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MINI-GRAM GATE DRIVER BOARD REPLACEMENT

1- REPLACEMENT PROCEDURE

1-1 Tools and Instruments Required

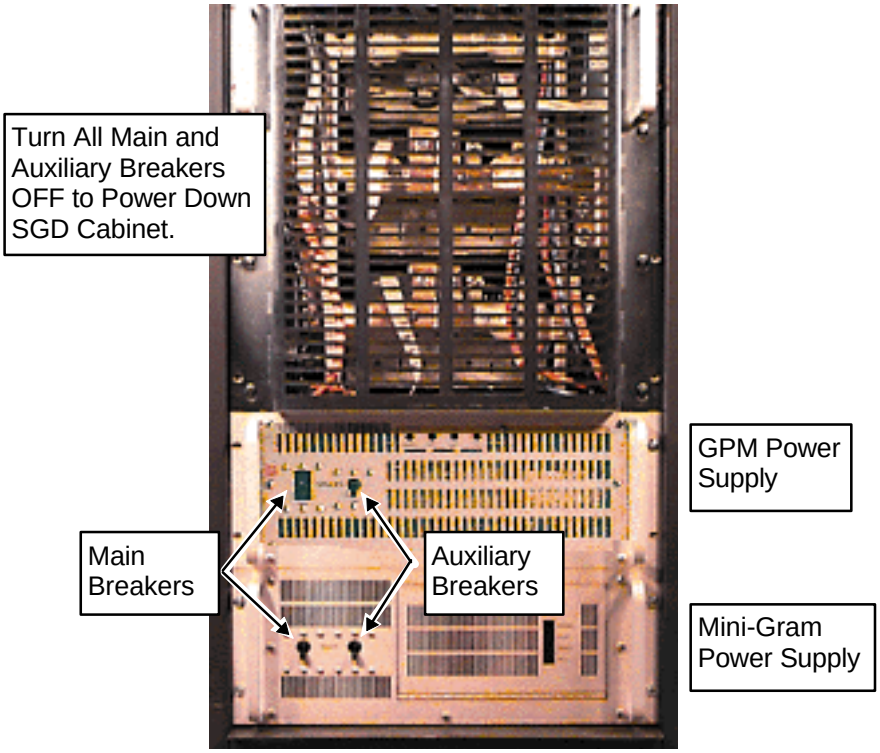
Item	Description	Part Number
1.	Mini-GRAM Gate Driver Board	46-288946G2
2.	Phillips-head Screwdriver	
3.	Flat-blade Screwdriver	
4.	Digital Multimeter with High Voltage Probes	
5.	Anti-static Circuit Board Bag	

1-2 Preliminary Set Up Procedure

FATAL ELECTRIC SHOCK HAZARD!! TO PREVENT FATAL ELECTRIC SHOCK, DISCONNECT POWER FROM THE PDU BEFORE YOU PERFORM THE FOLLOWING 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 SCALEABLE GRADIENT CABINET.

1-2 Preliminary Setup Procedure (Continued)

1. Power down the SGD Cabinet by turning off the Main Breakers and Auxiliary Breakers on the Front Panel of both the Mini-GRAM Power Supply and the Gradient Power Module Power Supply. See Illustration 1-1.



SGD HI-SLEW CABINET—LOWER HALF (FRONT COVER REMOVED)
ILLUSTRATION 1-1

2. Turn off the SGD Cabinet Breaker at the Power Distribution Unit. Lock out the Breaker and tag it.

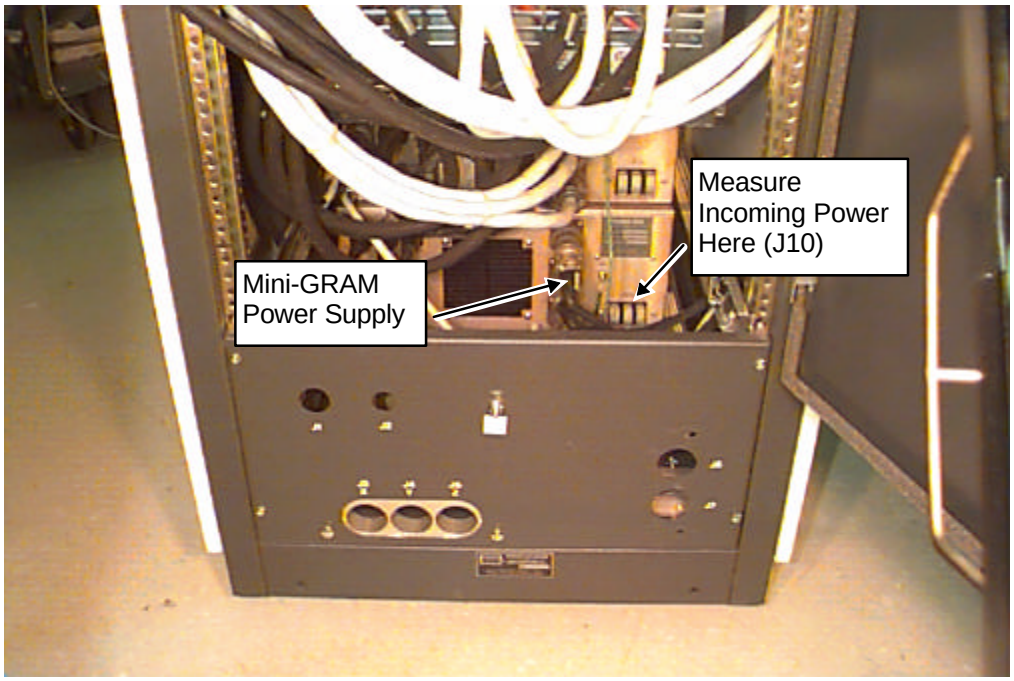
3. After power to the SGD Cabinet has had sufficient time to dissipate, take a Digital Multimeter and set it to its highest AC voltage range.

1-2 Preliminary Setup Procedure (Continued)

4. Verify that all energy has been dissipated by measuring incoming power to all components of the Scaleable Gradient Cabinet

   A. Measure incoming power to the Mini-GRAM Power Supply as follows:

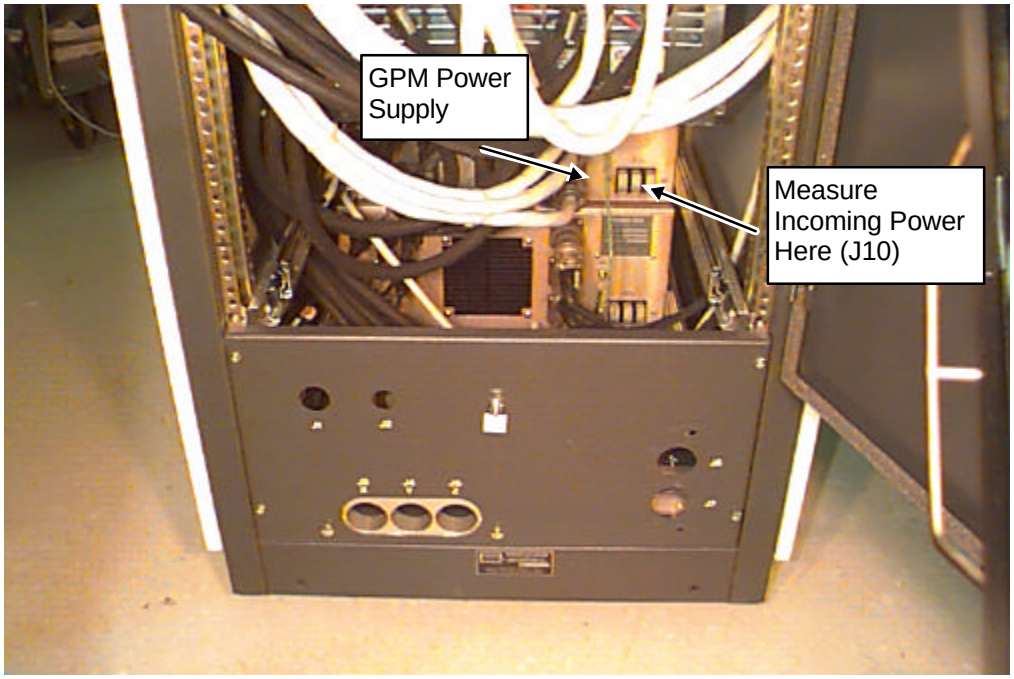
   - Place the reference probe (black) on the SGD Cabinet Ground.
   - Locate J10. This is the 208V, 3 Phase input to the Mini-GRAM Power Supply.
   - Measure voltage at each of three 208 Volt input terminals. The meter should read 0 Volts AC at each of the three measuring points. See Illustration 1-2.



SGD CABINET—REAR VIEW: INCOMING POWER MEASUREMENT LOCATIONS
ILLUSTRATION 1-2

1-2 Preliminary Setup Procedure (continued)

B. Measure voltage at the GPM Power Supply as follows:
- Place the reference probe (black) on the SGD Cabinet Ground.
- Locate J-10. This is the 208V, 3 Phase input to the GPM Power Supply.
- Place the red probe on each of three 208 Volt input terminals: L1, L2, and L3. The meter should read 0 Volts AC at each of the three measuring points. See Illustration 1-3.



SGD CABINET—REAR VIEW: INCOMING POWER MEASUREMENT LOCATIONS
ILLUSTRATION 1-3

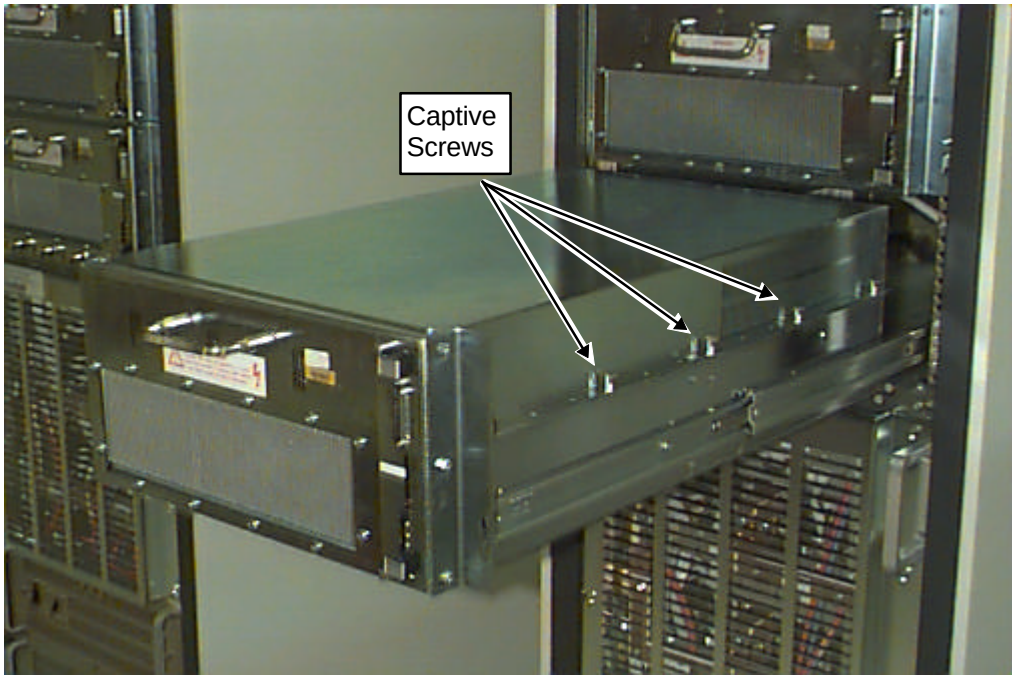
1-3 Replacement Procedure Steps

1. Remove the SGD Cabinet front cover.

2. Remove the four (4) Phillips-head screws from the Mini-Gram front panel, which secure the Mini-Gram to the SGD cabinet.

3. Carefully pull out the Mini-Gram on its slide and allow the catch to engage.

4. Loosen the ten (10) captive slot screws along the side seams of the Mini-GRAM enclosure. See Illustration 1-4.

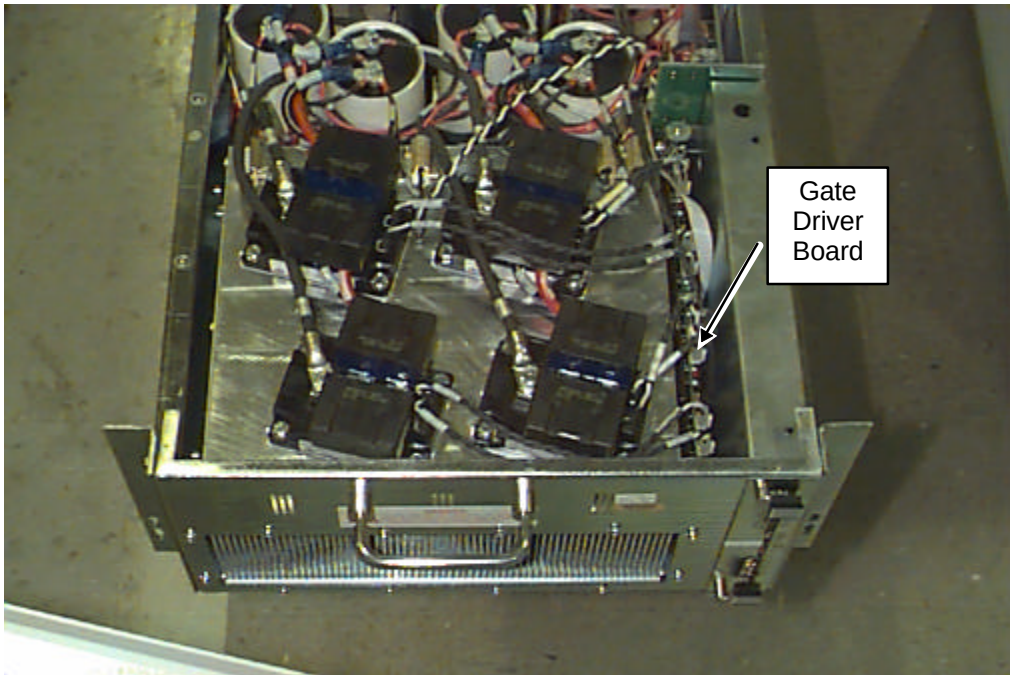


MINI-GRAM MODULE SHOWING LOCATION OF CAPTIVE SCREWS
ILLUSTRATION 1-4

5. Grasp one loosened captive slot screw from each side seam of the Mini-GRAM top cover and lift the cover off of the Mini-GRAM module.

1-3 Mini-GRAM Gate Driver Board Replacement Procedure (Continued)

6. Locate the Gate Driver Board in the near right hand corner as you face the Mini-GRAM front end. See Illustration 1-5.



TOP VIEW OF MINI-GRAM SHOWING GATE DRIVER BOARD LOCATION
ILLUSTRATION 1-5

7. There are eight sets of black and white braided wires which attach to the Gate Driver Board via two-pin plastic connectors. Note that these are numbered from one through eight beginning at the front end of the Gate Driver Board. Remove each braided wire pair from its attachment point on the board.

8. Remove the two (2) Phillips-head screws which secure the gate driver board to the inside of the Mini-GRAM enclosure.

9. While wearing an anti-static wrist band, lift the Gate Driver Board out of its slot. At this point, braided cable pairs J-9 and J-10 are still attached to the Gate Driver Board.

10. Remove J-9 and J-10. Store the Gate Driver Board in an anti-static circuit board bag.

11. Reverse the above steps to install a Gate Driver Board.

1-4 Functional Tests Required

None.

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
A	08/11/97	F. Fiore	Initial draft of document completed
B	09/06/97	F. Fiore	Enter original draft in MR template for Microsoft Word documents.
C	09/11/97	F. Fiore	Incorporate illustrations and call outs
0	10/03/97	F. Fiore	Initial release for SGD