### Using your Spectrum with the Serial 8056 compact printer

Details of how to set up the Serial 8056 compact printer are given in the printer manual. The printer is supplied with an adaptor lead which plugs directly into the RS232 socket on the left side of the Spectrum 128. It can then be used to print out programs or text generated by the Spectrum 128 and can also be used to make a black and white copy of the image on the screen (screen dump).

IMPORTANT NOTE: The printer can be used only when the Spectrum 128 is running a 128K program or in 128 BASIC. It will not work in 48 BASIC, nor with a 48K program with a print option (such as a word processor) even if you try running this in 128K mode.

### Using the printer with commercial programs

Programs such as Spectrum 128K word processors which contain a print option will drive the printer automatically when the print option is selected, provided you have installed the printer correctly. There should be instructions with the software to tell you how to do this, and the printer manual contains the technical details which you need. The most important point is to ensure that the baud rate is set to 1200.

### Using the printer with 128 BASIC

Before using your Spectrum 128 with the printer, you must load the special program contained on this tape cassette. This sets up the printer driver and only needs to be loaded once at the start of each computing session during which you intend to use the printer.

The program is recorded on both sides of the tape. To load it, follow the instructions on page 5 of the ZX Spectrum 128 introduction booklet. It will load in about twenty five seconds. You will then be returned to the main menu and can use the Spectrum 128 as normal to load a BASIC program or type in your own. The printer program will stay in memory ready for use until you switch off or press the reset button. It is unaffected by typing NEW.

### Listing a 128 BASIC program

To list a program which you have entered in 128 BASIC, select the Print option in the BASIC command menu. It will then be listed automatically. You can also use the BASIC commands LPRINT and LLIST. Channels opened to the printer will also work correctly.

### Making a screen dump

You cannot use the COPY command to make a screen dump. Instead, use the command RANDOMIZE USR 63696
This can be entered as a direct command or as an instruction in a program. If you include it in the program, it must be the very last statement in the last line.

There will be a pause of about ten seconds before the dump starts. When the dump ends, you will see the 'Nonsense in BASIC' error message. This is perfectly normal.

### Controlling the printer from 128 BASIC

All the special printer functions listed on pages 22-27 of the printer manual can be used as detailed in the manual.

**Character set**
The printer character chart on pages 29 and 30 is the same up to ASCII value 127, but values above that have different symbols from those in the printer manual and correspond to the chart on page 51 of the ZX Spectrum+ User Guide.

**Technical notes:**
The printer installation routine lowers RAMTOP to 63000. This will not affect printing from 128 BASIC except in the unlikely event that your program uses an address above this.

The printer installation routine sets the baud rate at 1200 permanently until the machine is reset. The BASIC command FORMAT will not affect it.