Speech Synthesis
Another interesting extra from Cheetah is the Sweet Talker speech synthesis unit. Sweet Talker uses an allophonic system, and hence is much less complex to program than units that work in phonemes (allophones are groups of like-sounding phonemes). There are other similar units available for ZX81 and many other home microcomputers

Hebot
The Hebot turtle, available either ready-made or in kit form, is one of the more sophisticated of the dedicated floor robots. It comes complete with software to drive it, and there are a variety of extras available such as photosensors, which can be used in conjunction with reflecting tape stuck down onto the floor, to make the robot follow a predetermined path

Keyboards
The multi-layer membrane keyboard is perhaps the ZX81's least satisfactory feature, so it is hardly surprising that a number of companies offer alternative full-size keyboards with conventional sprung keys. The Mapsoft ZX81 keyboard, shown here, is available from Maplin Electronics either as a kit or ready-built.

In addition to the normal character set, the Mapsoft keyboard provides three extra keys. For less than £30 it is a very useful addition to any ZX81, though similar products can cost more than twice as much. Another approach is a stick-on keyboard the same size as the ZX81's own, which is used in conjunction with the original. It makes locating a particular key rather easier, but has no other effect

Joystick Controller And Joystick
Given that many of the ZX81s sold must be used for games playing, it is perhaps rather strange that Sinclair has not produced its own joysticks and controllers. However, a wide variety are available, and these are either non-programmable, which specify for you which key strokes will be made by the joystick, or programmable, where the user decides which keys will be simulated. The model shown here, from AGF Hardware, is programmed by moving connecting cables around. Others are programmed through the computer. This one will accept any switch-type joystick, and also a trackball

ZX Printer
Sinclair's own ZX Printer uses aluminised paper that is sensitive to electricity. Instead of printing in a conventional manner, the print head removes the aluminised coating to reveal a darker surface beneath. While reasonably fast in operation, the limited paper type and width are major problems. It is possible to use a normal printer, however, via an interface card. Cards are available to support RS232 and Centronics interfaces