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Software Special

MTX 512
This mighty Memotech on test

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MEMOTECH MTX 512

Can the new Memotech series compete in either the home or business markets? Simon Rockman investigates.

The Memotech MTX models 500 and 512 are new computers from a firm which has been manufacturing high quality add ons for the ZX81 for some time now. However, with the production of their own computer they are moving into a weightier competition with the likes of Commodore, Acorn and Sinclair, all companies with multi million pound turnover and profits.

Our review machine was the MTX 512 which differs from the 500 in that it has 64K as opposed to 32K of RAM. It comes nicely packed with all leads, power supply, and a good selection of tapes: two games, a demo cassette, a blank tape and a cassette head cleaner. This all makes for a neat ready-to-run package but it is a shame they missed out the mains plug which goes into all export models.

Market Aims

It is very much a computer aimed at the worldwide market. The board for the video circuitry is plugged in and can be quickly changed for most of the different television formats around the world. Big worldwide sales are good for the user as well as the manufacturer. The more people with an MTX, the better the software.

Professional Design

The computer is a very slick affair, the case being made of black aluminium giving it a solid, professional feel. It is very wide to accommodate the positive full stroke keyboard with a numeric keypad and function keys. Its appearance makes it one of the most attractive home computers I've seen. Still beauty is only skin deep and what really matters is what's inside the packaging.

Language Power

The MTX comes with three resident languages: Basic, Assembler and Noddy. Noddy is a new language and Memotech refer to it as a text LOGO. It only has eleven keywords, the mnemonic for which is "BIGEARS PLOD". Noddy has no line numbers and uses free format screens organised into a series of

pages which are named and can be called from one another. It's main use is for displaying text and I can see applications in the computer assisted learning (CAL) field. Writing in Noddy is like a mixture of LOGO and Forth.

The Z80 Assembler is very nice and a little like the BBC micro in that it is incorporated into the listing. It does not have BASIC line numbers but shows the memory locations as hexadecimal addresses within the listing. However, the editing is poor requiring you to set and list from pointers. The ease with which machine code can be written and merged with BASIC should lead to some very spectacular games in the future.

The BASIC interpreter is pretty standard, accepting abbreviations using a dot, e.g. 'P' is PRINT. String handling is a little odd, requiring you to specify the length of the string in a DIM, and having to use a two dimensional array to create a true string array. The BASIC is fussy about spaces – something which would annoy me until I got used to it.

The screen in which programs are written is divided up into three sub-screens, one for the listing, one for editing in and one line for error messages. The error messages are not very explicit but the cursor will
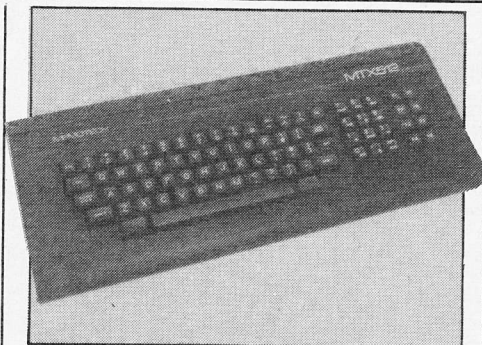
your own screens. The BASIC is fast and accurate, all the calculations being done in floating point maths so that you don't lose accuracy to gain speed. The processor's 4Mhz clock speed helps and Memotech are talking about offering an upgrade to 6Mhz. Slow screen scrolling makes the Memotech seem slower than it really is.

The graphics are good with a 192 by 256 resolution supported by lots of commands. As well as the usual line and plot there are turtle style angle and draw commands.

Spritely Sounds

Thirty two sprites are supported either 8 by 8 or 16 by 16. They are easy to use and define and do not use extra memory as in the CBM 64 because they have their own area of RAM. This is slightly limiting but makes them easier to use. Sprites

Educational Documentation

The documentation comes in the form of a large "Operators' Manual" but it is much more than that. The first section is a Basic tutorial. This is OK but it's not fun-to-read as are some basic books. The grass roots information is there and I could not find any major mistakes. The second part is on Noddy giving a good guide as to how it can be written but lacking examples of large applications. The third and fourth sections are on graphics and sound. Both are quite detailed and easy to follow. The fifth section is on how to interface assembler to Basic and not a tutorial for Z80 machine code. It shows you the rudiments however. The manual does lack a list of contents and this makes things difficult to look up.

Memorable Memotech?

There is plenty of room for expansion with the MTX and Memotech have planned a progression up to their small business machine with 80 column display (instead of the standard 40 x 24) floppy disks, silicon (or RAM) disks, and a hard disk under development. To use the disks you need CP/M. Expansion is expensive and the reliable, high speed (2400 baud) tape may make you think twice about the upgrade.
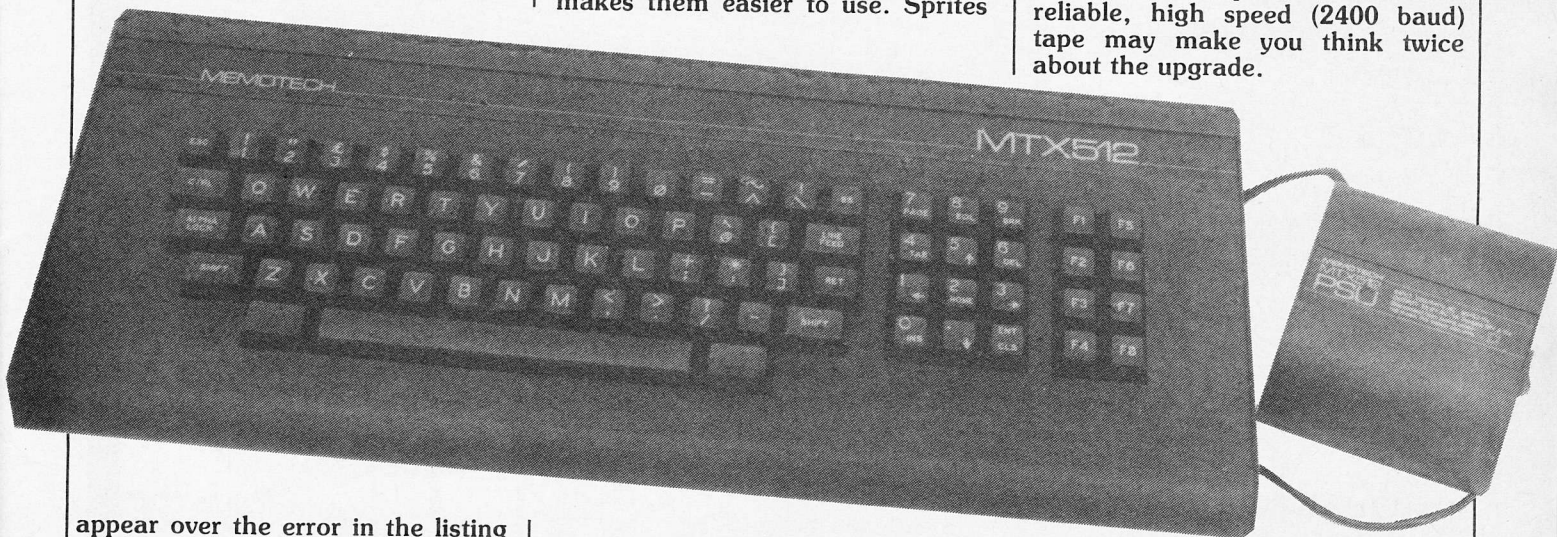
appear over the error in the listing provided you do not use multi statement lines.

Editing is done with a good line editor. Not as pleasant to use as a full screen editor but you can use Noddy for any text work and call the information from BASIC with the command PLOD "progname". There is a PRINT AT equivalent CSR. Screen handling is powerful despite the lack of a memory mapped display because you can define

can be made to leave a trail on the HI RES screen and make for easy animation. Sound control is good with three normal and one "pink noise" channel and a wide range of frequency and volume controls. Sound can be channelled into a buffer so that it plays and does not interfere with the rest of the program. There are two levels of envelope control allowing both simple and complicated sound effects.

The MTX 512 is a fairly ordinary machine. It has no really excellent feature to outstar its rivals and it is quite pricey when compared with such machines as the Commodores and Spectrums. It will need to build up a good reputation quickly and to have software support from the big software houses to make it special. £315 for a 64K Z80 machine is a reasonable price. But no bargain.