



## DAC CALIBRATION FOR MODEL 100A WITH 4-20 mA OPTION

1. Verify that the jumpers on the motherboard are set as follows:

JPI and JP2 jumpered to A and B if the DAS channel has the 4-20mA.  
JP5 and JP6 jumpered to A and B if the S02 channel has the 4-20mA.  
All channels without 4-20mA jumpered to B and C.

A and B is the jumper set toward the front of the analyzer. B and C is the jumper set toward the rear of the analyzer.

2. Make sure the V/F jumpers are set as follows:

B7 of V/F card jumpered to 3, 5 and 7. B6 of V/F card jumpered to 3, 5 and 7. B9 of V/F card jumpered to 3, 5 and 7.

3. Set the DVM to the 300niA scale and set the leads for measuring current. (See the instruction manual for the DVM to find out how to get up the DVM.) Install a resistor between 200 to 600 ohms in series with a DVM across the recorder output pins 5 and 6 on the rear panel.
4. Press SETUP-MORE-DIAG. Press NEXT until DAC CALIBRATION is displayed on front panel. Press ENTR to start procedure.
5. The Model I00A display will read "DAC #0:60mV". 60mV is the voltage which is programmed into the DAC. Press the up/down buttons on the front panel until the DVM displays the target current of 4.19mADC. Press ENTR.
6. The Model 100A display will now show a new voltage in the format shown in step 5. This voltage will be 90% of the full scale DAC output voltage (4500mV). Press the up/down buttons on the front panel of the analyzer until the DVM reading is 18.4mA DC. Press ENTR on the analyzer front panel. DAC #0 is now calibrated to a known good DVM and will be used as a voltage reference to calibrate the V/F circuit.
7. The display will now read ZR: 60 = XXMV. Where 60 = the voltage being output from the DAC and input to the V/F and XX is the voltage being read from the V/F circuit. Adjust the zero pot on the V/F card (R27) until the two values are the same and press ENTR.
8. The display will now read GN:4500=XXXXmV. Where 4500 is the voltage being output from the DAC and input to the V/F and XXXX is the voltage being read from the V/F circuit. Adjust the span pot on the V/F card (R3 1) until the two values are the same and press ENTR. The analyzer will now calibrate the remaining three DAC channels, indicating in percent how close to done it is. When it finishes, press EXIT to return to the upper level menus.