micro-1

User's Guide

Part Number 6443 KPD-253

FCC INFORMATION

The proper FCC rating is affixed to the back of each Kaypro computer, and the appropriate FCC information is given here.

FCC INFORMATION FOR CLASS B

This equipment generates and uses radio frequency energy and, if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type-tested and found to comply with the limits for a Class B computing device in accordance with the specifications in subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection when operated in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna.
Move the computer away from the receiver.
Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

WARNING: This equipment has been certified to comply with the limits for a Class B computing device in accordance with the specifications in subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with Class B limits may be attached to this computer, and only with a shielded cable. Operation with non-certified peripherals or with unshielded cables is likely to result in interference to radio and TV reception.

NOTE: TO PREVENT RADIO AND TV INTERFERENCE, SHIELDED CABLES MUST BE USED TO CONNECT PERIPHERAL DEVICES TO YOUR COMPUTER. THESE CABLES ARE AVAILABLE FROM YOUR KAYPRO DEALER.

Features of The micro-1

The KAYPRO micro-1 is a low profile, small footprint system. It is designed for use as an entry level stand-alone computer.

BIOS: The Phoenix ROM BIOS assures high compatibilty with the KAYPRO PC. When used with MS-DOS, the micro-1 will run all KPC software.

I/O: Centronics-compatible Parallel Port
RS232C Serial Port

Keyboard: Connects via standard 5-pin DIN to full sized 84-key keyboard with oversized *Shift* and *Enter* keys and separate numeric keypad.

Memory: 512K of RAM Standard

Power: External wall mount 120V 60Hz input.

Storage: Two 720K 3.5 inch micro floppy drives

Video Display: Connects to either a conventional monitor (CRT) or a KAYPRO LCD display panel. The micro-1 may be attached to a monochrome or color monitor. The video circuitry supports Color Graphics or Monochrome Text and Graphics.

All these features plus a real-time clock are contained in a system that measures only: 12" x 12" x 3". The ON/OFF switch and drives are conveniently located on the front panel and all power and peripheral connections are from the rear.

Figure 1 micro-1 front panel

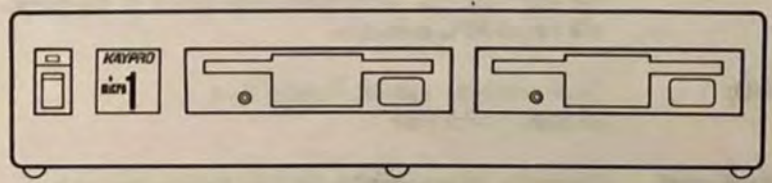
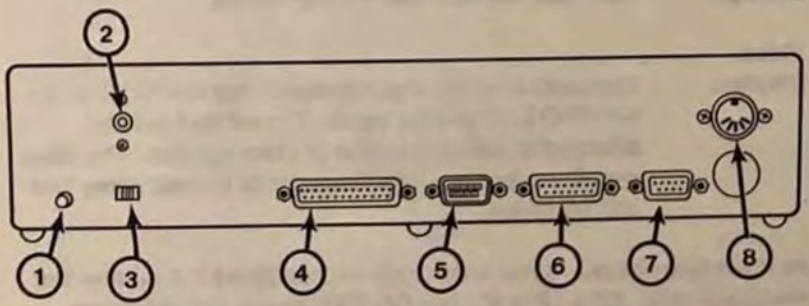


Figure 2 micro-1 rear panel



1. System Reset Button
2. DC Power Jack: Connect external power supply here.
3. Video Mode Switch: Select Color or Mono depending on video display.
4. Centronics Parallel Port: Parallel Printer connects here.
5. RS232C Serial Port: Serial Printer or Modem connects here.
6. LCD Display Panel connects here.
7. Conventional Monitor (Monochrome or Color) connects here.
8. 5-pin DIN Keyboard Connector

Hardware Installation

The components of your system are shipped in two separate boxes. One box contains the micro-1, keyboard, manuals and related cables. The other box contains your video display. Depending on the configuration you have chosen, your video display is a KAYPRO LCD panel or conventional monitor (CRT).

1. If you haven't already done so, unpack both shipping boxes. The boxes should also contain and warranty information and registration cards.

2. Set aside the packing materials and save them in case you need to ship the computer.

3. Place the system components on a flat work surface. The ideal work surface is a sturdy table or desk that allows access to the front and rear of the computer. Have a small (#2) slotted screwdriver handy to connect cables securely.

For a functional system you will need to connect the following:

Video display (KAYPRO LCD panel or monitor)
Keyboard
Power Cable

Refer to the illustrations on the opposite page in making the necessary connections.

4. Connect the keyboard to position 8.

5. Plug one end of the system power cord into position 2.

6. Plug the other end of the system power cord into a 115-volt outlet.

Attaching The Video Display

If you have the optional KAYPRO LCD panel plug the signal cable from panel into position 6 and set the video switch (position 3) for Color. If you need to optimize contrast move the sliding switch on the front of the LCD display panel.

If you have an optional KAYPRO RGB Monitor, plug the signal cable from panel or monitor into position 7 and set the video switch (position 3) for Color. Plug the power cord from the monitor into a grounded 115-volt outlet. If you have this option and the optional LCD panel, connect only the display you intend to use before turning the micro-1 on.

If you have the standard conventional Monochrome monitor, plug the signal cable from the monitor into position 7 and set the video switch (position 3) for Mono. Plug the power cord from the monitor into a grounded 115-volt outlet.

While you can have both a the LCD panel and a conventional monitor attached to the micro-1, you cannot use both displays at the same time. Before powering up the micro-1, be sure the video switch on the rear panel is set properly for the display in use.

Confidence Testing

After you have connected your video display, you have completed all the hardware installation steps. To test the connections you have made, follow these steps:

1. Verify that all the power cords are plugged in and that the cardboard connectors are removed from the drives.

2. Verify the video settings are correct. If you have a conventional monitor, turn the monitor on.

3. Insert the Master Diskette label side up in the A drive. Drive A is the drive toward the nameplate.

3. Place the power switch in the ON position.

After a few seconds, you should see the ROM BIOS "sign-on."

After the ROM BIOS sign-on, the micro-1 will go through a variety of test and start-up procedures ending with an **A >** system prompt.

Software Installation

The Master diskette should not be used in day-to-day operations. After hooking up your system, your first task should be making a working copy of your Master diskette. Start your system with the Master diskette in drive A (the drive toward the nameplate) and a blank double-sided, double-density micro floppy diskette in drive B.

At the A prompt type **DISKCOPY A: B:** and press *Enter*. Respond to the screen prompts as required.

If you are unfamiliar with MS-DOS, see your *MS-DOS User's Guide* for tutorial and other information on MS-DOS.

Additional Features

Changing Speeds

The micro-1 powers up at 9.54MHz. The keystrokes involved in selecting speeds are as follows:

Ctrl, *Alt* and the *1* key from the keypad selects 4.77

Ctrl, *Alt* and the *2* key from the keypad selects 7.15

Ctrl, *Alt* and the *3* key from the keypad selects 9.54

Resetting the micro-1

The micro-1 can be "soft" reset by pressing the *Ctrl*, *Alt*, and *Del* keys. If the micro-1 does not respond to the keyboard, you can restart the micro-1 by pressing the power switch on the front panel or the reset button on the rear panel. Pressing the reset button is equivalent to switching the computer off, pausing, and switching the computer on again.

Setting the real-time clock

There are two programs that address the micro-1's real-time clock. The first program, SETCLK prompts you for the current date and time and stores these values in the real-time clock. The second program, GETCLK reports the values held by the real-time clock and sets the operating system's "clock" to those values.

After powering up the micro-1, run the SETCLK program and enter the data following the onscreen prompts. Unlike many clock programs it will prompt you for the day of the week before requesting the date and time. Next, run the GETCLK program or simply reset the micro-1.

To check the values held by the real-time clock and set the operating system's "clock" to those values, you run the GETCLK program. The GETCLK program is in the AUTOEXEC.BAT file on your Master diskette and can be placed in a self-executing file on "boot" disks. If used in a self-executing batch file the GETCLK program eliminates the MS-DOS date and time prompts.See your *MS-DOS User's Guide* for instructions on creating an AUTOEXEC.BAT file.

Additional Configuration Information

The micro-1 serial and parallel ports use the same connectors, cables, and pin assignments as the KAYPRO PC. The parallel port conforms to standard Centronics pin assignments. The micro-1 will work with most serial devices provided the proper cable is used. To connect the serial port to Hayes-compatible external modem, use a KAYPRO serial modem cable. Due to power limitations only externally-powered auxiliary input devices (mice etc.) are compatible with the serial port.