TI99/4A

Texas Instruments' home computer is a Mercedes among Volkswagens – it has a high standard of construction, but the add-ons are expensive

In terms of design and construction, Texas Instruments' TI99/4A is one of the most professional of home computers. TI's withdrawal from the home computer market was a blow to hobbyists, but the machine is still being sold, and devotees regard it as still worth the trouble of seeking out.

It uses a 16-bit microprocessor, the TMS9900, designed and made by Texas Instruments, who make semiconductors, calculators, microprocessors and minicomputers. The TMS9900 was one of the first 16-bit chips but it failed to gain widespread popularity.

The TI99/4A has a 48-key keyboard, which by the general standards of home computer keyboards is very good to type on. There is a space to the right of it that receives the software cartridges, which Texas refer to as 'solid state software'. A similar connector on the right-hand edge of the case permits hardware expansion. The expansion modules, which are large plastic boxes, contain disk drive controllers, memory expansion

and a serial (RS232) interface and are connected via an expansion box, a unit which is essential if you wish to extend the machine.

The screen display is in 16 colours with high-resolution graphics, and there is also a sound generator capable of producing three independent notes or 'voices' at once. However, the lack of good documentation makes writing machine code programs to use the graphics and sound facilities fairly hard to learn.

Almost every hardware add-on costs £90 or more and there are virtually no peripherals made by suppliers other than Texas.

The computer is designed for new users to computing, BASIC being the resident language and LOGO the most popular add-on language. In America it has been widely used in schools, and once competed with the Apple II for the position of top-selling educational micro.

When it is switched on, a menu is displayed on the screen offering the user a number of choices. If a software cartridge is plugged into the computer

TI99/4A Keyboard
The keyboard is of a higher standard than on most home computers, though some users have commented that the 'bounce' on each key is too stiff. The number of keys is also rather limited, presumably to make room for the cartridge slot on the right-hand side. Most of the keys, therefore, double up — pressing 'CTRL' and 'E' will achieve the cursor-up function. The 'FCTN' key turns the top row into user-definable keys, and it is possible to insert a strip of plastic above this row, on which labels can be written