Quantum Design

MPMS Service Note 1014-816

Replacing the EPROM on the 1802

1. Verify that you have the replacement EPROM that was shipped with your MPMS option.

2. Turn off power to the Model 1802 Controller.

3. Exit the software.

Note: IC chips such as the EPROM may be damaged by static discharge. You are less likely to discharge static electricity if you ground yourself by touching the metal back or side panel of the Model 1802 Controller case before you touch the internal components. Moving around increases the possibility of static discharge, so limit movements while performing the upgrade.

4. Remove the front panel of the 1802 by removing the face plate screws and disconnecting the power switch (figure 1).

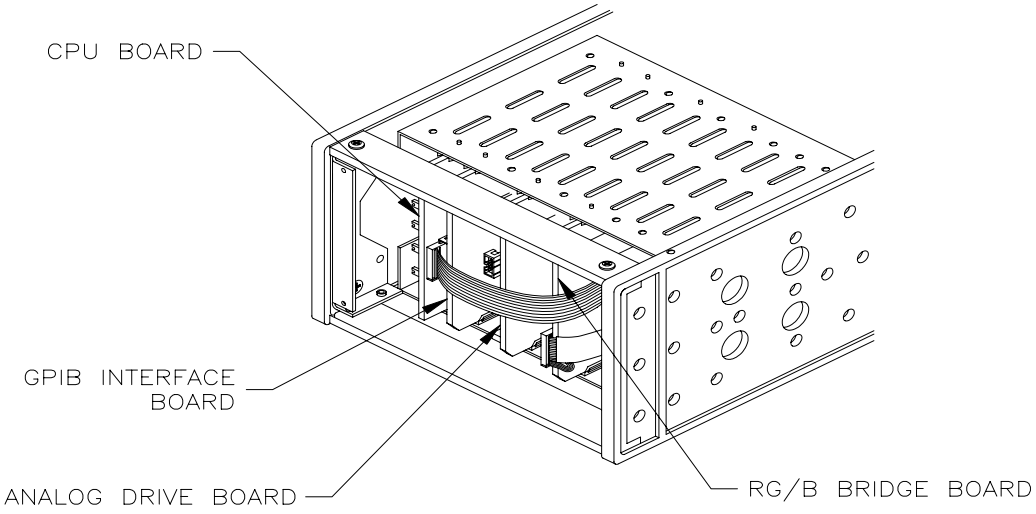

Figure 1 1802 Controller Board Layout

5. Refer to figure 1 to locate the CPU board. This board is at the left end of the board slots.

6. Remove the CPU board by pulling it out of its socket (figure 1). It may be seated quite tightly. Grip the board by the top and bottom edges while being careful not to contact any of the board

components. Use care not to bend any components during removal. For best results, ease the board out by pushing it up and down a little as you pull it away from the slot.

7. Refer to figure 2 to locate the EPROM sockets. Depending on the revision of your board, the sockets are marked S1 to S4 or U30 to U27.

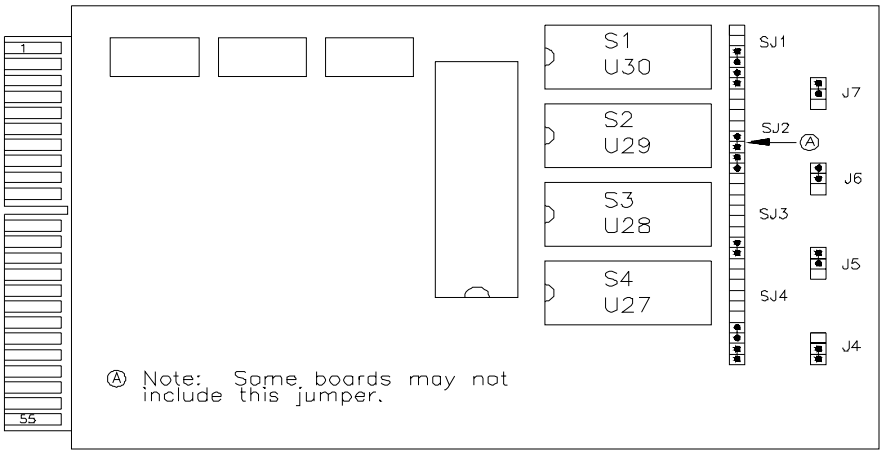

Figure 2 1802 CPU Card Showing Positions and Orientation

8. Remove the EPROM located in socket S4 (U27). To remove the EPROM, place a small, flat-ended tool underneath the short ends of the EPROM. Gently pry the EPROM up, working on each end of the chip alternately.

9. Discard the EPROM you have just removed.

10. Inspect the new EPROM and verify that the pins are aligned. Place the EPROM over the S4 socket and verify that the pins are spread correctly so that they seat easily. If bending the pins is necessary, place the chip on its side on a flat surface. Gently press the top edge of the chip to bend the pins under the chip (figure 3).

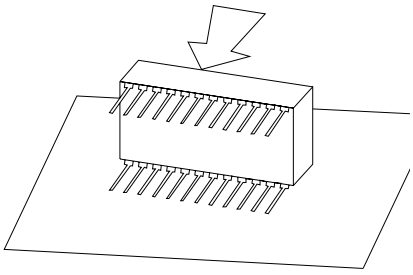

Figure 3 Aligning the Chip Pins

11. Carefully insert the new EPROM into the empty S4 (U27) socket. Insert the EPROM by placing the chip, with the alignment notch in the position shown in figure 2, over the socket and aligning the pins to the socket holes. With the pins in place, gently press down on the top surface of the chip. Press the chip in until it is fully seated.

12. Verify that the alignment notch on the new chip is oriented correctly. It should be on the end of the chip that is closest to the connector slot.

13. Return the CPU board to the 1802. Position the board so that the top of the board (the side with the chips on it) faces left. The board goes in the far left slot of the 1802. Insert the board by sliding it into the socket at the rear panel. Push the board until it seats firmly into the socket at the far edge of the board.

14. Reconnect the power switch.

15. Replace the face plate on the front of the 1802.

16. Turn on the 1802 power. Turn on the 1822 power as well if you are installing ETC using Service Note 1014-309.