Trendcom 200
High-Speed Thermal Printer

Sooner or later, personal computer users desire the use of a printer for "hard copy" but most printers are very expensive. So it was with interest that we approached this review of the Trendcom 200 thermal printer which sells for less than $700. It prints text at 80 characters per line and 40 characters per second or graphics at 60 dots per inch.

Thermal printers work by burning the characters into a specially treated paper. The printhead is a line of seven thick-film resistors which have a very short thermal time-constant so they can rapidly change from one character to the next as the printhead moves along the line to be printed. Some thermal printers use aluminium paper which can be difficult to read, but this does not apply to the Trendcom.

The big advantage of thermal printers is that they are quiet. Conventional mechanical printers can be very noisy but with the Trendcom 200 the only noise that the user is conscious of is the sound of the paper being advanced after each line is completed.

Another advantage of the Trendcom compared to conventional mechanical printers is that it is surprisingly compact, measuring just 317 x 70 x 254mm (W x H x D) and weighing a modest 3.6kg. Not only is the unit itself compact but it is effectively even more space-saving by virtue of the fact that the 216mm wide paper roll is accommodated internally rather than externally as with printers using fan-fold paper.

Since the paper is on a continuous (26 metres) roll, rather than in fan-fold format, there are no problems with initialisation prior to a printing run and there are no perforations to skip over, making this printer easy to work with. There is a disadvantage in that continuous printout is not as convenient to store as fan-fold format but this is a relatively minor consideration.

The Trendcom will recognise and print the full 96 ASCII character set, using a 7 x 5 dot matrix. The lower case characters have true "descenders" (the tails in j, p, q, y and g) by means of the following compromise: lower case characters without descenders actually occupy a 6 x 5 matrix while those with descenders and upper case characters (including numerals) occupy the full 7 x 5 matrix.

This means that upper case characters actually "descend" by one dot and thus look like a slightly larger font. A sample of the printout is shown in the caption for the photograph on this page.

As with other "intelligent" printers on the market, the Trendcom has full line buffering and bidirectional "look ahead" printing. After one line has been printed left to right, the internal microprocessor examines the next line saving considerable wear and tear on the printhead mechanism.

All movement (printing head and paper advance) is controlled by a pair of stepper motors, and as these are the only moving parts in the whole printer, it should be highly reliable.

As is to be expected in a printer of this type, there is a built-in self-test function, which is enabled by a miniature slide switch located in the rear left hand corner of the unit, just under the metal cover. The test takes the form of a printout starting with 80 characters of the ASCII set printed on a single line, and then followed up by 10 lines of varying thickness. The test will continue until disabled by moving the slide switch back.

The graphics mode is software selectable, using two special codes.

The Trendcom 200 is a quiet thermal printer featuring the full ASCII character set and continuous graphics. It will interface to most personal computers.

One is the graphics-select code and the other the text re-entry code. The two codes are 9E hex for entry into the graphics mode, and 9F hex for re-entry into the text mode. These codes assume that the printer is connected to an 8-bit data bus, and not 7-bit, as is the case with many computers which have a printer output port.

If the computer to which the printer
is connected happens to have one of these 7-bit printer ports, the two codes will have to be changed to allow for the lack of an eighth bit. The new codes become 1E and 1F respectively. The only other thing that needs to be done now is to pull the eighth data input to the printer high via a suitable pullup resistor.

When the printer is set to operate in the graphics mode, there are 480 print positions per line. This will give you some idea of the resolution that can be expected, and also the sheer volume of data that is required to generate even the simplest pattern. There are several ways of operating the printer in the graphics mode, the fastest of which makes use of the bidirectional printing capability.

There is a problem here however, and that is that the data has to be presented to the printer in the reverse order when it prints from right to left. The internal buffer does not invert the data here as it does in the text mode. Secondly, there is a problem regarding the alignment of the image from one line to the next.

The printer was tested by connecting it to the reviewer's Sorcerer computer. The total time between unpacking and having the unit up and running was no more than half an hour or so. The first test consisted of loading some BASIC programs and then listing and running them. The results obtained were very satisfactory.

This shows the interior details of the Trendcom 200 and a sample of its self test routine.

The second test was to use the printer while assembling a machine language program (this made use of the full 80-columns unlike the BASIC programs which are limited to 63 columns). Again we obtained a satisfactory result.

In summary, we found the Trendcom 200 to be a very attractive printer, one that takes up very little room on the desk and very quiet in operation. It is a little slower than other printers on the market with a throughput of 40 characters per second, but this is not a major drawback.

The cost of the printer is $610.00 (plus tax) which is quite reasonable when compared to its nearest rivals, particularly in view of its graphics capability.

Further information can be obtained from the Australian agents and distributors: Computerware, 63 Paisley St, Footscray, Victoria 3011. (G.C.)

---

> * Trendcom 100 $395*
> * Trendcom 200 $610*

Word Processing from:

**COMPUTERWARE**

63 Paisley Street, Footscray, Vic. 3011.

(03) 68-4200

*Plus sales tax

Price correct at time of publication