

163X Test Procedure¹**A. Power Supply**

1. Monitor TP7 and verify +24 Vdc (± 3 volts) with less than 0.7 volts of ripple.
2. Monitor TP8 and verify -24 Vdc (± 3 volts) with less than 0.7 volts of ripple
3. Monitor TP9 and verify +15 Vdc (± 0.5 volts)
4. Monitor TP10 and verify -15Vdc (± 0.5 volts)
5. Verify that the POWER LED is lit.

B. RMS SYMETERY

1. Inject a 50Hz sine wave at -10 dBv (0.316 Vrms) to the rear-input jack.
2. Monitor TP11 and adjust R31 for a symmetrical 100Hz sine wave approximately 70 mVpp (± 15 mV).

C. RMS LEVEL

1. Inject 1kHz sine wave at -10 dBv to the rear INPUT jack.
2. Monitor TP1 and verify a -10dBv level (± 0.15 dBv)
3. Monitor TP6 and adjust R25 for 0.000 Vdc (± 10 mV)

D. VCA SYMMETERY

1. Remove any connection from the INPUT.
2. Connect a 100Hz sine wave at 0dBv to the STRAPPING jack on the rear panel. Use a Tip/Ring/Sleeve type 1/4" plug with the signal connected to the Tip, ground to the Sleeve and no connection to the Ring.
3. Press the SLAVE switch on rear panel.
4. Verify that the SLAVE LED on front Panel is lit.
5. Monitor the OUTPUT and adjust R11 for minimum ac content in the waveform. The peak to peak amplitude of the waveform should be less than 5mV.
6. Remove any connection from the STRAPPING jack and return the SLAVE switch to its normal position.

E. INPUT GAIN TRIM

1. Inject a -20dBv, 1kHz sine wave to the HI-Z INFUT.
2. Set R4 CCW (min) and verify -2 0dBv at TP1 (± 1.5 dBv).
3. Set R4 CW (max) and verify 0.0dBv at TP1 (-1.5, +2.5 dBv).

¹ Re-formatted on 9/13/97. Update A.

F. MORE RANGE CHECK

1. Connect --30dBv, 1kHz sine wave to the rear INPUT.
2. Set the MORE control fully to the right and verify that the first three LED's are lit (± 1 LED).
3. Increase the input level to +10dBv.
4. Set the MORE control fully to the left and verify that the first three LED's are (± 1 LED).
5. Set the MORE control fully to the right and verify that all the compression LED's are now on.

G. LEVEL SET RANGE

1. Connect -10dBv, 1kHz sine wave to the rear INPUT.
2. Set the MORE control fully right.
3. Set the LEVEL SET control CCW (-30) and verify OUTPUT is -22.0dBv (+4, -3 dBv).
4. Set LEVEL SET fully CW (+10) and verify OUTPUT is +7.7dBv (+3, -4 dBv).

H. NOISE

1. Remove any connection from the INPUT jack.
2. Set the MORE control fully left.
3. Set LEVEL SET to mid position (-10).
4. Verify that OUTPUT noise (20Hz to 20kHz bandwidth) is less than -82dBv unweighted and -85dBv "A" weighted.

I. FREQUENCY RESPONSE

1. Connect 0.0dBv, 1kHz sine wave to the rear INPUT.
2. Set the MORE control fully left.
3. Adjust the LEVEL SET control until the OUTPUT reads 0.00dBv.
4. Set the input frequency to 20kHz and verify the OUTPUT is 0.0dBv (± 1 dB).
5. Repeat step 4 for 100Hz, 1kHz, and 20kHz.
6. Set MORE control fully right.
7. Repeat steps 3 through 5.

J. DISTORTION

1. Connect 0dBv, 1kHz sine wave to the INPUT.
2. Set LEVEL SET to 0 on the front panel.
3. Set MORE control to mid position.
4. With a suitable analyzer, measure Total Harmonic Distortion. THD should be less than 0.08%.
5. Repeat step 4 at 40Hz and 10kHz. THD should be less than 0.25% at 40Hz and 0.10% at 10kHz.