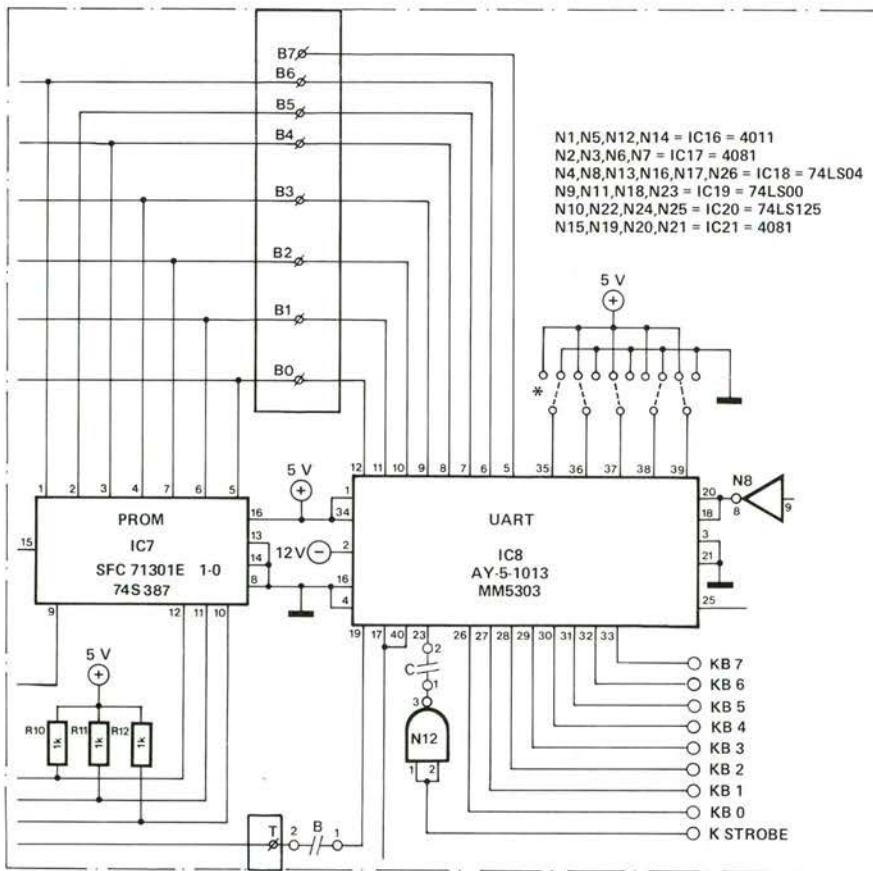


# 102

# the Elekterminal with a printer

interface with low cost printers

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It is quite easy to connect the Elekterminal, or any other terminal which is equipped with a UART, for that matter to a low cost printer. Most if not all low cost printers incorporate what is known as a 'centronics interface'. Basically the reason for this is that Centronics were one of the leaders in the field of budget printers, and as a result their original interface design has been used by a large number of manufacturers as an industry standard. The unversally available Epson MX 80 is a prime example. The advantage of using such a printer is that the I/O routines do not have to be altered.

The Elekterminal already has a UART, converting the serial bit output of the computer into a 8 bit parallel code for video RAMs. So, it is just a simple matter of using the same code to drive the printer in parallel.

Link data lines D0 . . . D7 on the printer interface circuit (which forms part of the printer) to connections

B0 . . . B7 on the Elekterminal printed circuit board. It is obvious that there is no B7 terminal available on the board, so a new terminal has to be made up. This can be derived by making a connection to pin 5 of the UART. The next stage is to link up the strobe input of the interface to point T on the Elekterminal.

In some cases the printer may go haywire, while the computer will still continue to apply data. This is simply because minor differences may occur as far as the interface specifications are concerned. Should this happen then the following procedure has to be adopted.

- Connect the 'printer' busy line directly to the 'clear and send' line on the serial output port (such as ACIA) of the computer system, and not via the Elekterminal. As a result, the output data will then be kept back, allowing the printer to work without interruption.

- Connect a 4k7 resistor between the CTS line and ground. This ensures that the line is disabled whenever the printer is not in use, allowing the operator to continue work with the computer even when the printer is switched off.

A very important point to keep in mind is that the UART must receive the correct bit pattern from the computer. This should be: 8 bits, no parity and 2 stop bits. Any discrepancy or deviation from this pattern may prevent the printer from acknowledging the most significant bit containing the logic 1 for a character, making the printer virtually useless!