
Z88ix
USER GUIDE

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FIRST EDITION

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Introducing Z88ix

This BBC Micro link package allows you to transfer files between the Z88 and a BBC Micro. The package comes with the software on a 5.25" floppy disc and a cable to connect the BBC Micro to the Z88. Your BBC Micro must have an RS423 serial port to communicate with the Z88.

The package should contain:

- a floppy disc marked Z88ix
- a cable to connect the two computers
- this manual.

Using Z88ix

The connecting cable has a round plug at one end and a D-shaped connector at the other. The D connector goes into the serial port on the right-hand side of the Z88. The round plug goes into the RS423 port on the BBC Micro. Notice that the plug that goes into the BBC Micro can be inserted in two different orientations. Only one is correct.

1 Loading the software

Insert the floppy disc into your main drive. Hold down the **SHIFT** key while you press and release the **BREAK** key. The software starts to load. The first page displayed gives a general description of the program and lists any problems which may occur.

The transfer program Z88ix splits the screen into two sections. You use the top section to select commands. You do this by pressing the key corresponding to the first letter of the command. The lower half of the screen is used to display information about transfers you have made. It provides you with a visual record of transfers.

Before transferring files you must start Imp-Export on the Z88. This can be done by highlighting **Imp-Export** in the **INDEX** page and pressing **ENTER** or by pressing **O x**. If you want to send files from a device **or a directory which has not been set** in the Panel, you will have to supply a full filename to the Z88.

For example, if **the** Panel setting is : RAM. 0 and you want to transfer a file called 'Temp', from the BBC Micro and store it in : RAM. 1, you will have to supply the filename : RAM. 1/ Temp, after selecting the R option to Receive file.

Note that when you select a command letter on the Z88, you must then press ENTER, but on the BBC Micro, you do not have to press RETURN after selecting the appropriate command. For more details on Z88 Imp-Export, see the Z88 manual.

If at any time you experience difficulty on either computer you can press ESCAPE. This dears buffers and closes any open files.

These are the commands that the program offers:

S) end File

This command sends a file from the BBC Micro to **the Z88**. After you **press S**, the BBC Micro asks for a filename (in the lower window). If it cannot find the file you specify, it displays the **File not found** error message. If the file is found, it is sent to the Z88. Before sending, you should set the Z88 to receive by using R for a single file or B for a batch of files.

R)receive file

Use this command to receive files sent from the Z88 to the BBC Micro. The BBC Micro asks for a filename. If you press RETURN, the BBC Micro uses the filename sent by the Z88. Otherwise, it uses the filename you supply. At this point, you can send from the Z88. **Use S to send a file and enter the filename of the** file you want to send to the BBC Micro. When the BBC Micro receives the name of the file sent from **the Z88**, it displays the name sent and **also the name** it is going to use, which will either be the name you supplied or the name as sent by the Z88.

B)atch receive

This option is used when the Z88 wants to send several files at the same time. Select this option and then start sending files from the Z88. As each file comes in, the BBC Micro displays its name. If the BBC Micro receives a filename which it cannot use, it abandons the Batch receive. When you have sent all the files you want, send an End Batch signal by selecting the E option on the Z88. The BBC Micro should display an End of session message when the End Batch signal is sent.

E)nd batch

When sending a batch of files to the Z88 from the BBC Micro, you must first put the Z88 into Batch receive mode. Having sent all the files you want to from the BBC Micro, you then send an End Batch signal to tell the Z88 you have finished.

Q)uit

This ends the program and returns you to BASIC.

While sending or receiving, a line count is displayed by both the BBC Micro and the Z88. When a file has been transmitted the counts on the Z88 and on the BBC Micro should be the same. If they are not the same there has been some kind of transmission error (see below).

2 Possible problems

Most errors will be avoided if you always make sure that the computer which is to receive a file is set to receive before the sending computer begins to send. You should also check that both of the cable plugs are firmly in their sockets and that the BBC Micro plug is in the right way round.

Transmission errors may occur if the serial port parameters on the Z88 have been changed (perhaps to drive a printer). These are set in the Z88 Panel page. The Panel page can be reached by pressing `O s`. To work with the BBC Micro link, the serial parameters should be set as follows:

- Transmit baud rate 9600
- Receive baud rate 9600
- Parity None
- Xon/Xoff Yes

Error messages

Bad name

The BBC Micro cannot use the name supplied and you will have to change it. This error often occurs because the name is too long. If you are receiving a file and the Z88 is sending a name which is too long then you must supply the name for the BBC Micro to use. Filenames can be up to seven characters long in DFS and ten characters in NFS and ADFS.

File not found

This error is given when you try to send a file which the BBC Micro cannot find. You may need to quit the program and find the file in a catalogue before continuing. The Z88 can also give this error. You should, check which device and directory your file is in and if necessary give the full filename.

Reception error

This error occurs when the BBC Micro receives something unexpected from the Z88. It could be caused by parity or baud rates being set incorrectly or by one computer sending before the other begins to receive.

Protocol error

This error occurs when the Import/Export protocol which is sent to the BBC Micro is not valid. This could be because the Z88 began sending before the BBC Micro began listening or because the parity and baud rates were set incorrectly.

Progress reports

End of file

This message is given when the Z88 has finished sending a file to the BBC Micro. If this message does not appear after the Z88 has finished sending then something has gone wrong.

End of session

This message is given when the BBC Micro receives or sends an End Batch signal. If you send an End Batch from either computer the other computer should report its arrival.

3 Compatibility

The BBC Micro link package works with the following BBC Microcomputers provided they are fitted with at least one 40 or 80 track disc drive and run BBC BASIC.

- Model B
- Model B+
- 6502 Second Processor
- Master 128
- Master Turbo.

The program runs on a Master Compact if a serial interface has been fitted. However, the program is normally supplied on a 5.25" disc, so you will need to arrange for the software to be transferred to a 3.5" disc. Your Acorn dealer should be able to help.

4 Import/Export Protocol

The protocol used by the Z88 Imp-Export software is given here for programmers who may be interested in writing their own software.

Protocol signals

<i>ESC</i> N	Start of filename
<i>ESC</i> F	Start of file/end of filename
<i>ESC</i> E	End of file
<i>ESC</i> Z	End of batch of files (or end of file)
<i>ESC</i> B x y	Hex byte. x and y are ASCII digits. For example, to send \$A3, the hex bytes 1B, 41, 33 are sent.
XON (\$11)	Receiver sends to transmitter to restart flow.
XOFF (\$13)	Receiver sends to transmitter to stop flow.

All the characters following *ESC* (\$1B) must be in upper case. The *ESC* B code is used to send codes \$00-\$1F and \$7F-\$FF, apart from *CR* (\$0D) and *TAB* (\$09).

The transfer protocol is:

Single file: ESC N filename ESC F data ESC E

If several files are being sent as a batch, the last file should be followed by an ESC z. The final ESC E can be replaced by an ESC z if the file is the last to be sent.

5 PipeDream and VIEW PROFESSIONAL files

PipeDream and VIEW PROFESSIONAL files are compatible. This means that documents written in either one can be transferred between the two computers with very little loss of information. All text, numbers, highlight codes and document layout will be preserved. The differences are as follows:

PipeDream does not support the READ () and WRITE () functions provided in VIEW PROFESSIONAL.

- PipeDream will accept dates with a century specified as 1. 1. 1988 whereas VIEW PROFESSIONAL will not. You can avoid problems by not specifying the century to PipeDream, giving simply 1. 1. 88.

PipeDream can perform date arithmetic which VIEW PROFESSIONAL cannot; avoid any date arithmetic in documents which are to be transferred.

Dates in PipeDream require two more characters display width than those in VIEW PROFESSIONAL, as the century is displayed. Allow two extra characters column width.