

# Osborne-1

**This is the first microcomputer designed to be portable, and the first to be supplied with software included in the price**

Although it is not strictly classed as a home computer, the Osborne-1 is a particularly interesting machine because it was the first completely self-contained portable microcomputer. With its two built-in disk drives and small monitor, the Osborne offers its user the ability to carry his own data processing capability with him, wherever he may go. The only thing that the machine lacks is an internal battery pack, but the manufacturer reasoned that this would increase the overall weight of the machine beyond reasonable bounds — it already weighs 10.5kg (23.5lbs). There is, however, a DC socket on the front panel, along with the other interface connections. The machine needs both 12v and 5v inputs: the former for the disk drives, the latter for the logic.

The Osborne's high price — about £1,000 — also makes it hard to class as a home computer — though this does include approximately £600 worth of some of the best established business software available. This includes: Microsoft's CBASIC, a compiled version of the BASIC language, which allows much faster operation of programs; Supercalc, widely acknowledged as the best of the first generation spreadsheet programs; Wordstar and Mailmerge, the best selling of the transportable (not limited to any one type of machine) word processing packages; and, perhaps best of all, the Digital Research CP/M (Control Program/Monitor) operating system, which allows a vast range of software packages to be run on any machine that uses it.

The Osborne-1, in common with the Apple II (see page 349), requires its operating system to be loaded from disk. In addition to overseeing the internal operation of the computer, the CP/M system allows most housekeeping routines — making back-up copies of files and whole disks, initialisation of new disks, cataloguing disk contents, and so on — to be accomplished directly. But the CP/M system has other strengths as well. First of all, software can be written for the operating system, independently of the machines on which it operates. To the software house this means a much larger potential market, hence a great deal more money can be spent on production, which in turn ensures a higher quality package. Secondly, to a skilled CP/M user, the machine type is almost irrelevant, and this allows hardware to be upgraded and enhanced without the onerous task of re-entering data files and converting programs. For a short period, Osborne

## Dual Density Disk Drives

Each drive has a nominal capacity of 200 Kbytes, but this is reduced to 184 Kbytes after formatting

## Microprocessor

The Osborne-1 uses Zilog's Z80A microprocessor, running at 4 MHz

## Motorola 6850

These chips control the operation of the RS232 standard serial port

## Motorola 6821

This integrated circuit is used to support the IEEE488 parallel input/output port

## RS232 Serial Port

## IEEE488 Parallel Port

## Modem Port

## System ROM

## Keyboard Connector