### MELBOURNE'S HOME COMPUTER SHOW ...



## **Southwest's CT-82 "super intelligent" terminal**

The new CT-82 intelligent video terminal from Southwest Technical Products provides a bright and crisp 12MHz CRT display, together with an almost bewildering array of software-implemented control functions. Yet it provides these features at a cost lower than many "dumb" terminals.

#### by JAMIESON ROWE

When you first sit down in front of SWTP's new CT82 terminal, it doesn't seem much different from other terminals. You do notice a few special control keys like "Insert", "Delete" and "Transmit", but apart from that things look fairly familiar.

It's when you open up the CT-82's User Guide Manual that the differences soon start to become apparent. Then it hits you: with the CT-82 you can change virtually all of the operational functions and control parameters involved in such a terminal, and you can change them under software control by merely feeding in a few control characters.

This means that the terminal can be configured any way you wish, either from the keyboard of the terminal itself or from the computer to which it is connected. And it can be reconfigured at any time — on a dynamic basis if required!

What the SWTP people seem to have done is decide that if they were going to produce an ''intelligent'' microcomputer-based terminal, they would use the microcomputer to provide as much operational and functional flexibility as possible. So as well as provide the ability to edit a slab of text and then send it off as a nicelyprepared block, the CT-82's internal 6802 microcomputer also provides the ability to change all sorts of aspects of the terminal itself.

There are no less than 128 different control function codes recognised by the CT-82. Some of these correspond to standard ASCII control codes, while the majority are made up from twocharacter combinations.

Here are some examples of the terminal configuration flexibility provided. Six control codes are used to configure the CT-82's screen cursor: you can have a block cursor or an underline, blinking or non-blinking, or no visible cursor at all. Eighteen further codes provide for cursor movement control: bump up, down, left or right, move a specified number of positions in the same four directions, home to

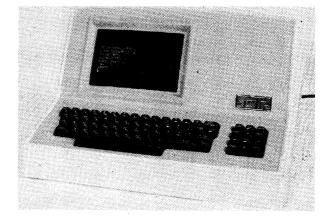
any of the four display corners, or set either horizontal or vertical position or both.

Six codes are used to configure the CT-82's carriage return/line feed behaviour: you can set it for automatic line feed with carriage return, or not; automatic carriage return/line feed at the end of a line, or not; and automatic scrolling on line feed, or not. A further nine codes are used for configuring interface modes: upper case only, upper

or right of cursor, and insert character left or right or cursor.

As if functions like these weren't enough, the CT-82 also provides some powerful graphics display features. Some 11 codes are used for these, including the code to select graphics mode. With a display format of 22 lines of 92 six-pixel characters (66x184), the CT-82 lets you clear, set or invert any specified graphics pixel; clear, set or invert a straight line joining any two specified pixel addresses; or move the entire graphics display up, down, to left or to right. Some pretty impressive graphics functions, in other words!

There are a variety of other miscellaneous control codes. The CT-82 can automatically display a binary byte as two hexadecimal digits, if required, or display a two-byte number in left-



and lower, conversational mode or page edit mode, full or half duplex, set baud rate (31 speeds available from 50 to 38,400 baud), and shift mode normal or inverted. Another 22 codes control the CT-82's responses to control characters, and their display or nondisplay.

For text editing there are eleven different erase functions. Apart from a destructive backspace and line cancel you can erase the whole field, any of the four display quadrants separately, from the cursor to either the end or the start of the field, or from the cursor to the end or the start of the current line. Similarly there are 12 roll and slide functions: apart from scroll up or down, you can roll any of the four guandrants up or down independently, or the whole field to left or right. Eight further codes control insertion and deletion: delete line up or down, insert line up or down, delete character left

normalised decimal notation with leading zeroes suppressed. It can also read the current cursor position and feed this back to the computer, or do the same for an optional light pen attachment.

Add all this functional flexibility to a bright, crisp 12MHz CRT display and the reliability provided by state-of-theart LSI technology, and the CT-82 emerges as a most impressive terminal. Particularly so when you consider that the cost for the basic version is only \$950 plus tax — less than the cost of many "dumb" terminals. Even with all options the cost of the CT-82 only rises to around \$1250 plus tax, making it outstanding value for money.

Further information on the CT-82 intelligent terminal is available from Southwest Technical Products (Australasia) at 7A Burton Street, Darlinghurst NSW, or PO Box 380, Darlinghurst 2010.

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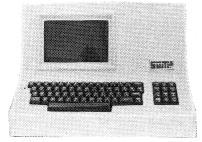
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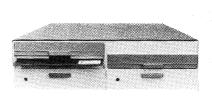
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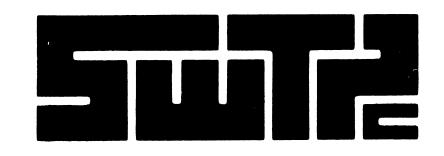
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**SOUTHWEST TECHNICAL PRODUCTS SYSTEMS:** A range of systems which range from hobby-level machines available in kit form, up to professional level systems complete with multiple floppy discs and/or a hard disc, high speed printers and multiple intelligent video términals. The systems are made by Southwest Technical Products Corporation in Texas, USA and marketed here by SWTP Australasia/Paris Radio Electronics, of PO Box 380, Darlinghurst, NSW 2010.

In the packaged machines and systems area, SWTPC has an /09 machine which features 56K of RAM and a serial interface. This can be obtained with their CT-84 intelligent video terminal for around \$2400. There is also a larger S/09 machine with 128K of RAM, which may be obtained complete with dual 21cm floppy discs, a 16 megabyte hard disc, and three CT-82 terminals for around \$12,000. Three different printers are available for the systems in the range, at prices from \$950 to \$2500 each.



## HARDWARE

KIT	DESCRIPTION	PRICE
/09 6809 Cor 69/A 6809 Cor 69/K 6809 Cor S/OO S/O9  CT-82 Terminal MF69A Mini Fla DMF2 Disk Syste CDS-1 Winches SP-3 Daisy Whe SP-5 Daisy Whe PR-40 Alphanu MP-09 6809 Pr MP-09A 680	omputer w/128K Memory mputer w/56K Memory mputer w/8K Memory mputer Kit w/8K Memory w/o Processor or Me w/Monitor w/Monitor w/Monitor w/Appy Disk System em w/2.5m Capacity ter Hard Disk System eel Printer (QUME) weric Printer ocessor Board Kit 9 Processor Board (	\$1660.00 \$760.00 \$660.00 \$560.00 \$1295.00 \$1295.00 \$2650.00 \$4835.00 \$3295.00 \$3295.00 \$3515.00 \$3275.00 \$192.50 Assembled)
MP-32 32K Me MP-36 16K Mem MP-8A 8K Mem MP-8M 8K Mem MP-8M 8K Mem MP-LA Parallel MP-LA Parallel MP-L2 Dual Pa MP-N Calculat MP-P Power SL MP-QP Circuit I MP-R Eprom F MP-S Serial Int MP-SA Serial Int MP-SA Serial Int MP-SX Seri	nory Expansion for S/O9 mory (assembled) nory (assembled) nory (assembled) nory (assembled) nory kit Interface or Interface Board for SP-3 (assemble Programmer erface terface (Assembled) rial Interface terface Expansion Timer ectric Interface Static Memory Card essor Circuit Board emory Circuit Board ller Board for MF69A izing Assembler (5" or 8	\$2305.00 \$715.00 \$440.00 \$258.50 \$220.00 \$45.00 \$65.00 \$66.00 \$66.00 \$445.00 \$66.00 \$110.00 \$65.00 \$45.00 \$45.00 \$110.00 \$27.50 \$52.25 \$66.00 \$115.00 \$27.50

## SOFTWARE

Flex O9 ver. 2.6:5 w/manual Flex O9 ver. 2.6:5 w/o manual Inventory Program Mail List Program Word processing Editor & Text processor	\$38.50 \$11.00 \$110.00 \$110.00 \$165.00
Word Processing Editor	\$110.00
Text processor	\$66.00
SP-O9-2 Text Editing System	\$38.50
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SP-09-4 Basic	\$71.50
SP-09-5 Debug Package	
SP-09-6 Extended Basic	\$110.00
SP-O9-7 Standard Precompiler	\$55.00
SP-O9-8 Extended Precompiler	\$55.OO
SP-O9-9 Multi-user Basic	\$165.00
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