

SECTION
K

Installing and Removing the SCSI Board

Installing

1. Remove all cables connected to the ASR-10, including the power cord.
2. Turn the unit upside-down and remove all the screws from the base and rear panel.
3. Disconnect both ends of the 34-pin ribbon cable that connect the digital board (J6) to the analog board (J1).
4. Remove the two (2) KEPS nuts (nuts with star washers attached) that hold the SCSI opening bracket to the I/O bracket. The SCSI opening bracket is no longer needed.
5. Install the SCSI board between the analog board (4090017101) and the digital board (see Figure 19):
 - a) Install the two (2) plastic standoffs into the holes in the keyboard bracket, and
 - b) Install two (2) 6-32 screws into the mounting brackets. One on center stringer bracket and one on the right support bracket.
6. Connect the following cables:
 - a) A 34-pin ribbon cable: SCSI board J4 to edge analog board J 1,
 - b) A 34-pin ribbon cable: SCSI board J2 to edge of digital board J6, and
 - c) A 26-pin ribbon cable: SCSI board J3 to center of digital board J4.
7. Attach SCSI cable bracket to the I/O bracket using the two (2) KEPS nuts.
8. Attach the cable from the SCSI cable bracket to J1 on the SCSI board.
9. Place an ohmmeter across R14 of the SCSI board (see Figure 19).
10. Verify that the resistance is between 1900% and 2 100% .

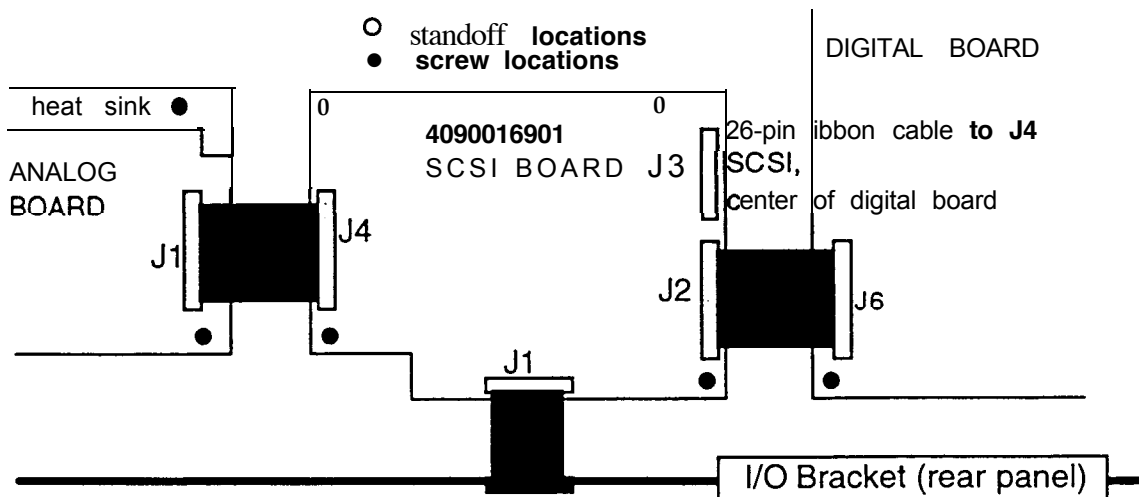
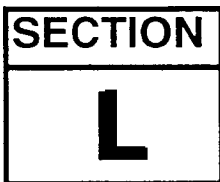


Figure 22 - SCSI Board Mounting

11. If it is less than 1900% , there is a total or partial short between analog and digital ground. Disconnect the 20-pin ribbon cable from J4 on the analog board.
 - a) If this fixes the problem, there is a problem with the tape insulation on the analog jack board mounting tab.
 - 1) Remove the analog board and analog jack board as described in Sections B and G.

- 2) Make sure that the insulation completely covers and slightly overhands the mounting tab.
- b) If disconnecting the 20-pin ribbon cable from J4 on the analog board doesn't fix the problem, there is a problem with the tape insulation on an analog board mounting location.
 - 1) Remove the analog board as described in Section B.
 - 2) Make sure that the tape insulation completely covers, and slightly overhangs, the analog board mounting locations.
- c) Replace the boards as described in Sections B and G.
- d) Verify that the resistance across R14 is between 1900% and 2100%.
12. Place the bottom plate on, but don't install any screws yet.
13. Turn the unit right side up. Turn it on and watch the display.
14. Verify that the display shows ENSONIQ ASR-10, then SCSI INSTALLED, then SEARCHING FOR SCSI DEVICE.
15. Turn the unit off and turn it upside down and replace all the screws on the bottom plate and rear panel (**use no more than 8 in/lbs of torque**).



Removing

Replacing the Digital I/O Option Board

1. Remove all cables connected to the ASR- 10, including the power cord.
2. Turn the unit upside down on a soft surface and remove all the screws from the base and rear panel. **Note** that you will have at least two different types of screws. Remove the bottom cover.
3. Make sure. that the EPROMs are version 1 SOB or higher. The two Operating System EPROMs, LOWER (U19) and UPPER (U22), are located in the center of the digital board (409001700X) near the OTTO chip.
4. With the jacks closest to you, find the four (4) holes in the keyboard bracket to the left of the digital board. The disk drive ribbon cable runs through this area and it is the area behind the SCSI board (see Figure 20).

NOTE:

- On some units one of the two disk drive ribbon cable clamps may have been put on the keyboard bracket in this DI-10 mounting area. If the unit you are working on is like this, the ribbon cable clamp must be removed. A screwdriver will do the job, as the cable clamp is attached with double-sided foam tape. There is no need to replace the ribbon cable clamp. The DI-10 board will mount on top of the disk drive ribbon cable and hold it in place.
5. Place the DI-10 board assembly over the holes in the position shown in Figure 20. Snap the DI-10 board standoffs into the keyboard bracket. Make sure that the plastic standoffs are fully seated in the holes.

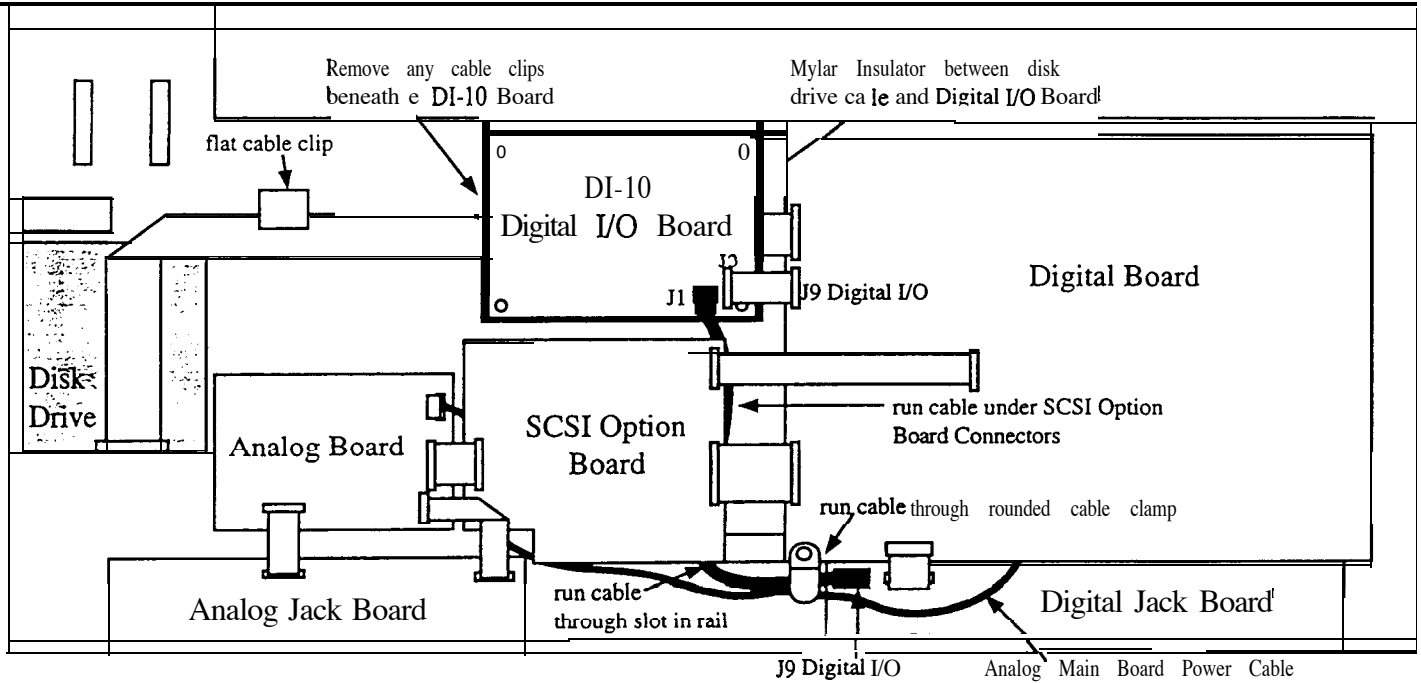


Figure 23 • Installing a DI-10 Board into an ASR-10 Keyboard Unit

NOTE:

If you accidentally put the board on in the wrong way, it may be removed by pushing in the center tab of each plastic standoff. Do each corner one at a time, lifting the board just high enough to keep the plastic tab from relocking. When all four are done, the board can be lifted off and reseated in the proper direction.

6. Connect one end of the 20-pin ribbon to the DI-10 board at J3.
7. Feed the dual shielded cable through the slot in the metal work under the back (toward you) of the SCSI board mounting area.
8. Plug the dual shielded cable into J1 of the DI-10 board and J9 of the digital jack board. Note that the connectors are keyed.
9. Remove the mounting screw from the lower left hand corner of the digital board. This screw also holds in place a rounded cable clamp with a multi-conductor power cable going through it. Place the dual shielded cable into the cable clamp with the power cable. Reattach the cable clamp and digital board to the frame as it originally was.
10. Make sure that the unit is working properly.
11. Turn the unit off and turn it upside down and replace all the screws on the bottom plate and rear panel (use **no more than 8 in/lbs of torque**).