICRODRIVER USER'S MANUAL

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Manufactured in the UK by:-
Mirage Microcomputers Ltd
24 Bank Street
BRAINTREE
Essex
CM7 7UL
Tel: (0376) 48321

All efforts have been made to ensure the accuracy of this Manual. However, Mirage Microcomputers can assume no responsibility for any errors in this manual or their consequences.

INTRODUCTION

Microdrives offer the ZX Spectrum user a low cost storage medium with a vast improvement in loading speed compared with tape. The problem up to now has been how to transfer cassette based programs to them and take advantage of their fast loading times.

The Microdriver can be used to save any ZX Spectrum program on microdrive cartridge and reload it at the press of a button. A typical 48K program which takes 5

minutes to load from tape can be loaded from microdrive in as little as 20 seconds.

Note, however, that programs saved by the Microdriver are in a special format and cannot be loaded into the computer in the normal way.

A program can be stopped and saved at any point during its operation, when loaded back it will continue as if nothing happened. This feature can be useful for saving games at a critical point or for making a program backup. Several programs can be stored on one microdrive cartridge, the maximum number will depend on the program size.

It is advisable not to stop a program while the microdrives are in operation. The microdrive cartridge could be corrupted or the computer hang up when the program is run.

The Microdriver has been designed to be used with the 48K ZX Spectrum (or Spectrum+), the ZX Interface 1 and at least one microdrive. It is compatible with the ZX Interface 2 and ZX Printer.

CONNECTION

Plug the Microdriver into the expansion port of the ZX Interface 1 after disconnecting the power supply. The locating key in the Microdriver connector should be aligned with the slot in the edge of the expansion port and the assembly pushed firmly home. The power supply can then be reconnected.

Other ZX Spectrum peripherals can be connected to the expansion port at the rear

of the Microdriver. Make sure that these do not overload the computer.

USING THE MICRODRIVER

The Microdriver does not affect the normal operation of the computer until the push button is pressed, before this programs can be loaded and saved to tape or microdrive in the usual way.

When the Microdriver's push button is pressed it takes control of the computer and prints a copyright message at the top of the display.

Press any key and the Microdriver will display a menu from which the following functions can be selected:

Load

To load a program that has previously been saved by the microdriver press 'L' followed by 'ENTER'. Type the filename and press 'ENTER', then the microdrive number followed by 'ENTER'.

The display will clear while the program is loaded from the microdrive. If the operation is successful control will return to the menu, otherwise an error message will be displayed.

When typing the filename the 'DELETE' key ('CAPS SHIFT' and 'O') can be used to delete the last character typed. The 'SPACE' key can be used to return to the menu (note that the filename cannot contain spaces). The 'BREAK' key ('CAPS SHIFT' and 'SPACE') will stop the load operation.

Save

To save the program press 'S' followed by 'ENTER'. Type the filename and microdrive number as above.

The microdriver will process the program and then start the microdrive. If a program of the same name exists you will be asked if you want it overwritten. When the program has been saved you will be asked if you want it verified, this will ensure that the program can be loaded successfully. Control will then return to the menu.

It is a good idea to add an extension to the filename to show that it was saved using the Microdriver, eg.game.mdv. This will differentiate it from other programs on the microdrive cartridge when the CAT command is used from Basic.

Poke

The poke function can be used to modify the operation of a program if you know the correct address and data to use. These are sometimes published in computer magazines for popular programs but may not work if the program modifies itself after loading.

To select poke press 'P' followed by 'ENTER'. Type the address followed by 'ENTER' and then the data and 'ENTER'. Control will then return to the menu. The poke can be aborted at any time by pressing 'SPACE'.

Run

To continue running the program from the point at which it was stopped press 'R' followed by 'ENTER'. When the 'ENTER'

key has been released the program will start.

New

To clear the ZX Spectrum memory and return to Basic 'N' followed by 'ENTER'.

Break

The 'BREAK' key ('CAPS SHIFT' and 'SPACE') can be used to abort load, save and verify operations to microdrive or tape. Control will return to the menu ready for the next command.

TAPE BACKUP

The Microdriver includes the facility to save programs to tape. This can be used to back up a copy of a program from microdrive and release the space on the cartridge for other use.

Follow the same sequence as for save and load above but enter 'T' when prompted for the microdrive number. Programs saved in this way can only be loaded and run by the Microdriver.

ERROR MESSAGES

The following error messages may be displayed by the Microdriver. When these occur press any key to return to the menu.

File not found

The program could not be found on the microdrive.

Drive is write protected

The write protect tab has been removed from the microdrive cartridge and the program cannot be saved.

Microdrive full

There was not enough room on the microdrive cartridge to save the program.

File loading error

The program cannot be loaded from the microdrive. The cartridge may be worn or damaged.

Wrong file type

An attempt has been made to load a program that was not saved by the Microdriver.

Verification has failed

The program has not been saved successfully. The cartridge may be worn or damaged.

Microdrive not present

There is no drive with the number given attached to the computer. This can also occur if the cartridge has not been formatted.

Bad program

There is no program in the computer memory. A program must be loaded or 'New' used to return to Basic.

File saving error

There was a microdrive error during save. The cartridge probably needs formatting again or is worn out.

NOTE

It has been brought to our attention that a small number of Issue 1 and early Issue 2 Spectrums may not function correctly with the Mirage Microdriver. These Spectrums require the mandatory modification to the clock circuitry as defined in the Sinclair Service Manual. Details of this modification may be obtained from your local Sinclair service centre or directly from ourselves.

Mirage Microdriver Schematics
 By DB/S4E - www.zxspectrum.it

PAL16R4

CLOCK -01	CLK	Vcc	20-	+5V
MREQ -02	I1	IO	19-	M1
A13 -03	I2	IO	18-	WR
A15 -04	I3	O	17	
A12 -05	I4	O	16	
A14 -06	I5	O	15	
RESET -07	I6	O	14-	ROMCS (3)
(1) BUTTON -08	I7	IO	13-	[B]---+
(2) ROMCS -09	I8	IO	12-	[A]---+
GND -10	GND	OE	11	

- (1) other contact to GND
- (2) to PassThrough Bus
- (3) to Spectrum Bus

2764

01	VPP	+--+	VCC	28-	+5V
02	A12		/PGM	27-	+5v
A9 -03	A7			26-	+5v
A8 -04	A6		A8	25-	A10
A5 -05	A5		A9	24-	A4
A6 -06	A4		A11	23-	A11
A7 -07	A3		/OE	22-	RD
A2 -08	A2		A10	21-	A3
A1 -09	A1		/CE	20-	[A]---+
A0 -10	A0		D7	19-	D4
D5 -11	D0		D6	18-	D3
D2 -12	D1		D5	17-	D6
D0 -13	D2		D4	16-	D1
GND -14	GND		D3	15-	D7

6116

A9 -01	A7		Vcc	24-	+5V
A8 -02	A6		A8	23-	A10
A5 -03	A5		A9	22-	A4
A6 -04	A4		W/R	21-	WR
A7 -05	A3		/OE	20-	RD
A2 -06	A2		A10	19-	A3
A1 -07	A1		/CS	18-	[B]---+
A0 -08	A0		D7	17-	D4
D5 -09	D0		D6	16-	D3
D2 -10	D1		D5	15-	D6
D0 -11	D2		D4	14-	D1
GND -12	gnd		D3	13-	D7

Spectrum Bus

Pin	Component side (top) Note	Underside Note
1	A15 1	A14 1
2	A13 1	A12 1
3	D7 1	5V
4	NC	9-11V
5	Slot	Slot
6	D0 1	Chassis
7	D1 1	Chassis
8	D2 1	Clock ULA pin 32
9	D6 1	A0 1
10	D5 1	A1 1
11	D3 1	A2 1
12	D4 1	A3 1
13	INT CPU pin 16 1	IORQULA ULA pin 33
14	NMI CPU pin 17 2	Chassis
15	HALT CPU pin 18 2	UHF Modulator input
16	MREQ CPU pin 19	Y ULA pin 17
17	IORQ CPU pin 20	V ULA pin 16
18	RD CPU pin 21	U ULA pin 15
19	WR CPU pin 22	BUSRQ CPU pin 25 2
20	-5V	RESET CPU pin 26
21	WAIT CPU pin 24 2	A7 1
22	12V	A6 1
23	-12V 3	A5 1
24	MI CPU pin 27 2	A4 1
25	RFSH CPU pin 28 2	ROMCS ULA pin 34 4
26	A8 1	BUSAK ULA pin 23 2
27	A10 1	A9 1
28	NC	A11 1