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DC OFFSETS ADJUSTMENT - MINIGRAM

1- OVERVIEW

This procedure relates to Signa Horizon with MiniGRAMs which are part of the SGD Hi Slew cabinet. If you have GRAM 1 modules refer to the procedure for DC Offset Adjustment - GRAM 1.

Before shimming, perform the GRAM DC Offset Adjustment on each axis. Failure to do so will cause errors in shimming.

2- DC OFFSETS ADJUSTMENT PROCEDURE

Note

For systems with 8.2 software only, the GRAM DC Offset Adjustment has been automated. Follow steps a-c, and ignore the manual procedure that follows. This automated procedure **must be run**.

- a) Select [**Diagnostics**] from the Service Desktop.
- b) Select [**IPG**], [**Manual**], [**Digital DC Offset**].
- c) Exit Diagnostics.
- d) The calibration values are stored in the */usr/g/caldir/gram_tune.dat* file. (You do not have to touch the Offset pots on the miniGRAM's).

For systems with any version of 8.1 software, proceed below:

1. Remove the head coil and holder from the cradle. Install the Grafidy phantom holder.
2. Landmark on the center line of the Grafidy phantom holder.
3. At keypad on front magnet enclosure, press LANDMARK and MOVE TO SCAN.
4. Prepare system to scan using the Service Protocol #5.1, [**Grafidy**], and the parameters shown in the Protocol List under Signa Help. Right click on [**Research Options**] and select **Setup Params** from the Scan Operations list. Enter values listed below:

Setup Parameters

R1 = **13**

R2 = **14**

TG = **0**

Number of Frames: **4** <Enter>

Window One

Frame 1: **1** <Enter>

Frame 2: **0** <Enter>

Window Two

Frame 3: **3** <Enter>

Frame 4: **0** <Enter>

[Done]

2- DC OFFSETS ADJUSTMENT PROCEDURE (continued)

Note

It is necessary to set the grad shim values to zero in order to ensure that there are no additional offsets in the circuit. This ensures an accurate calibration. Remember to restore the grad shim values after this adjustment procedure is complete.

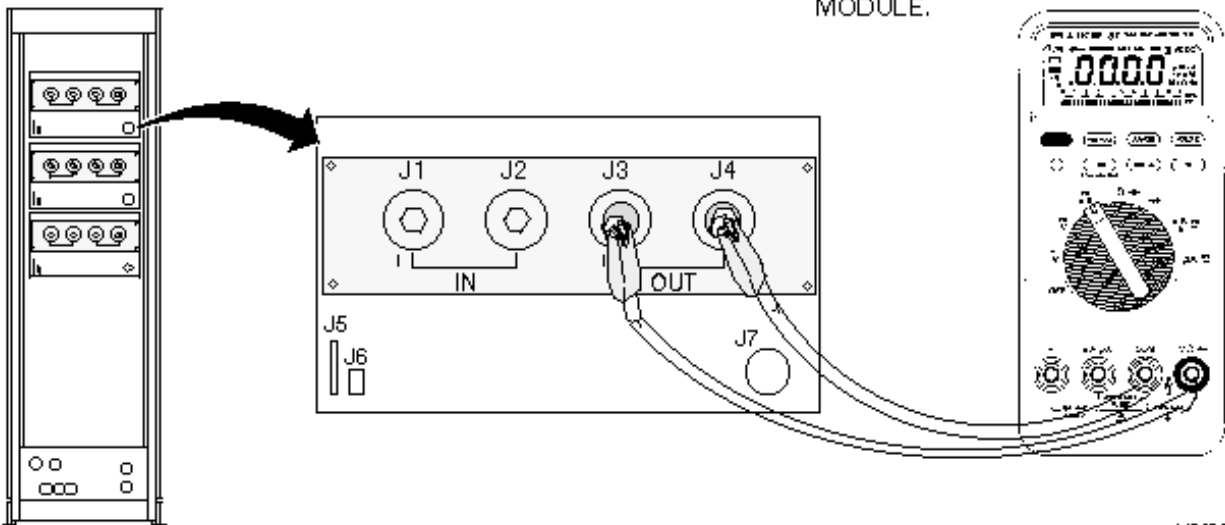
5. **[Manual Prescan]**, then record grad shim values for x, y, and z axes. If values are not set to 0, set them by moving the slide bar to 0.
6. Select **[Done]** to exit manual prescan. This is important so that the scanner is ready, but not scanning.

DANGER!!

FATAL ELECTRIC SHOCK HAZARD!! GRAM MODULES GENERATE FATAL ELECTRICAL CURRENTS. SCANNING OR PRESCANNING DURING THIS MEASUREMENT MAY CAUSE A FAILURE TO THE GRAM, AND EXPLOSION OF THE VOLTMETER. DO NOT SCAN OR PRESCAN DURING THIS MEASUREMENT AND ADJUSTMENT.

7. Using voltmeter leads with alligator clips, connect a voltmeter at the rear of the GRAM chassis across J3 (+OUT) and J4 (-OUT). The voltmeter should be set to DC millivolts. See Illustration 1-1.

ALLIGATOR CLIPS CONNECTED THROUGH THE ACCESS HOLES TO THE STUBS ON THE OUTPUT TERMINALS OF THE MINIGRAM MODULE.



L4565 C

GRAM OFFSET CONNECTION FOR DVM
ILLUSTRATION 1-1

2- DC OFFSETS ADJUSTMENT PROCEDURE (continued)

Note

Using longer leads will allow viewing the voltmeter as the adjustments are performed.

8. Make sure the scanner is in Ready when making the adjustments. Then on front of miniGRAM, locate and adjust potentiometer labeled OFFSET, so that the voltmeter reads 0 mVdc \pm 10 mVdc.
9. If all three axes are to be tuned, repeat steps 7 through 9 for each axis. If one or two axes are to be tuned, repeat steps 7 through 9 for the axis being tuned.

REVISION HISTORY

| REV | DATE | AUTHOR | PRIMARY REASONS FOR CHANGE |
|------------|--------------|---------------|---|
| 0 | Oct 3, 1997 | J. Wolak | Initial version released for SGD production |
| 1 | Apr 14, 1998 | J. Wolak | Added Release 8.2 auto DC offsets |
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