Equipment Replacement Procedures for the 289H-M LSS

Enclosed is a replacement card for the 289H-M Loop Surveillance System (LSS) Monitor. This board replaces the existing Utility Card or Controller Card (either the modem-equipped Controller Card or the LAN Controller Card).

This document is intended for use when a Controller Card or Utility Card is replaced in a 289H-M. The instructions describe the procedures for removing and installing these cards. For instructions on replacing the Firmware EPROM chip on the Controller Card, please refer to "Firmware EPROM Replacement Procedures" (103123.DHD).

Procedure

Please follow the instructions below carefully to prevent damage to the equipment while installing or replacing cards:

Removing the Chassis Cover

1. Loosen the screws on the front of the monitor and remove the chassis cover by sliding it toward you. The screws do not have to be fully unthreaded to remove the cover.

    Note: Make sure that you are grounded before removing the circuit boards or any of the chips. If available, put on an anti-static wrist strap and clip the strap wire to a piece of metal grounded to the frame. If you do not have access to an anti-static strap, touch the grounded metal 289H-M LSS chassis before proceding.

    As shown in Figure 1, the 289H-M LSS chassis contains a backplane and three printed circuit boards (PCBs): the Utility Card, the Controller Card (either a standard Controller Card or LAN Controller Card), and a relay card (either Dedicated, Subsciber or Universal Addressable Monitoring Card).

Turning Power Off

2. Locate the main power switch in the front, right corner of the top, AUXiliary Card (the Utility Card). Switch off power to the 289H-M LSS.

3. Unplug the power supply connection from the back of the Utility Card. Also unplug the phone line from the Controller Card, the second card down.
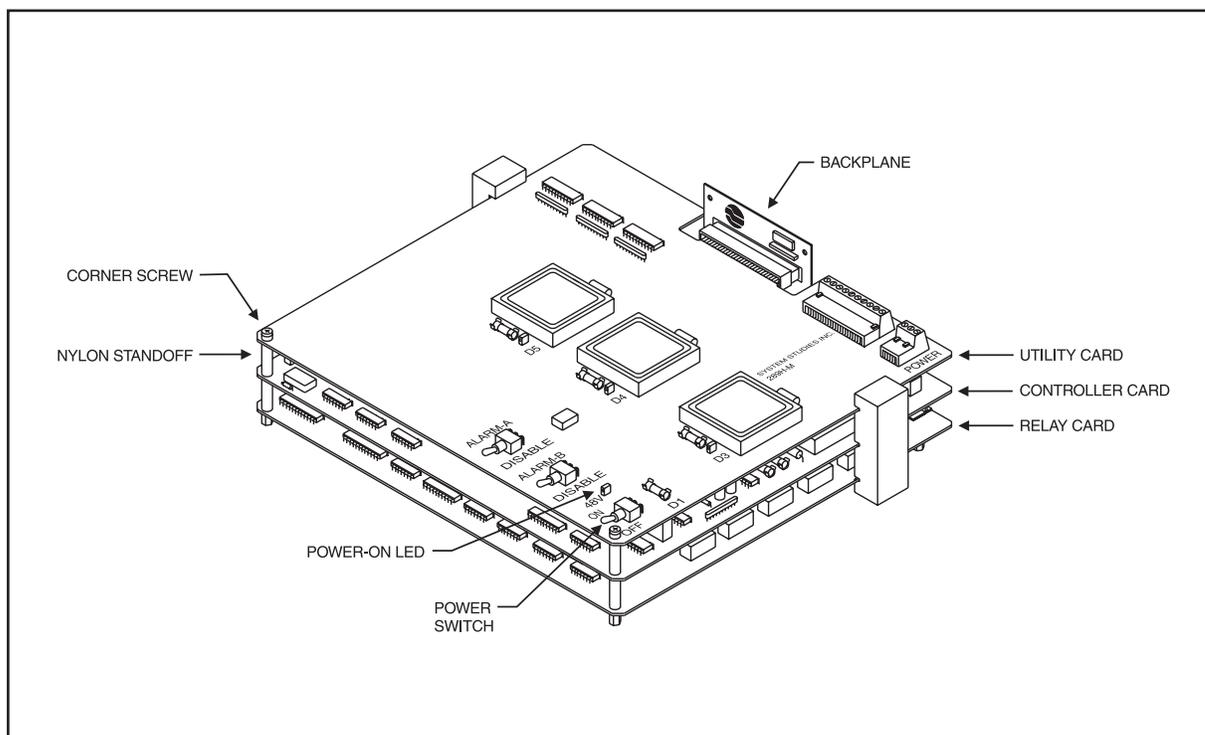
Figure 1—Circuit Board Configuration in 289H-M LSS Monitor

Removing Nylon Standoffs

4. Unscrew the two Phillips screws located at the front corners of the Utility Card. Carefully slide the screws upward and out, and remove the two nylon standoffs on top of the card. Set them safely aside, leaving in place the other nylon standoffs that the screws were threaded through to secure the PCB cards.

Removing Utility Card

5. Gently pull the Utility Card out of the rear backplane edge connector, and remove it from the assembly. The next PCB card down should be the 289H LSS Controller Card. Set the nylon standoffs that separated the two cards safely aside.

   If you are not removing/replacing the Controller Card, go to step 8.

Removing and Replacing the Controller Card

6. Carefully pull the Controller Card out of the rear backplane edge connector, and remove it from the assembly. If you are replacing the EPROM chip, refer to "Firmware EPROM Replacement Procedures" (103123.DHD) for instructions.

7. If you are installing a new Controller Card, check to be sure there are no ejector clips on the new card. If there are clips, they need to be removed before the card is installed in the 289H-M.

   Slide the Controller Card into the backplane connector, making sure it is seated properly.

Replacing the Utility Card

8. If you are installing a new Utility Card, check to be sure there are no ejector clips on the new card. If there are clips, they need to be removed before the card is installed in the 289H-M.

    Reseat the Utility Card by inserting it into the edge connector of the backplane.

9. Refit the nylon standoffs, and thread the Phillips screws back into place without over-tightening the screws.

10. Reattach the power supply cable and phone line to the monitor, and turn the power switch back on. You should hear the 289H-M LSS initializing and begin cycling through the relay cards.

    Troubleshooting: If you do not hear the 289H-M initializing, pull the Controller Card out and re-check the chip connection. Make sure the pins are not bent and that the Firmware EPROM was not installed upside down.

11. Slide the chassis cover back into place and tighten the screws to secure it.

If you have any questions regarding this replacement procedure, please call System Studies Technical Support at (831) 475-5777 or (800) 247-8255. You may also e-mail your questions to *support@airtalk.com*.