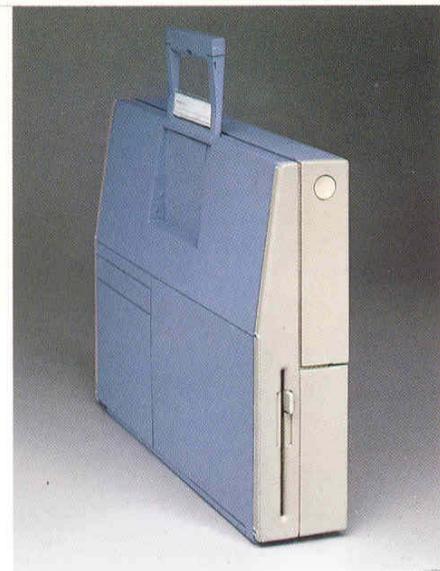
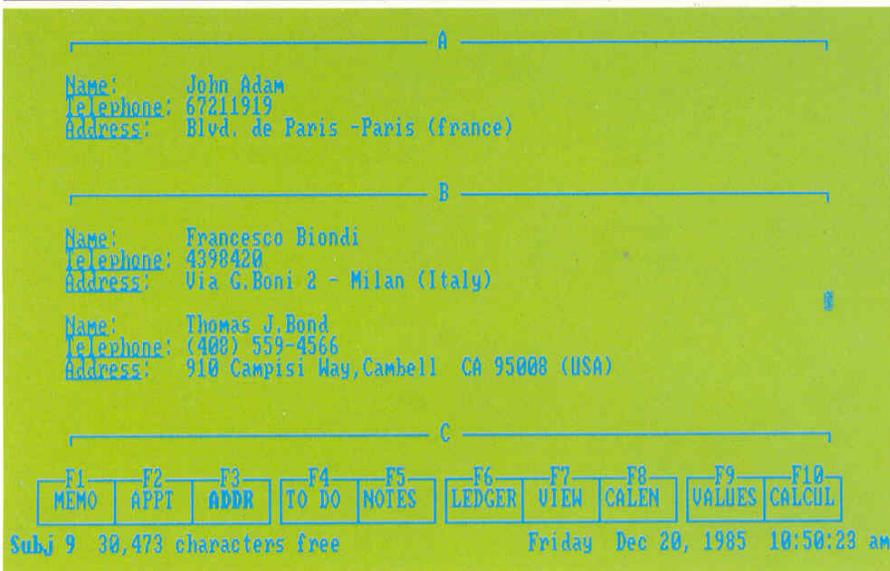


PERSONAL COMPUTER M22





The Olivetti Personal Computer M22 is the ultimate solution in the field of portable/transportable personal computers. The M22 features an ideal slim design, truly light weight, a full 25-row by 80-column liquid crystal display with backlight technology for perfect vision at any angle and an 85-key professional keyboard in your national language version. The M22 may be operated with either battery or mains power. The system's total compatibility with industry standards ensures that jobs running on the Olivetti Personal Computer M22 may be run on any Olivetti or industry standard personal computer. This full compatibility with industry standards also guarantees access to a wide range of operating systems and languages in your own national version and to an almost limitless software library. With RAM memory configurable up to 1 M byte, with its silicon disk (created in a partition of the RAM and emulating perfectly the characteristics of a floppy disk while being much faster and safer), with its minifloppy disk and integrated 10 M byte HDU, the Olivetti Personal Computer M22 guarantees the same performance as any desk-top model. The built-in "personal windows" software, featuring such functions as word processing, calendar and calculator provides the additional benefits of diskless processing and user-friendly system configuration. Concurrency between the various PC software environments and "personal windows" is guaranteed by means of a second CPU and a special key which toggles from one to the other. A password facility protects the system from unauthorized use and turns your "personal windows" data into a truly private diary.

The flexible configurability of this Olivetti Personal Computer makes it easy to transform a portable, floppy disk, battery operated M22 into a transportable, hard disk personal computer using AC power. The Olivetti Personal Computer M22 is a complete system. The minimum configuration contains: 256 K byte RAM, an 80-column by 25-row backlight LCD, a full 85-key professional keyboard, a 360 K byte minifloppy disk, the silicon disk, serial and parallel interfaces, a mouse interface, an industry standard expansion slot for the insertion of any half- or full-size expansion board offered on the market today, an additional slot for the insertion of a compact M22 board, the battery carrier and AC power supply. All this and a handsome carrying case for the computer, floppy disks, manuals, cables and so on. The Olivetti Personal Computer M22 can be connected to a full range of peripherals and both portable and desk-top printers.

GENERAL CHARACTERISTICS

- 2 x CPU 80C88 (4.77 MHz speed)
- 256 KB RAM expandible up to 1 MB
- 1 x 360 KB 5.25in slim size minifloppy disk unit
- silicon disk (user-configurable)
- TTY serial interface (RS 232 C/V24)
- parallel interface (Centronics)
- mouse interface
- 2 expansion slots for compact Olivetti boards (one slot is occupied by the serial interface board which is standard in the basic configuration)
- 1 expansion slot for industry standard boards
- professional keyboard (85 keys)
- backlight LCD display (80 columns x 25 rows)
- built-in software ("personal windows")
- battery carrier

- universal AC power supply and cables
- carrying case.

GENERAL OPTIONS

- memory expansion board
- memory expansion kit
- rechargeable battery pack
- 10 MB integrated hard disk unit (requires AC power)
- additional serial interface
- local area network (LAN) boards
- BSC/SNA communications boards
- modem coupler (MC10)
- acoustic coupler (AC10)
- integrated modem/serial interface
- mouse.

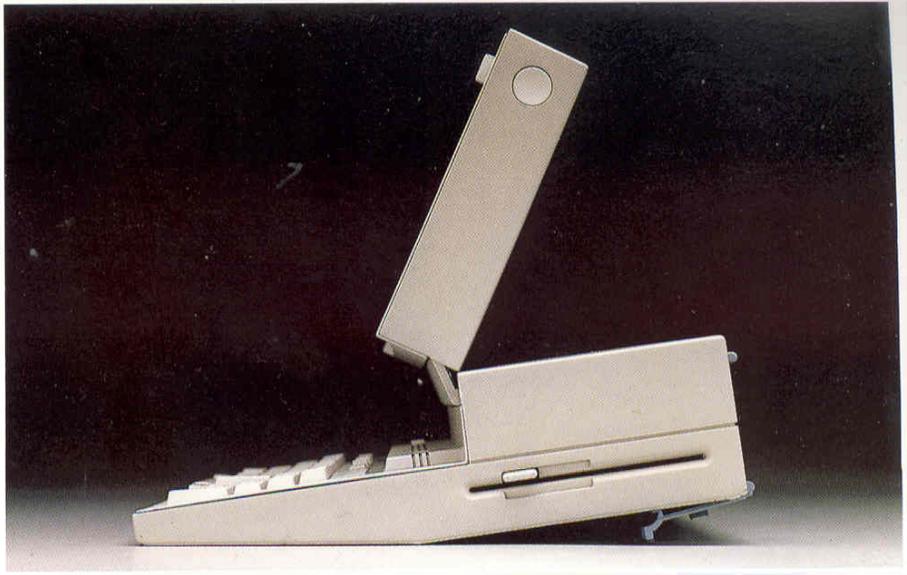
BASIC UNIT

CPU

- 2 x CMOS 16-bit 80C88 microprocessors
 - clock speed: 4.77 MHz
 - memory access time: 200 ns.
- The second CPU provides concurrent support for the built-in "personal windows" software and the silicon disk.
- 8-bit internal bus
 - DMA controller.

Memory

- 32 KB ROM BIOS with automatic power-on diagnostics for main system functions control
- 32 KB ROM for "personal windows" software
- 32 KB ROM for central software and additional diagnostics
- 256 KB NMOS RAM expandible to 1 MB (access time: 150 ns).



Standard interfaces

- serial interface for peripherals and asynchronous communications (EIA RS 232 C, CCITT V24). Transmission rate is software selectable from 75 to 9600 baud
- 8-bit parallel interface (Centronics) for printer connection
- mouse interface for Olivetti mouse (GRD 2469).

EXPANSIONS

The built-in expansion slot allows the use of all industry standard boards (half- and full-size).

Olivetti supplied expansions are:

- 256 KB memory board expandible up to 768 KB (MEM 2256)
- 256 KB RAM memory expansion kit for memory board upgrading (EXM 2268)
- asynchronous serial interface (compact board) (SIC 2232)
- asynchronous serial interface (SIC 2431)
- mouse directly connectable to the integrated mouse interface (GRD 2469)
- rechargeable battery pack (RBP 2281).

Communications boards:

(specific software kits are required)

- 3270 SNA/BSC protocol (LCU 2474)
- 2780/3780 protocol (LCU 2480)
- integrated modem (U.S. BELL 103 = 110/300 bps, BELL 212A = 1200 bps) compatible with Hayes smart modem
- modem coupler (300 bps, half/full duplex, originated/answer) (MC10).

Local Area Network boards:

- 10-NET attachment kit. 10-NET is a homogeneous PC LAN which includes among other features: multiple printer/file servers, file/record locking, printer spooling, multiple security levels, job submission and utilities (i.e. Electronic Mail, Agenda, etc.) (LAN 2486).

Integrated mass storage device

- 360 KB slim size minifloppy disk unit
 - 5.25in double sided/double density
 - average access time: 100 ns
 - transfer rate: 250 KB/s
 - number of tracks: 40
 - track density: 48 tpi
 - track to track access time: 6 ms
- silicon disk.

The silicon disk provides hardware emulation of a 5.25in FDU using a protected region of dynamic RAM. Can be configured as drive A: or B. The size of the silicon disk may be set to 63 K, 126 K, 180 K, 360 K or OFF (disabled).

- 10 MB 3.5in integrated Winchester hard disk unit (HDS 2210).

KEYBOARD

Full-size keyboard with the following characteristics:

- functionally compatible with market standard keyboard
- 85 keys
- 10 function keys
- special key to toggle "personal windows" software
- extended numeric pad
- acoustic feedback
- full n-key rollover
- 4 LED status indicators (communications, floppy disk access, silicon disk access, low battery/HDU access)
- LED indicators for the keys: "CAPS LOCK", "SCROLL LOCK", "NUM LOCK"
- national versions.

DISPLAY

Liquid crystal display with the following characteristics:

- backlight with adjustable brightness levels
- software selectable 80 x 25 or 40 x 25 character display
- graphics resolution (pixels)
 - 640 x 200
 - 320 x 200
- refresh frequency: 72 Hz
- tilttable (0 to 180 degrees)
- character font: 8 x 8
- "shades-of-grey" in graphics mode
- 2:1 aspect ratio
- contrast control.

Power sources

- battery carrier for both throw-away (Alcaline) and rechargeable (Nickel Cadmium) batteries
 - 10 batteries of 1.5 W
 - battery life:
 - alkaline batteries: 16 hours
 - nickel cadmium batteries: 4 hours
- rechargeable battery pack (RBP 2281)
 - fits into the battery carrier
 - 8-hour normal usage
 - rechargeable through the external power supply
 - rechargeable with machine "ON" or "OFF"
 - 12-hour recharge time
- external universal power supply
 - 90-264 V, 50-60 Hz
 - national connector plugs
 - automatic adaptation to available mains (Universal).

Carrying case

Included in basic configuration for comfortable portability of the system. Besides the M22, it can be used to carry for example floppies, manuals, etc.



PRINTERS

Olivetti offers a wide range of printers tailored to satisfy different users' needs. Either portable or desk-top printers are available.

Type: daisy wheel or dot matrix.

Speed: 25 to 220 cps.

Matrix: 9x7, 9x9, 12x7, 12x18.

Graphics or semigraphics.

B/W or colour.

Paper handling:

- rear feed
- sprocket feed
- pin feed
- automatic sheet feeder.

Interfaces:

- parallel (Centronics)
- serial (RS 232 C).

SOFTWARE

"Personal windows"

Built-in (ROM-based) software which allows the user to configure the system and perform basic activities without needing to use the disks:

- 64 KB RAM required for data
- national versions
- concurrency with system activities
- functions are:
 - memo
 - appointments
 - address book
 - to-do list
 - notes
 - ledger
 - view
 - calendar
 - values
 - calculator.

Operating system

- MS-DOS.

Languages and tools

A large library for the above operating system including:

- MS-DOS
- GW-BASIC (both interpreted and compiled)
- MS-FORTRAN
- MS-PASCAL
- MS-C
- ISAM
- SORT
- MASM.

Dimensions and weight

Width: 401 mm

Height: 91.4 mm

Depth: 344.4 mm

Weight (without batteries): 7.5 kg

External power supply

Width: 140 mm

Height: 53 mm

Depth: 107 mm

Environmental conditions

Temperature:

- system on: 10 ÷ 40°C.
- system off: 5 ÷ 45°C.

Relative humidity:

- system on: 20 ÷ 80% (non condensing)
- system off: 5 ÷ 95% (non condensing).

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