

The Kaypro 2

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Alan Kay was the founder of Non-Linear Systems Inc. which developed the first digital voltmeter. In 1981 he also founded the Kaypro Corporation to enter the computer market. In 1982, the first machine released was the Kaypro II, directly competing with the popular Osborne-1 portable computer. It was an immediate success with business travelers and writers who needed remote computing possibilities.

KAYPRO

The naming of early Kaypro systems was confusing. There was a brand name switch from Kaycomp to Kaypro, and then a switch from Roman numerals (Kaypro II and IV) to Arabic numbers (Kaypro 2 and 4). The Kaypro 5 and 10 referred to the size of the harddisk (5Mb and 10Mb), and each model number had different revisions. The model described in this article is the Kaypro 2 from circa 1983 (Cabinet PN81-003, Mainboard PC81-240A).

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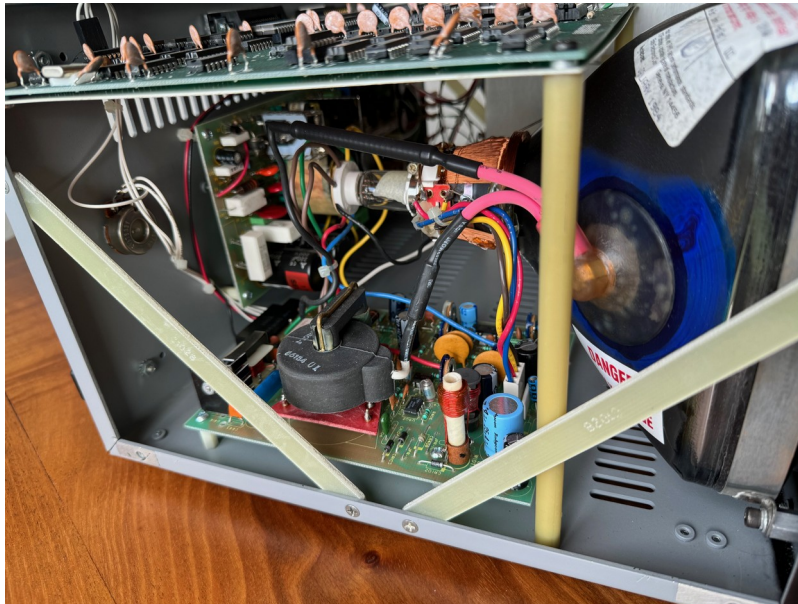
The Kaypro 2 is a complete portable computer with built-in CRT screen, keyboard, two floppy drives, and external interfaces. The model shown here weighs 12.4kg. The physical dimensions are 22cm x 42cm x 46cm (including feet and protruding features). The power consumption is between 60 and 65 Watts when idle or accessing a floppy drive. The machine is fanless with multiple air vents to keep components from overheating.



The full-sized professional keyboard is detached and has 76 keys (including the numeric keypad). The keyboard is connected to the main system with a coiled cable using a 4-pin modular plug. When packed up for transport the keyboard snaps on to the computer body, covering up the screen and floppy drives, and becomes the bottom of the packaged system when carried.



The screen is a 9 inch (22.86cm) diagonal monochrome green phosphorous CRT. The brightness intensity can be adjusted with a dial in the back of the machine. The screen has a character size of 25 rows and 80 columns. Standard ASCII characters are mapped to individual 5x8 pixel cells by the ROM. The Kaypro 2 was not designed to perform high resolution graphics.

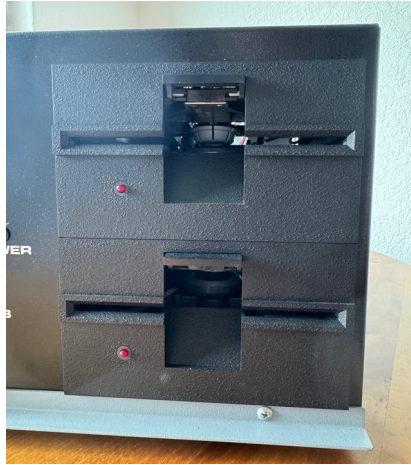


The rear (or top) of the Kaypro 2 provides a number features listed here:

- RS232 serial port for modems and other serial components
- Centronics parallel port for printers
- standard 3-prong AC power connector, replaceable fuse, and power switch
- winding hooks for storing the power cable
- reset button to restart the computer without turning off the power supply.
- handle for carrying during transport
- keyboard cable modular plug
- screen brightness adjustment knob



The Kaypro 2 provides two floppy drives for storage on 5.25 inch diskettes. The drives are single-sided and double-density, storing 191K per floppy. These drives are used to boot CP/M, run programs, and load data. The drives connect to the mainboard using a standard 34-pin Shugart interface. Unlike the competing Osborne-1, the Kaypro has no built-in storage space for holding floppy diskettes.



The inside of the Kaypro 2 is not cramped and has a lot of space between components. This also helps dissipate heat through the vents on the back, sides, and bottom. The major components found in the Kaypro 2 are:

- power supply unit
- video board
- CRT assembly
- mainboard
- drive bays with two floppy drives





In addition to CP/M, Kaypro typically bundled application software for customers to use without additional cost. Some examples of programs included:

- Perfect Filer - database application
- Perfect Calc - spreadsheet application
- Perfect Writer - word processor application
- Perfect Speller - spell checking program
- S-BASIC - CP/M BASIC programming language and compiler

Included were paper handbooks and documentation to help customers learn how to use the software.



The initial market success began to decline after the IBM PC became the industry standard. Kaypro tried to adapt and produce IBM compatible products, but they entered the market too late. By 1992 Kaypro was bankrupt.

Links to software, documentation, schematics, and other Kaypro information:

<https://retrocmp.de/kaypro/index.htm>

<http://www.bitsavers.org/pdf/kaypro/>

<http://www.retroarchive.org/maslin/disks/kaypro/>

Original english version of this article can be found here:

<https://digitalforensics.ch/enter/kaypro2.pdf>