



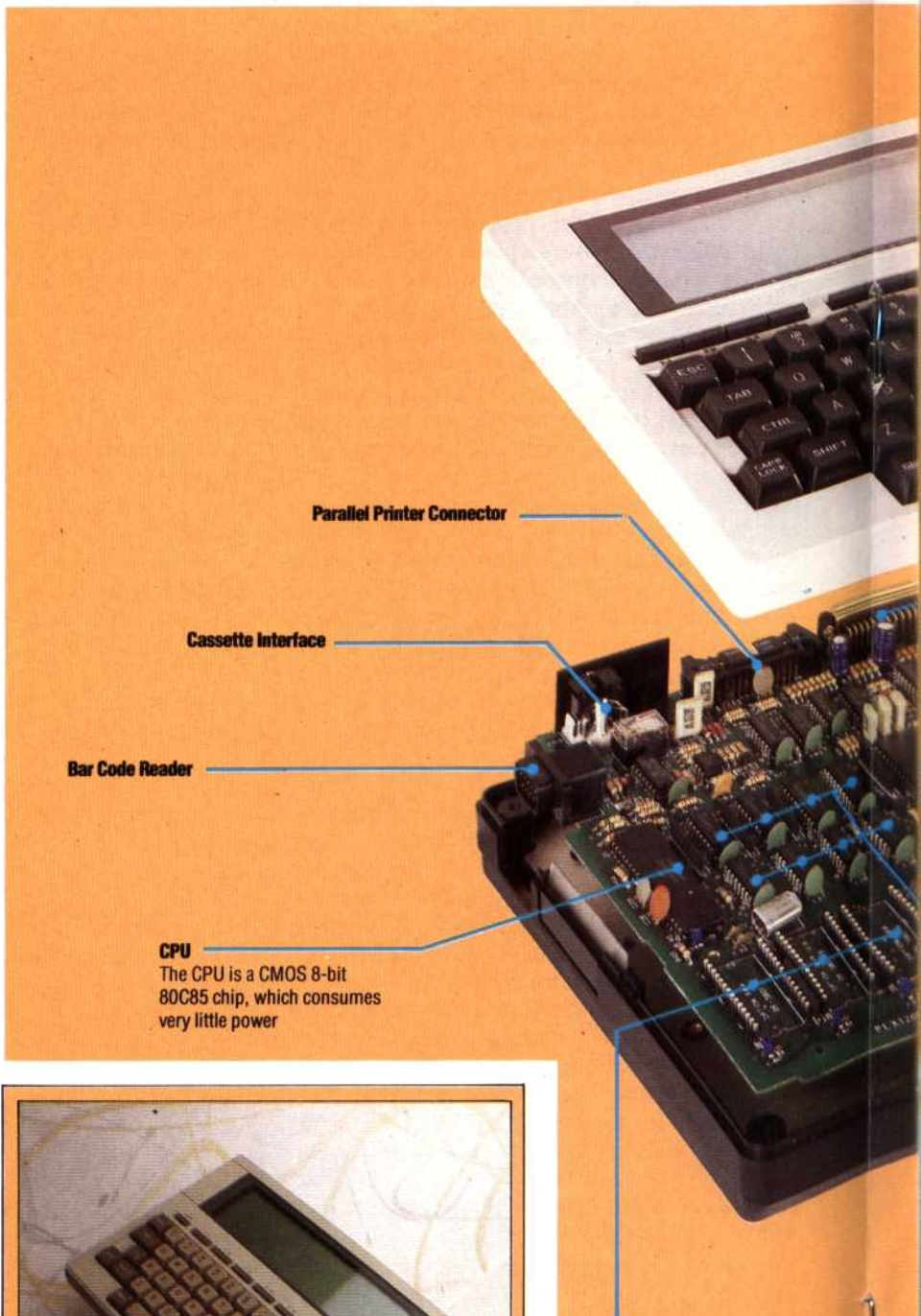
THREE OF A KIND

As a result of the ever-growing demand for 'computing on the move', manufacturers are concentrating on the lucrative portable computer market. Here, we take a look at one of these 'lap-held' machines — the Tandy Model 100 — and compare it with two, essentially similar, competitors.

The process whereby a manufacturer buys a completed product, changes a few elements to make it look unique, then repackages it as a 'custom manufactured' item, is known as 'badge engineering'. This technique has existed for a long time in the consumer electronics field, with products such as televisions and hi-fi equipment. The same technique is now being used in the computer market, and three popular portable computers — the Tandy Model 100, the NEC PC8201A and the Olivetti M10 — are the result of just such an arrangement. All three machines are manufactured by the same company, the Japanese Kyocera firm, and are sold to Tandy, NEC and Olivetti, who package the machines and market them under their own labels. Here, we consider the Tandy Model 100, and highlight the differences between this machine and its siblings.

Weighing slightly less than 1.8 kg (4 lb), the Tandy, NEC and Olivetti models fall comfortably into the 'lap-held' category. The Model 100 has a full QWERTY-style keyboard, built-in ROM-based software and a battery-operated LCD screen. It can be run entirely on battery power and the contents of RAM are not lost when the machine is switched off. Files may be stored in RAM and accessed directly as if the memory were a cassette or disk. The Model 100 may also be connected to a cassette or disk drive for external storage, but the permanent memory makes it easy to store important data 'on the run'.

The LCD screen provides eight lines of 40 characters, and has the ability to mix text and graphics. The display is composed of 15,360 dots, each of which may be addressed individually. Characters are formed in a 6 by 8 matrix, and upper- and lower-case characters may be displayed. The Model 100 features a full international character set, as well as a special set of graphics characters, unlike the NEC machine, which has only three graphics characters. Both the NEC and Tandy models have LCD screens that lie flat in their cases, but the Olivetti M10 features a movable screen that can be tilted to a comfortable working angle, thus providing extra flexibility. The NEC and Tandy screens have adjustable contrast controls to improve screen clarity.



Expansion RAM
The Tandy 100 can be expanded to 32K RAM internally by installing additional RAM chips here



NEC PC8201A
Although the NEC PC8201A is exactly the same size as its siblings, this machine has a significantly different keyboard. The cursor keys have been moved out into a small cluster, the function keys have been reduced from 8 to 5, and the keyboard layout is slightly different. In addition, the NEC has only three of the standard programs in ROM: Text, Schedule and Telecom