

8060A TEST PROCEDURE

1.0 TURN ON

- 1.01 While holding down the Continuity button, turn the Unit Under Test (UUT) on. Check all segments of the LCD.
- 1.02 Release the Continuity button. UUT is now in the Ratio Test mode. UUT should read 10000 cts \pm 4 cts.
- 1.03 Push the Continuity button again. Ratio test should go off.
- 1.04 Select DC/V/2. Short input. UUT should read 0.0000 \pm 1 ct.

2.0 DC CALIBRATION and POWER SUPPLY CHECK

- 2.01 Select DC/V/2. Adjust R6 fully CW, turn R5 fully CCW. Apply +1.9000 VDC to the UUT. Adjust R5 for a display reading equal to or slightly greater than 1.9000. Adjust R6 CCW for a display reading of 1.9000 \pm 1 ct.
- 2.02 Apply -1.9000 VDC to the UUT. The display should read -1.9000 \pm 4 cts.
- 2.03 Read input impedance on the 8860. Input impedance should read 9.9000 to 10.1000 megohms.
- 2.04 Place test probe on TP7. Voltage should be +5.10 to +5.30 VDC.
- 2.05 Place test probe on TP8. Voltage should be 3.07 to 3.22 VDC lower than the voltage obtained in step 2.04.
- 2.06 Place test probe on TP2. Voltage should be -4.90 to -5.20 VDC.
- 2.07 Select DC/V/200mV. Apply +190.00 mVDC. Adjust R8 until display reads 190.00 \pm 1 ct.
- 2.08 Apply -190.00 mVDC. UUT should read -190.00 \pm 5 cts.
- 2.09 Select 20V range. Apply +19.000 VDC. UUT should read 19.000 \pm 5 cts.
- 2.10 Apply -19.000 VDC. UUT should read -19.000 \pm 8 cts.
- 2.11 Select 200V range. Apply +190.00 VDC. UUT should read 190.00 \pm 5 cts.
- 2.12 Select 1000V range. Apply +1000 VDC. UUT should read 1000.0 \pm 3 cts.
- 2.13 Lower Battery supply potential to 5.6 VDC. BT should appear on the display.
- 2.14 Raise the Battery supply potential to 6.4 VDC. BT should go out.

3.0 AC CALIBRATION

- 3.01 Select AC/V/200mV. Adjust R18 fully CW, adjust R15 fully CCW. Apply 190 mVAC, 200 Hz. Adjust R15 for a display reading equal to or slightly greater than 190.00. Adjust R18 for a reading of 190.00 \pm 2 cts.
- 3.02 Apply 190.00 mVAC, 30kHz. UUT should read 190.00 \pm 50 cts. (189.50 to 190.50)
- 3.03 Select AC/V/200. Apply 190.00 VAC, 10kHz. Adjust C3 until the display reads 190.00 \pm 10 cts.
- 3.04 Apply 1.9000 VAC, 10kHz. Adjust C7 until the display reads 1.9000 \pm 30 cts.
- 3.05 Repeat steps 3.03 and 3.04 once before proceeding.
- 3.06 Apply 19.000 VAC, 10kHz. Adjust C8 until the display reads 19.000 \pm 20 cts.

3.07 Final AC Check...Make the checks in the table below.

<u>RNG/FUNCTION</u>	<u>INPUT (Volts)</u>	<u>FREQ (Hz)</u>	<u>DISPLAY</u>	<u>+/- CTS</u>
200mV AC	190.00m	200	190.00	5
200mV AC	190.00m	30k	190.00	50
200mV AC	190.00m	100k	190.00	500
push dB on				
200mV AC	2.45m	500	-50.0 dB	10
200mV AC	2.45m	30k	-50.0 dB	30
2V AC	1.9000	200	7.79 dB	10
push dB off				
2V AC	1.9000	200	1.9000	10
2V AC	1.9000	5k	1.9000	50
2V AC	1.9000	10k	1.9000	20
2V AC	1.9000	30k	1.9000	100
2V AC	1.9000	20	1.9000	150
2V AC	1.9000	100k	1.9000	500
2V AC	100.0m	200	.1000	20
2V AC	100.0m	100k	.1000	150
20V AC	19.000	200	19.000	10
20V AC	19.000	10k	19.000	20
20V AC	19.000	30k	19.000	100
20V AC	19.000	50k	19.000	300
200V AC	190.00	200	190.00	10
200V AC	190.00	10k	190.00	10
200V AC	190.00	30k	190.00	100
200V AC	190.00	50k	190.00	300
750V AC	750.0	200	750.0	20
750V AC	750.0	1k	750.0	20

4.0 FREQUENCY CALIBRATION AND CHECK.

4.01 Select V/AC/200mV. Push 'HZ'. Apply 15 mV AC, 1900 Hz.
Adjust R9 for the maximum reading obtainable.

4.02 Perform the following checks. Readings can be noisy up to
+/- 3 counts.

<u>RNG/FUNCTION</u>	<u>INPUT (Volts)</u>	<u>FREQ (Hz)</u>	<u>DISPLAY</u>	<u>+/- CTS</u>
200mV AC 'HZ'	20m	100.00	100.00 Hz	5
200mV AC 'HZ'	100m	190.00k	190.00 kHz	5
200mV AC 'HZ'	100m	1900.0	1900.0 Hz	5
2V AC 'HZ'	200m	19.000k	19.000 kHz	5

5.0 OHMS / CONTINUITY FUNCTIONAL CHECK

5.01 Select Ohms. Perform the following checks.

<u>RNG/FUNCTION</u>	<u>INPUT (Ohms)</u>	<u>DISPLAY</u>	<u>+/- CTS</u>
200 ohms	short	0.00	4
200 ohms	190.00	190.00	7
2k ohms	1.9000k	1.9000	7
20k ohms	19.000k	19.000	7
200k ohms	190.00k	190.00	7
Mohms	1.9000M	1.9000	10
Mohms	19.00M	19.00	3
Mohms	90.0M	90.0	3
Mohms	290M	290.	5

5.02 Select Ohms, push the Continuity button. The LCD should read OL -><- . Apply 20.0 ohms. The bar on the LCD should come on immediately. The display should read 20.0X shortly thereafter.

5.03 Push the Continuity button again (20.0 ohms still applied). The tone symbol should be displayed, and the piezo should be on loudly.

5.04 Apply 50 ohms to the input of the UUT. The bar on the LCD and the piezo tone should go off. The LCD should display: 50.xx -><- .

5.05 Apply 500 VAC, 200 Hz to the UUT for 10 seconds. Apply 190.00 ohms to the UUT. Reading should settle to 190.00 +/- 8 cts after a few seconds.

6.0 DIODE TEST VERIFICATION

6.01 Select Diode test (Ohms/2&20). Display should read OL.

6.02 Apply 1900 ohms to the UUT. Using a digital mA meter, check the output current. The mA meter should read .9 to 1.1 mA.

6.03 Apply 100 ohms to the UUT. The display should read .0900 to .1100. The mA meter should again read .9 to 1.1 mA.

7.0 CONDUCTANCE VERIFICATION

7.01 Select Ohms/200 & Mohms (2000nS). Apply 1.000 Mohm. The display should read 1000.0 +/- 10 cts.

7.02 Open circuit the input to the UUT. The display should read 0.0 +/- 2 cts.

- 4.05 Apply 500 VAC, 200 Hz to the UUT for 10 seconds. Apply 190.00 ohms to the UUT. Reading should settle to 190.00 +/- 8 cts after a few seconds.

5.0 DIODE TEST VERIFICATION

- 5.01 Select Diode test (kOhms/2&20). Display should read OL.
5.02 Using a digital mA meter, check the output current. Apply 1900 ohms to the UUT. The mA meter should read .9 to 1.1 mA.
5.03 Apply 100 ohms to the UUT. The display should read .0900 to .1100. The mA meter should again read .9 to 1.1 mA.

6.0 CURRENT VERIFICATION

- 7.01 Select A/DC. Perform the following checks.

<u>RNG/FUNCTION</u>	<u>INPUT (AMPS)</u>	<u>DISPLAY</u>	<u>+/-CTS</u>
200uA DC	+190.00uA	190.00	30
200uA DC	-190.00uA	-190.00	30
2mA DC	1.9000mA	1.9000	30
20mA DC	19.000mA	19.000	30
200mA DC	190.00mA	190.00	30
2000mA DC	+1.9000A	1900.0	30 Burden < .85 VDC
2000mA DC	-1.9000A	-1900.0	30 Burden <-.85 VDC

- 7.2 Select A/AC. Apply 19.000 mA, 1kHz. Display should read 19.000 +/- 60 cts.

END OF TEST