

Calibrating the G1176LN (mnats rev.J)

Originally by AXT Systems (www.axtsystems.com)

Additional comments in **RED** for mnats rev. J by XeNo (www.xenoworld.org)

Power Supply

1. Run the unit for 5-10 minutes to stabilise.
2. Check the power supply rails. They should be +30VDC ($\pm 0.5V$) and -10VDC ($\pm 0.5V$).

'Q' Bias Adjustment

1. Set the controls as follows:

Control	Set to
Input	fully CCW
Output	fully CW (3/4 CW according to mnats)
Attack	fully CCW (switched to OFF – Pad 22 shorted to GND)
Release	fully CW
Compression ratio	20:1
Meter mode	+4dB (VU)
Q bias trimmer	fully CCW (VR81)

2. Apply a 0.775Vrms (0dB) 1kHz sine wave signal to the input.
3. Turn the input control CW until the VU meter reads +1VU on the meter.
4. Slowly turn the Q bias trimmer (**VR81**) CW until a drop of 1dB occurs and the meter reads 0VU. The FET is now slightly in conduction.

Gain Reduction Meter Tracking

1. Set the controls as follows:

Control	Set to
Input	Middle
Output	fully CW

Attack	fully CCW (switched to OFF – Pad 22 shorted to GND)
Release	fully CW
Compression ratio	20:1
Meter mode	GR
VR54 trimmer	1/4 turn from fully CCW

2. With no signal applied, adjust VR55 so that the meter reads 0VU.
3. Apply a 0.245Vrms (-10dB) 1kHz sine wave signal to the input.
4. Switch the meter mode to +4dB. (VU)
5. Turn the output level control CW until the meter reads 0VU.
6. Turn the attack control ON (CW – remove short from Pad 22 to GND) and observe the drop in the meter reading.
7. Adjust the input level control until -10dB is indicated on the VU meter.
8. Turn the attack control OFF (CCW – short Pad 22 to GND) and re-adjust the output level control for 0VU meter reading if necessary.
9. Repeat steps 7 and 8 until the output drops 10dB whenever the attack control is turned ON (Pad 22 shorted to GND).
10. Without adjusting the input or output controls, select the meter mode for GR.
11. Adjust VR54 until the GR meter reading reads -10dB when the attack control is ON.
12. Adjust VR55 until the GR meter reads 0VU when the attack control is OFF.
13. Repeat steps 11 and 12 until the results are consistent.

GR Meter Zero

1. VR55 may be adjusted slightly to zero the GR meter without affecting the other controls.

Signal Preamp Linearity

1. Set the controls as follows:

Control	Set to
Input	fully CW
Output	halfway
Attack	fully CCW (switched to OFF – Pad 22 shorted to GND)
Release	fully CW
Compression ratio	20:1
Meter mode	GR

2. Apply a 0.0245Vrms (-30dB) 500Hz sine wave signal to the input.

3. Measure the THD of the output signal and adjust VR16 until the minimum amount of distortion is achieved.