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1- GRADIENT SYSTEM CONTROL ASSEMBLY (SCA) REPLACEMENT

This procedure applies to Signa Open*Speed* 0.7T Power Cabinet and the required steps to remove and replace a gradient System Control Assembly (SCA) (2176109).

1-1 Required Tools

- Digital Multimeter
- Philips Screwdriver

2- REMOVAL/REPLACEMENT OF GRADIENT SCA

2-1 Lock Out Tag Out

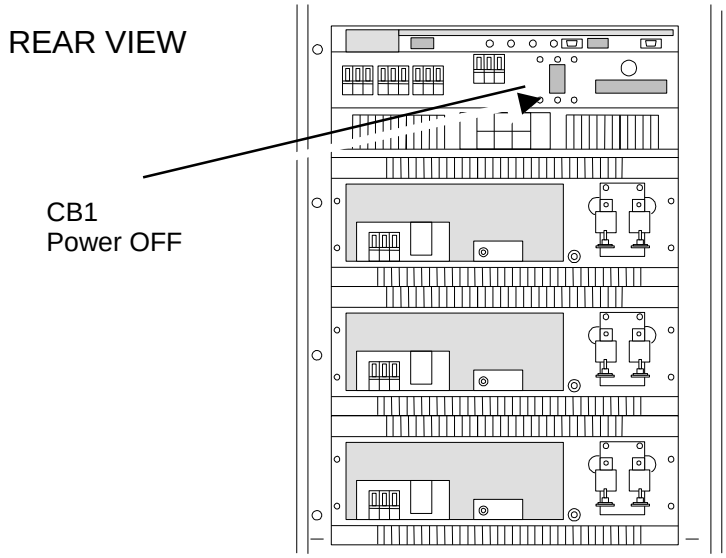
DANGER!!

FATAL ELECTRIC SHOCK HAZARD! TO PREVENT FATAL ELECTRIC SHOCK, DISCONNECT POWER FROM THE PDU BEFORE YOU PERFORM THE REMOVAL/REPLACEMENT PROCEDURES. PERFORM LOCKOUT/TAGOUT PROCEDURE PER GE OSHA LOCKOUT/TAGOUT REQUIREMENTS 29 CFR 1910.147. DO THIS BY SECURING THE PDU CIRCUIT BREAKER FOR THE GRADIENTS.

1. Turn AC power OFF at service panel.

2. Remove front and rear covers.

3. Turn power OFF at Power Supply Unit (PSU) at rear of cabinet. See Illustration 2-1 for circuit breaker location.



PSU CIRCUIT BREAKER LOCATION
ILLUSTRATION 2-1

4. Verify all LEDs are OFF on front of PSU.

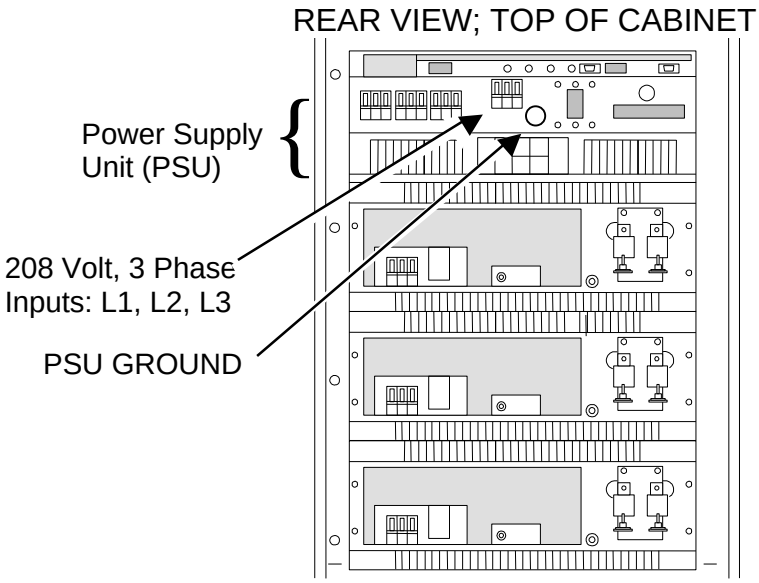
5. Wait *5* minutes for power to dissipate.

6. Turn off the Gradient Breaker at the Power Distribution Unit (PDU). Lock out the Breaker and tag it.

7. After power to the Gradient Amplifiers has had sufficient time to dissipate take a Digital Multimeter and set it to its highest AC voltage range.

8. Verify that measuring incoming power to all components of the Gradients have dissipated all energy. See Illustration 2-2.

   - Place the reference probe (black) on the PSU Ground.
   - Locate L1, L2, and L3. These are the 208V, 3 Phase inputs to the PSU.

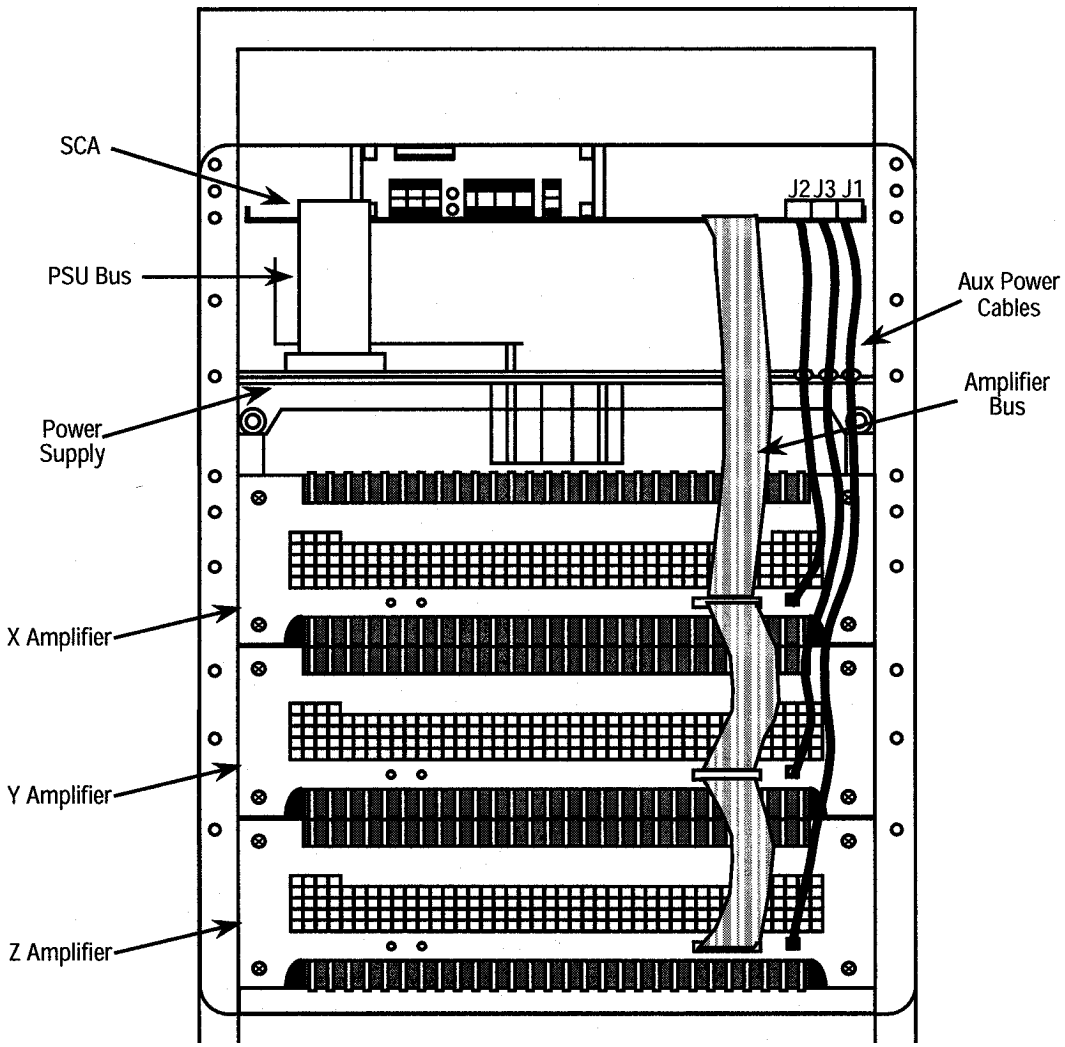


INCOMING POWER MEASUREMENT LOCATIONS
ILLUSTRATION 2-2

9. Measure voltage at each of three 208 volt input terminals. The meter should read 0 volts AC at each of the three measuring points.

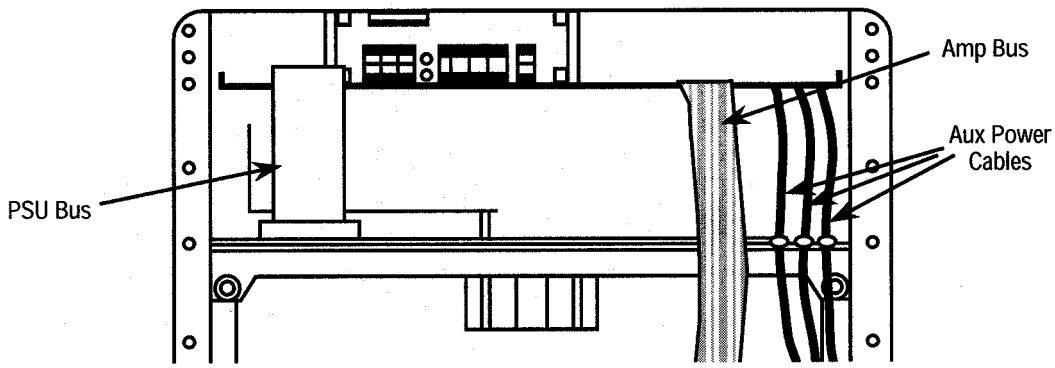
2-2 Removing the SCA

1. Disconnect aux power cables (3) from front of SCA. Disconnect amp bus cable from all 3 amps and drape carefully to avoid damage. See Illustration 2-3.



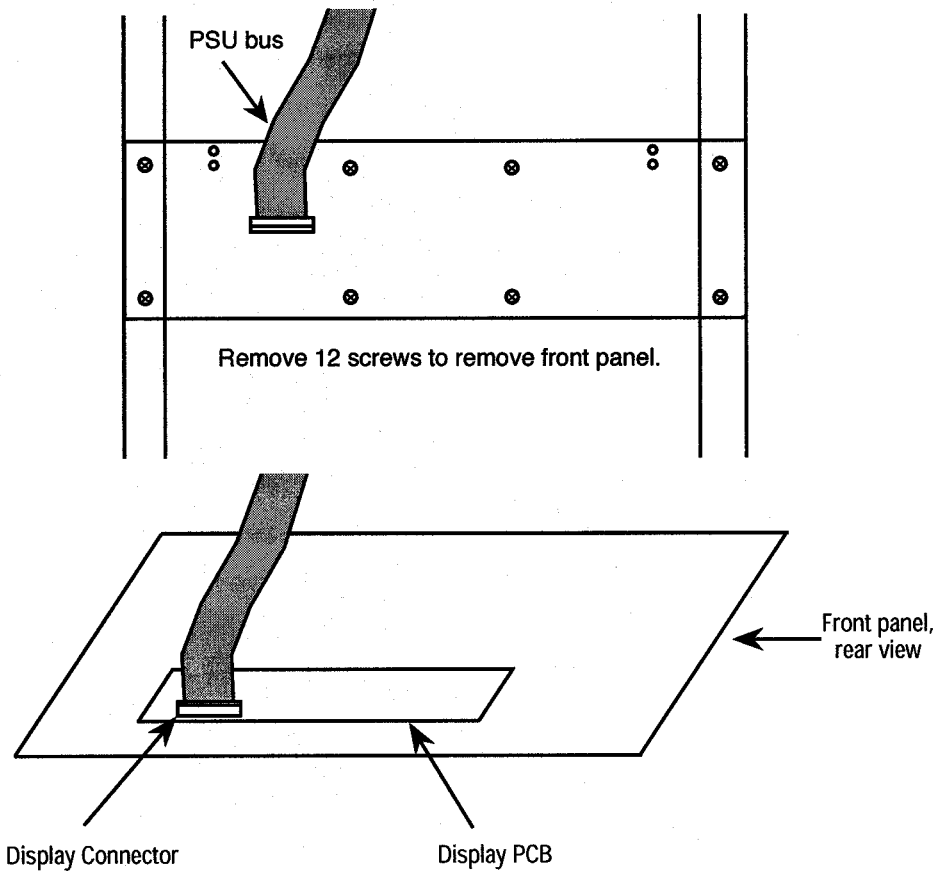
CABLE LOCATIONS
ILLUSTRATION 2-3

2. Disconnect PSU bus, amp bus and aux power cables to amplifiers and drape over top of cabinet. See Illustration 2-4.



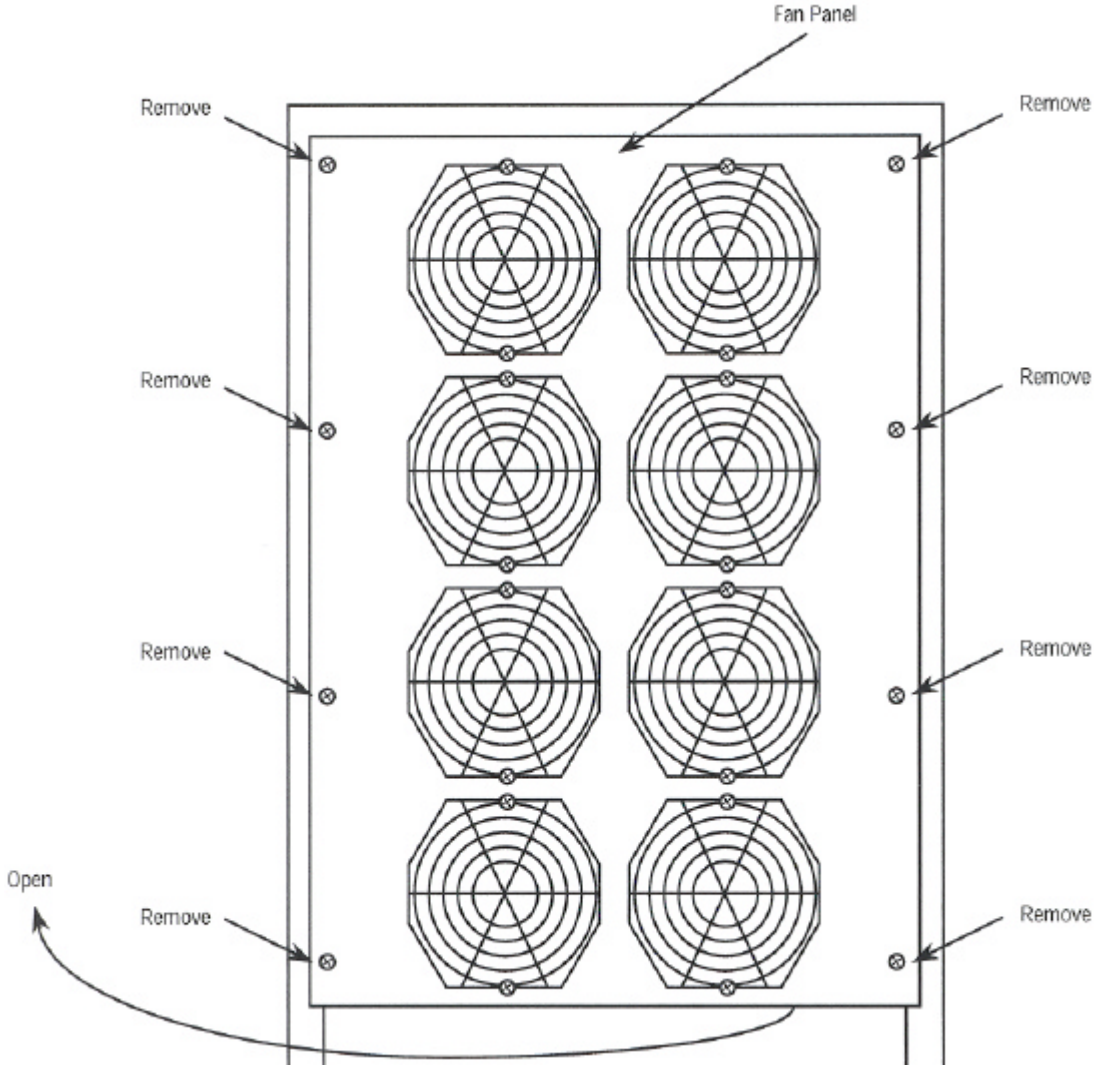
CABLE LOCATIONS
ILLUSTRATION 2-4

3. Remove PSU/SCA common front panel and disconnect display connector at display card. See Illustration 2-5.



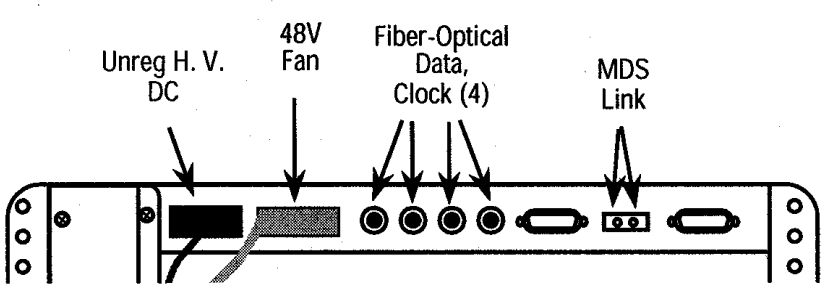
FRONT PANEL AND CABLE CONNECTIONS
ILLUSTRATION 2-5

4. At rear of cabinet, remove 8 screws and open fan panel. See Illustration 2-6.



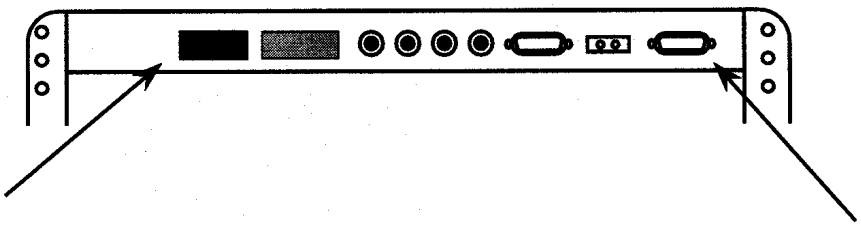
FAN PANEL SCREW LOCATIONS
ILLUSTRATION 2-6

4. Remove fiber optic cables, H.V. DC Unreg cable and 48 V fan power cable. See Illustration 2-7.



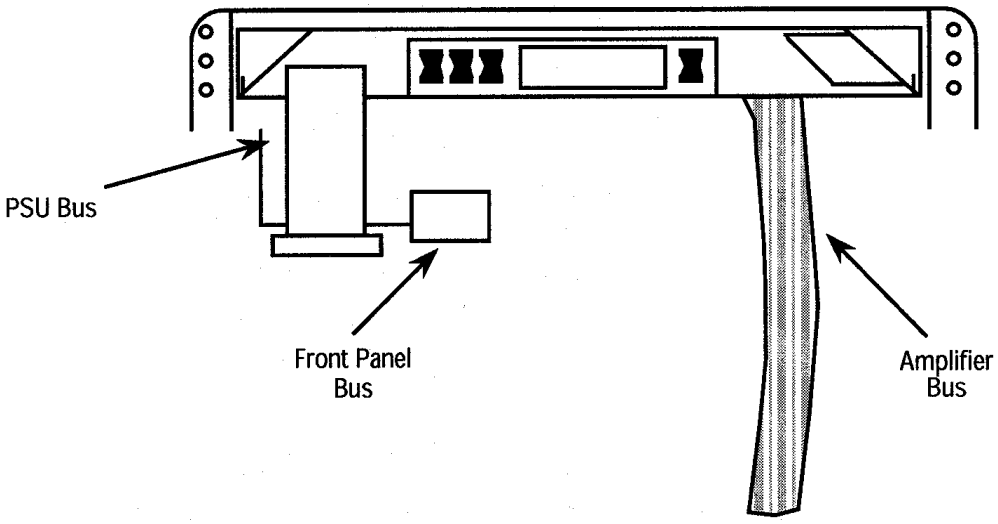
CABLE CONNECTIONS
ILLUSTRATION 2-7

5. Push SCA Forward in sleeve 5 cm by pushing on rear of SCA. See Illustration 2-8.



SCA PUSH
ILLUSTRATION 2-8

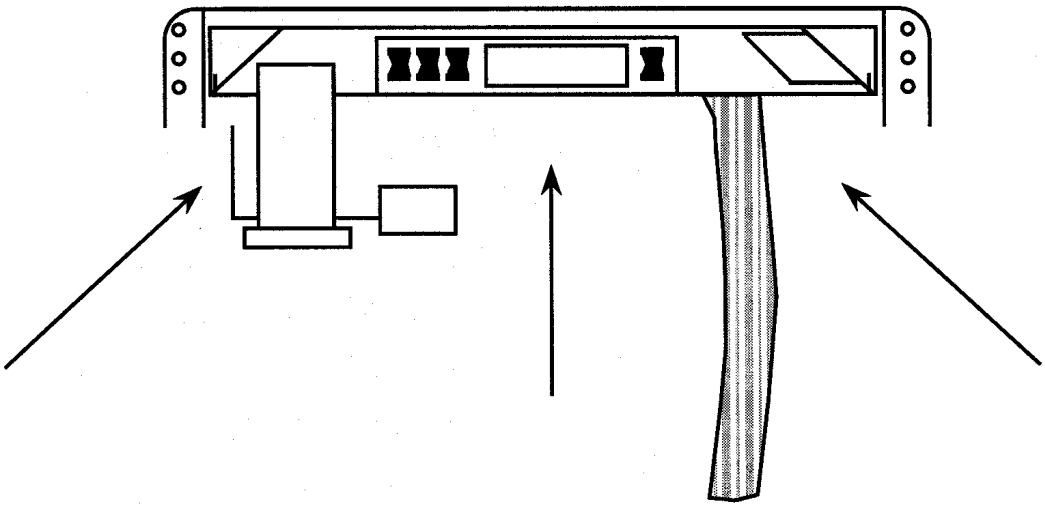
6. Pull front of SCA out of front of sleeve. Remove SCA from front. See Illustration 2-9
   - Carry by sides. Be careful to avoid damage to unit.



SCA REMOVED
ILLUSTRATION 2-9

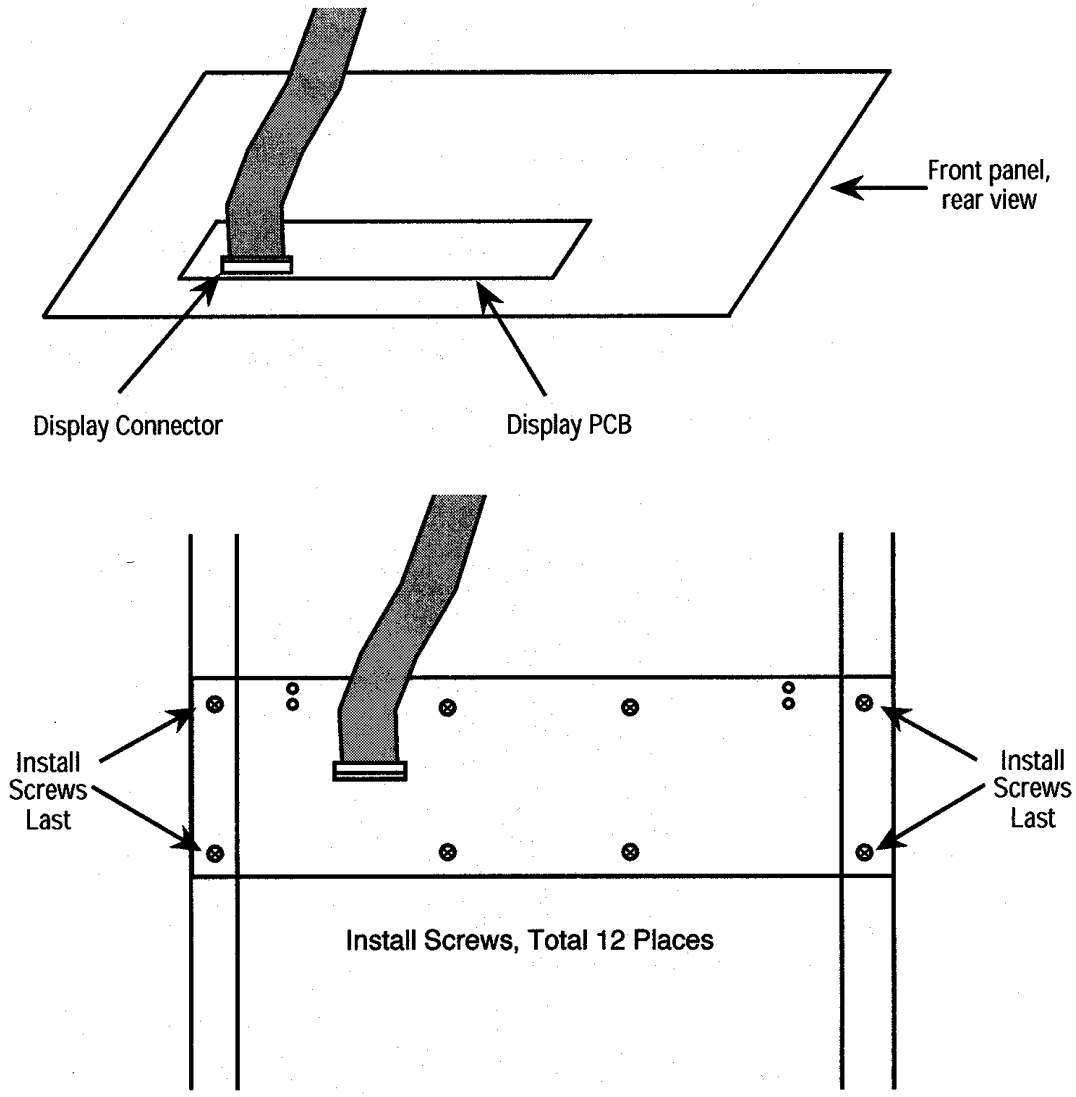
2-3 SCA Replacement

1. Place new SCA in sleeve and slide in from front to back. Replace cables for amplifier through front panel. Engage guide pins. See Illustration 2-10.



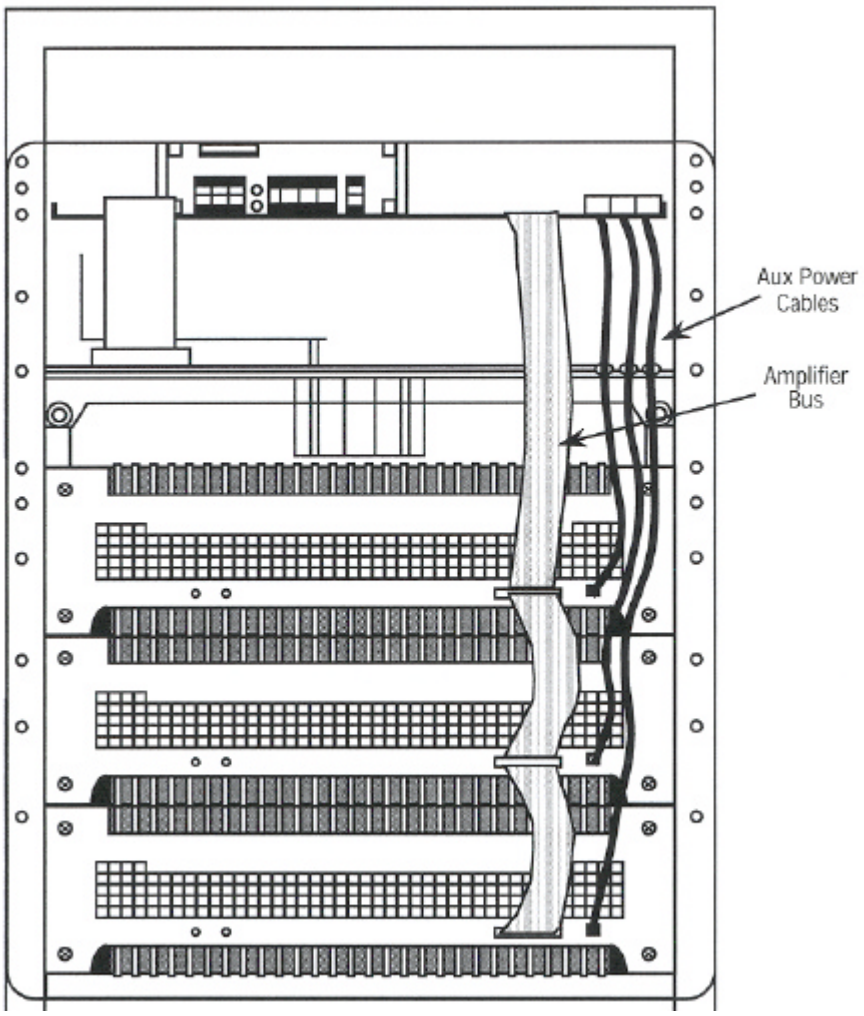
SCA REPLACEMENT
ILLUSTRATION 2-10

2. Install display connector on rear of front panel displays PCB, observing polarization key. Then install front panel of PSU/SCA. See Illustration 2-11.



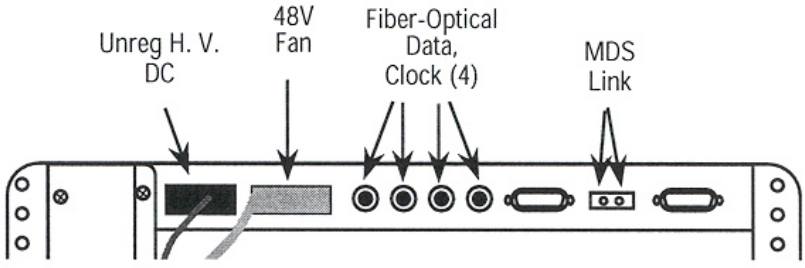
INSTALLING FRONT PANEL
ILLUSTRATION 2-11

3. Install control and Auxiliary power cables on front of amplifier. See Illustration 2-12.



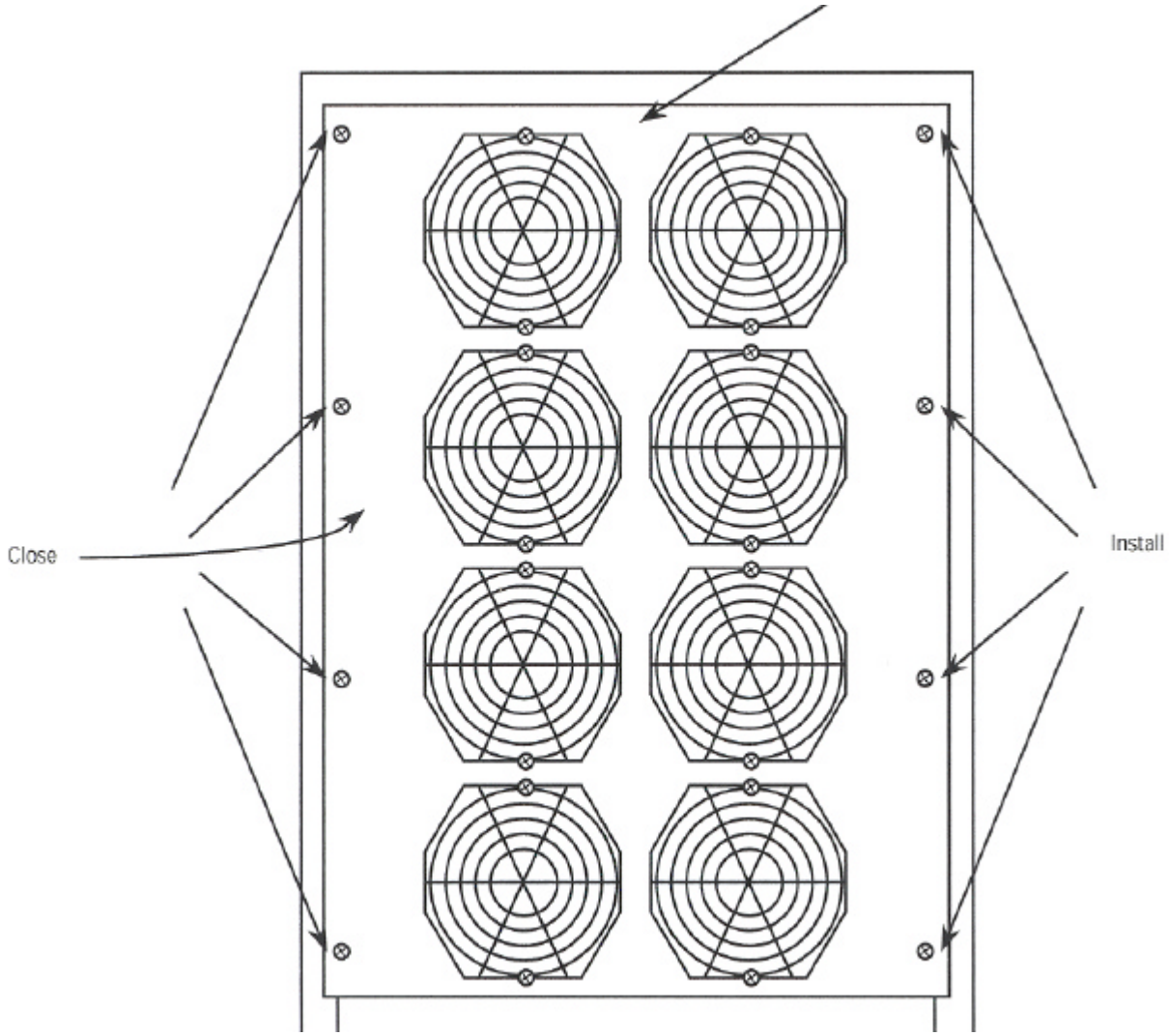
FRONT CABLES INSTALLATION
ILLUSTRATION 2-12

4. Install cables at rear. See Illustration 2-13.



REAR CABLE INSTALLATION
ILLUSTRATION 2-13

5. Close fan panel and install 8 screws. See Illustration 2-14.



FAN PANEL SCREW LOCATIONS
ILLUSTRATION 2-14

6. Inspect unit prior to turn-on.
   - Install front and rear doors.
   - Turn AC power ON at service panel.
   - Verify proper power-up sequence.

3- FUNCTIONAL CHECKS REQUIRED

No calibrations required; power up the cabinet and perform a scan to verify functionality.

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
A	November 29, 1999	Analogic (K. Keshena)	Procedure was modified specifically to the Signa OpenSpeed System -- Preliminary release of Open*Speed* version.