Appendix A
Early Kaypro II, 4K EPROM Modification For TurboROM

This appendix provides instruction on how to modify an early Kaypro II main board to accept the '83 TurboROM. An adapter kit is available from Advent Products, Inc., to perform this same modification without soldering or permanently modifying the main board.

The TurboROM for the '83 and the ProGRAPHICS Kaypros is a 4K (2732A) EPROM. Late model Kaypro II computers were shipped with the Kaypro 4 main board and do not require any changes for use with the TurboROM. The late model Kaypro IIs can be distinguished by having PC81-240A silk screened on the front right corner of the main circuit board and the monitor EPROM at U47 will marked 81-232.

Early Kaypro IIs do not have any number silk-screened on the front right corner of the main circuit board and are not designed to accept a 4K EPROM. The monitor EPROM at U47 is labeled 81-149.

If the Early Kaypro II has been previously (and successfully) modified to accept a 4K EPROM, the changes indicated in this Appendix are not required.

A.1. TurboROM Adapter Kit, Early Kaypro II

The TurboROM Adapter Kit consists of a jumper wire with special clips and a modified integrated circuit chip for replacing the IC at U60 on the main board.

1. Turn the Kaypro OFF, and unplug the Kaypro from the power source.

2. Using a medium sized Phillips screwdriver, remove the four screws on each side and the two screws on the top of the cover. Remove the cover and set it aside.

3. Remove the monitor EPROM from its socket at U47 using a small flat-bladed screwdriver. Pry very gently with the screwdriver. Pry on each end of the EPROM so that neither the socket nor the EPROM are damaged.

4. Locate pin 21 on the TurboROM and gently bend this pin away from the body of the part. Insert the TurboROM at U47, aligning pin 1 of the TurboROM with pin 1 of the socket. The notched end will be pointed away from the disk drives.

5. Use the jumper wire from the adapter kit to connect pin 21 of the TurboROM to pin 6 of the IC at U33.

6. Replace U60 with the modified integrated circuit from the adapter kit.

A.2. Early Kaypro II, 4K EPROM Modification

This section details how to modify the early Kaypro II main boards to accept 4K EPROMs in the event that the TurboROM Adapter Kit is not available.

1. Turn the Kaypro OFF, and unplug the Kaypro from the power source.

2. Using a medium sized Phillips screwdriver, remove the four screws on each side and the two screws on the top

of the cover. Remove the cover and set it aside.

3. Locate pin 21 on the TurboROM and gently bend this pin away from the body of the part. Replace the Kaypro EPROM at U47 with the TurboROM.

4. Solder a wire between pin 21 of the TurboROM and U33 pin 6.

5. Remove U60 from its socket. Bend pin 1 out from the body of the IC and solder a wire from pin 1 to pin 8.

6. Re-install U60, leaving pin 1 out of the socket.

Appendix B
Early Kaypro II, Double Sided Drives

Early Kaypro II computers do not support the side select logic required for double sided floppy disk drives. Late model Kaypro II computers were shipped with the Kaypro 4 main board and do not require any changes for use with double sided floppy disk drives.
The late model Kaypro IIs can be distinguished by having PC81-240A silk screened on the front right corner of the main circuit board. The monitor EPROM at U47 will be marked 81-232.

Early Kaypro IIs do not have any number silk screened on the front right corner. The monitor EPROM at U47 may be labeled 81-149.

This appendix details how to modify the early Kaypro II main boards to generate the side select logic. The Personality/Decoder Module is available from Advent Products, Inc., to perform this same modification without soldering or permanently modifying the main board.

B.1. Main Board Removal

1. Turn the Kaypro OFF.

2. Unplug the Kaypro from the power source.

3. Using a medium sized Phillips screwdriver, remove the four screws on each side and the two screws on the top of the cover. Remove the cover and set it aside.

4. Carefully disconnect the four cables attached to the main Kaypro circuit board. Remove the two screws holding the front edge of the main board to the white plastic stand-offs. Remove the screws and fasteners that hold the back edge of the board to the metal cabinet.

5. Remove the main Kaypro II circuit board from the computer.

B.@. Main Board Modification

1. Locate U73 and remove it.

2. Purchase a 74S04 integrated circuit to replace U73.

3. Bend pin 5 of the 74S04 out from the body of the chip. Remove the IC at U73 and install the modified 74S04 in the socket at U73. Pin 5 does not go back into the socket.

4. Add a wire on the component side of the board, connecting U73 pin 5 and the feed thru solder pad labeled E40.

5. Add a wire, on the component side of the board, connecting U73 pin 6 to J6 pin 32 (J6 is the floppy disk drive cable connector).

Appendix C
Early Kaypro II
Field Service Bulletin #4

Early Kaypro IIs have a circuit design problem that can cause the corruption of data on the floppy disks. This design problem was corrected on later versions of the Kaypro II. Kaypro issued Field Service Bulletin #4 to detail how to fix the problem with Kaypro IIs in the field.

The information in this appendix applies only to Kaypro II models WITHOUT the main circuit board identified as PC81-240A in the front right corner. Check the integrated circuit identified as U87 in the front right corner of the circuit board. It should have two small wires connecting its pins to each other, one wire on each side of the chip. If it does not have these wires, they will have to be installed according to the following instructions:

1. Remove IC U87 from its socket.

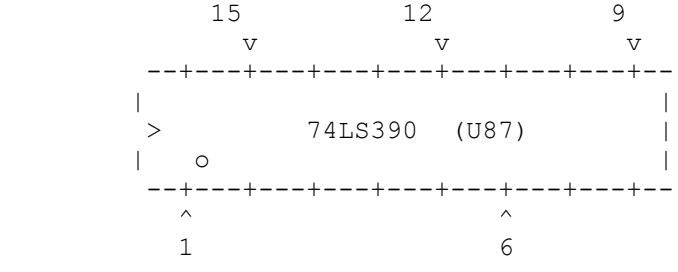
2. Bend pin 1 of the IC out from the body of the IC.

3. Cut off pin 9 of the IC near the body.

4. Solder a wire from pin 1 to pin 6 of the IC.

5. Solder a wire from pin 12 to pin 15 of the IC.

6. Reinstall the IC, leaving pin 1 out of the socket.



PIN NUMBER ID. IS DETERMINED BY THE NOTCHED END