

CO-POWER-88
FOR THE
KAYPRO-II AND 4

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Hardware: Installing CO-POWER-88 in the Kaypro

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**                                                                 **
** We recommend that the CO-POWER-88 circuit boards be installed by a **
** qualified service technician. We are not responsible for any accidents **
** or liabilities caused by or deriving from the installation of CO-POWER- **
** 88.                                                                 **
**                                                                 **
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CO-POWER-88 is two circuit boards that are connected by a ribbon cable. The smaller board is the Z80 Adapter Board; the larger board is CO-POWER-88's Main Processor Board. {The Main Processor Board has 128k of RAM on board. The 256k CO-POWER-88 has a 128k RAM add-on card that plugs onto the Main Processor Board above the 128k on board RAM.}

The Main Processor Board comes attached to a metal bracket. This bracket fastens CO-POWER-88 behind the Kaypro's disk drives. Installation of the boards is easily done by following these steps:

(This installation is for Kaypros that have horizontal drives. Older models that have vertical drives may need a different installation.)

- #1 If the unit is plugged into an electrical outlet, unplug it. Unscrew the cover screws and remove the Kaypro's cover.
- #2 Locate the Z80 chip on the Kaypro's circuit board. It is a 40-pin part in a socket. Remove this chip. Plug the empty 40-pin socket that came with the coprocessor into the now-empty Z80 socket, aligning Pin 1s. Pin 1 on the socket is marked by a small dent in the socket's edge. it looks similar to this:



- #3 Insert the Z80 chip into the 40-pin socket on the Z80 Adapter Board, making sure that Pin 1 of the chip and socket are aligned. Pin 1 on the chip is usually marked in one of two ways:

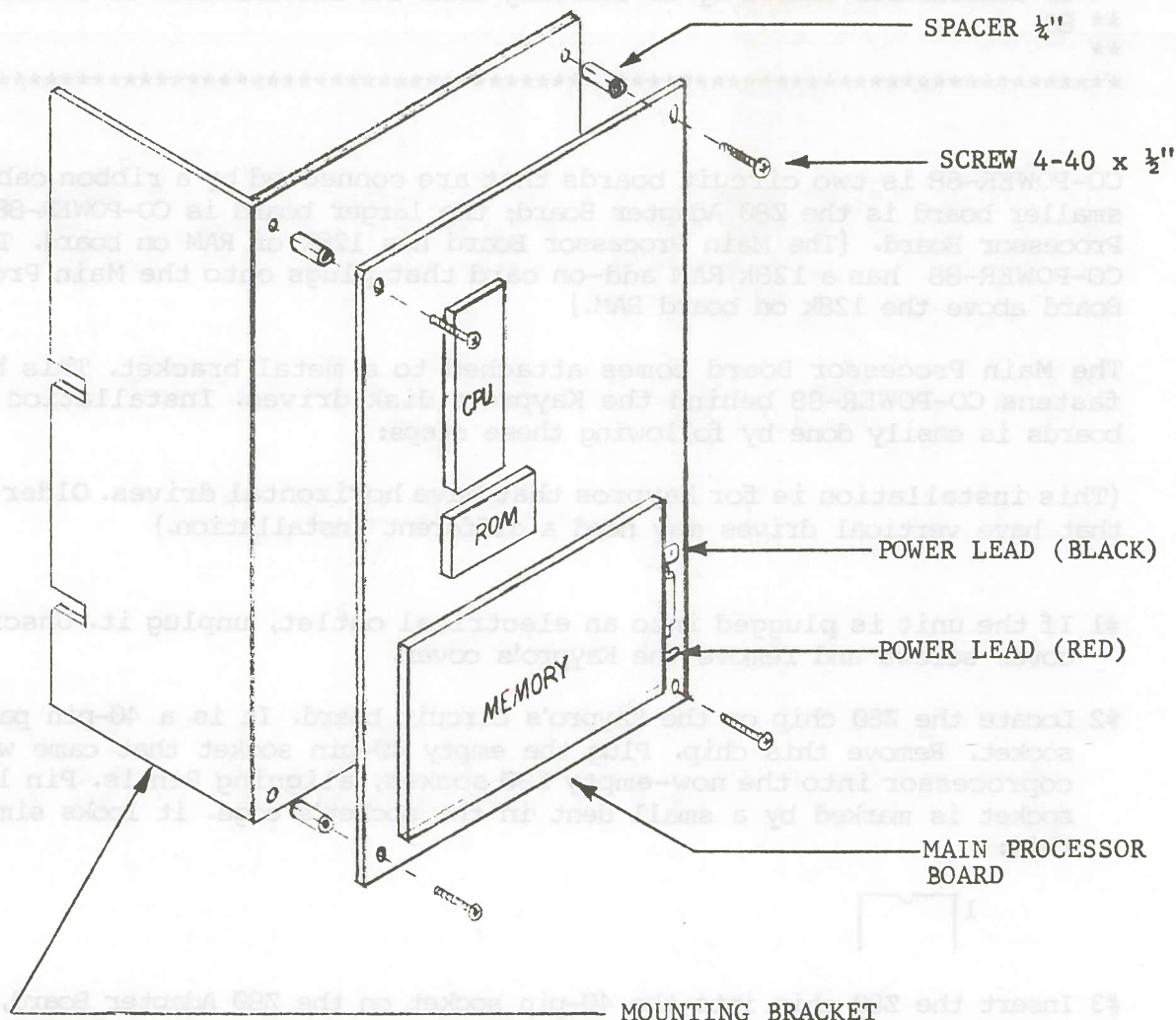
1- by a small circle or notch: 2- by a groove



- #4 Plug the Z80 Adapter Board into the socket that was inserted in the Kaypro's Z80 socket in Step 2, aligning Pin 1s. Match Pin 1 of the socket with Pin 1 of the Z80 chip on the Z80 Adapter Board.
- #5 A ribbon cable connects the Z80 Adapter Board to CO-POWER-88's Main Processor Board. Plug one end of the cable into the empty socket on the edge of the Z80 Adapter Board, aligning Pin 1 of the socket (marked by a small indentation) to Pin 1 of the cable (marked by a red wire). The other

end of the cable will be connected after CO-POWER-88's Main Processor Board is installed.

#6 The Main Processor Board is attached to a metal bracket as shown below.

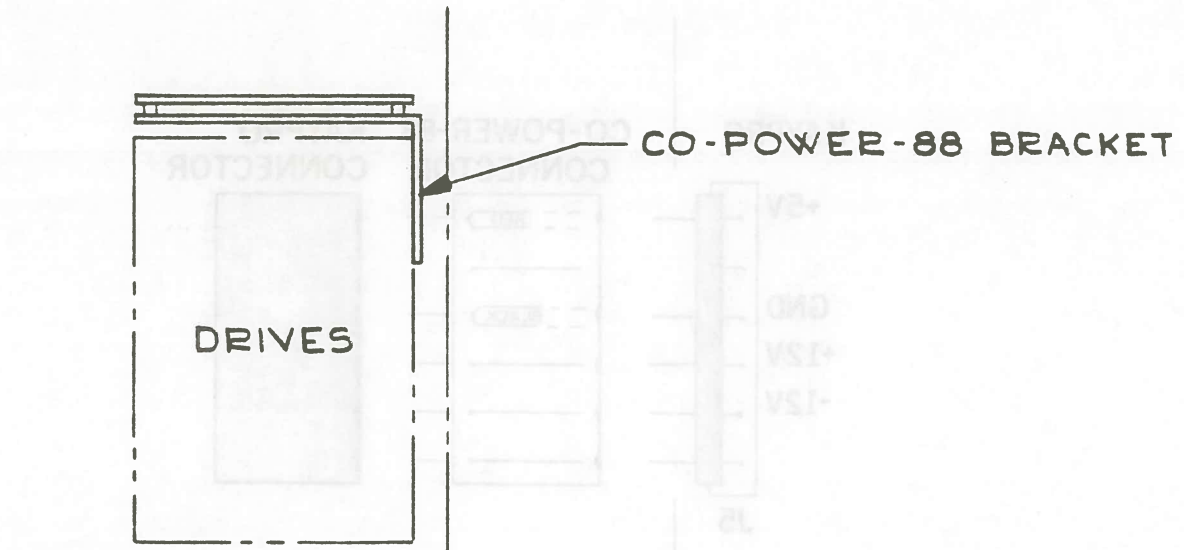


Look at the Kaypro's disk drive enclosure. There are four screws on the outside edge of the enclosure. Loosen the two back screws, the ones blackened below:

Side View

Front of Kaypro	drives		Back
	○	●	
	○	●	

Slide the CO-POWER-88 bracket under the screws. Tighten the screws. CO-POWER-88's Main Processor Board is now attached. It should look like this:



KAYPRO TOP VI

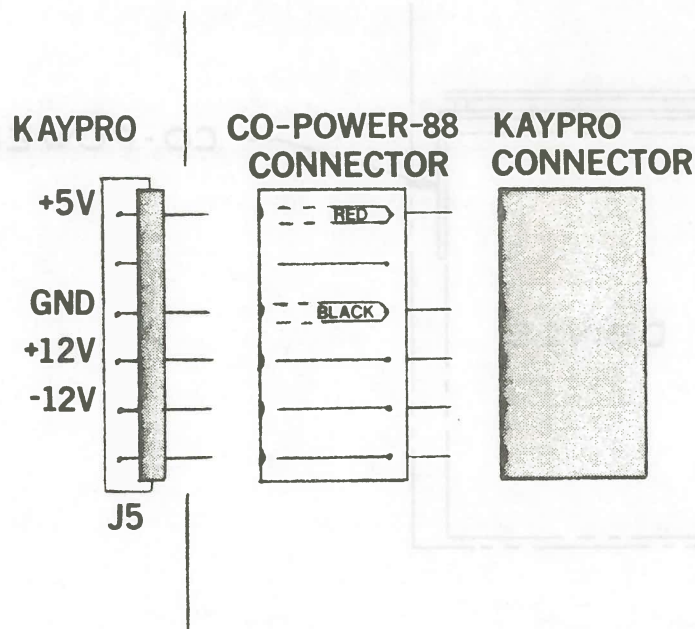
- #7 Connect the other end of the ribbon cable to the empty socket on the Main Processor Board, matching Pin 1s of the socket and the cable.
- #8 A power cable comes with CO-POWER-88. It is a red and a black conductor wire twisted together with connectors at each end. At one end of each wire is a single spade plug. Plug the red wire's spade plug to the +5 male plug on the Main Processor Board. Plug the black wire's spade plug to the ground male plug on the Main Processor Board. The location of these male plugs is in the Diagram in Step 6. Bend the connected leads away from the Main Processor Board.

The other end of the power cable has a plastic connector with five metal pins extending from it. This connector plugs onto the Kaypro's power supply through J5. J5 is marked on the Kaypro's circuit board. It is an area in front of the J4 Serial I/O port. It has a plastic connector connected to it. This plastic connector also connects to the Kaypro's power supply. Find J5, it looks like this:



Unplug the Kaypro connector from J5. Plug the CO-POWER-88 power cable

connector into J5, then plug the Kaypro connector into the CO-POWER-88 connector. It should be connected like this:



#9 CO-POWER-88 is now installed. Before redoing the enclosure, plug the unit in and boot the system to verify that the installation was done properly. Then replace the Kaypro's cover and reinsert all removed screws.

#8 A power cable comes with CO-POWER-88. It is a red and a black conductor wire twisted together with connectors at each end. At one end of each wire is a single spade plug. Plug the red wire's spade plug to the +5 male plug on the Main Processor Board. Plug the black wire's spade plug to the ground male plug on the Main Processor Board. The location of these male plugs is in the diagram in Step 6. Bend the connected leads away from the Main Processor Board.

The other end of the power cable has a plastic connector with five metal pins extending from it. This connector plugs onto the Kaypro's power supply through J5. J5 is marked on the Kaypro's circuit board. It is an area in front of the J4 Serial I/O port. It has a plastic connector connected to it. This plastic connector also connects to the Kaypro's power supply. J5, it looks like this:



Unplug the Kaypro connector from J5. Plug the CO-POWER-88 power cable

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