

1. HISTORY SHEET. Each unit must be accompanied by an INSTRUMENT HISTORY SHEET. Ensure the History Sheet has been completed satisfactorily.
2. MAINS VOLTAGE. Check the Mains Switch setting on the rear panel. It must be 230V.
3. EARTH CONTINUITY. Check the earth connection from the IEC connector to the rear panel. Check the tightness of the Rear Panel Earth connection. It must be tight. Check that an Earth Symbol has been placed adjacent to the Earth Terminal.
4. VISUAL INSPECTION. Inspect the unit, paying particular attention to the following:
  - 4.1 PSU Capacitors and Diodes. Value and orientation.
  - 4.2 Intergrated circuits. Type and orientation.
  - 4.3 Transformer Wiring. Wired as per PCB silk screen. Check insulation of wires.
  - 4.4 Soldered Joints. Check for solder shorts, dry or unsoldered joints.
  - 4.5 Internal Fuses. Check fuses are seated correctly. Check values as stated on the PCB Silk Screen.
  - 4.6 External Finish. Check front and rear panel silk screening for legibility. Check all external surfaces for marks and blemishes. Check that all screw heads are undamaged, check screws are tight.
  - 4.7 Knobs and Switches. Check that Knobs and Switches move freely. Check they are correctly aligned with their legends. Check they are uniformly spaced from the front panel.
  - 4.8 LED Alignment. Check that all LED's are equally spaced from the front panel.
5. FIT VALVES. Check the valve bases for splayed pins. Perform corrective action as necessary. All valves are ECC83/12AX7A unless otherwise stated. Plug valve in each socket, ensure valve is a tight fit. Do not wiggle valve in socket
6. SWITCH ON. Check Mains Switch moves freely. Leave in OFF position. Set DVM to DC Voltage and connect between Ground & +15 volt point on PCB. Connect the IEC Mains Cord to the Mains Inlet. Switch unit On. Check each supply in turn as quickly as possible. Switch OFF if a supply is not present.
  - 6.1 +15 volt rail. +15.00 volts +/- 0.25v.
  - 6.2 -15 volt rail. -15.00 volts +/- 0.25v.
  - 6.3 HT voltage 150 volts +/- 8.0v.
  - 6.4 Heater voltages +6.3 volts & -6.3 volts +/- 1.0v.
7. LED CHECK. Using the appropriate controls check all LED's illuminate together. The DRIVE and PEAK LED's may be excluded from this test.

Revision History	Issue 1	From Serial Number: 580001	To Serial Number:

8. INITIAL SETTINGS. Set all Front and Rear panel switches to the OUT position.  
Set all Centre Detent pots to mid-position.  
Set all other Pots fully anti-clockwise.  
Set all Rotary Switches fully anti-clockwise.
9. TEST EQUIPMENT. To perform the tests to this procedure use:  
A calibrated Signal Generator.(Sinewave) 0.0 dBu @ 1 kHz unless stated.  
A calibrated Signal Analyser.(dBu/THD+N%) With 22-22k Filter set to On.  
An Oscilloscope.  
A Digital Voltmeter.
- 9.1 REFERENCES All unit settings are on the Front Panel unless stated otherwise.  
All Settings(RVnn) and Test Points(TPnn) are on the Main PCB unless stated otherwise.
- 9.2 HISTORY SHEET. All faults/rework must be logged on the History Sheet.  
Where practical show the operator/assembler the nature of the problem.  
Serious/Repetitive faults must be reported to the Production Manager.  
After the unit has been succesfully tested Sign & Date the History Sheet.  
The History Sheet must remain with the unit at all times.  
After the unit is dispatched the History Sheet must be filed for analysis.

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10. INITIAL TESTS.

10.1 SIGNAL BALANCE. Connect input to Channel 2 XLR. 0.0 dBu.  
 Alternately scope pins 2 & 3 of Channel 2 OUTPUT XLR while adjusting RV2.  
 Adjustment is complete when the signals at pins 2 & 3 are equal.  
 Repeat Test with input to Channel 1 XLR, using RV1.

Conduct the Tests on Channel 1 and then repeat all the Tests on Channel 2.  
 Where applicable Channel 2 test references are shown in brackets.

- 10.2 COMPRESSOR OFFSET. Connect DVM to Test Point on LHS(RHS) Front Panel PCB.  
 Adjust RV28(RV27) for a reading of -400 mVolts DC.
- 10.3 GATE LEVEL. Remove input signal.  
 Connect DVM to TP2(TP1).  
 Adjust RV9(RV6) for a reading of +80 mVolts DC  
 Note: Value will fluctuate slightly.  
 If +80 mVolts cannot be achieved shunt a 10 Meg resistor across R93(R48)
- 11.0 CALIBRATION. Signal In = 0.0 dBu to LINE XLR. Signal Out from Output XLR.  
 Set Analyser Filter to ON.
- 11.1 LINE INPUT GAIN. Set RV8(RV10) for 0.0 dBu.  
 INPUT GAIN pot variation = +/- 20 dBu.
- 11.2 COMPRESSOR GAIN. Select COMP IN.  
 Set RV11(RV7) for 0.0 dBu.
- 11.3 HUM & NOISE. MUTE the Output of the Signal Generator.  
 The output value should read -80 dBu or better.
- 11.4 INSTRUMENT INPUT. Signal In = -20 dBu to Front Panel Jack Socket.(Single Pole)  
 Set INPUT GAIN to mid-position.  
 Check for -7.0 dBu +/- 1.0 dBu.
- 11.5 UNBAL IN/OUT. Signal In = -20 dBu to Rear Panel Unbal Input.(Single Pole)  
 Signal Out from Rear Panel Unbal Output.(Double Pole)  
 Set INPUT Switch to LINE position.  
 Check for -20 dBu +/- 1.0 dBu.
- 11.6 DISTORTION Set Signal In to 1kHz.  
 Set Analyser to read THD+N(%).  
 Check for a value better than 0.2%.  
 Set Signal In to 100 Hz.  
 Set THRESHOLD & RATIO controls Clockwise.  
 Check for a value better than 2.0%.  
 Set THRESHOLD & RATIO controls Anti-clockwise.  
 Return Analyser to read dBu.

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- 11.7 NOMINAL GAIN. Set Rear Panel INPUT GAIN switch to IN.  
 Check for a reading of -14 dBu. Set Rear Panel INPUT GAIN switch to OUT.  
 Set Rear Panel OUTPUT GAIN switch to IN.  
 Check for a reading of +14 dBu. Set Rear Panel OUTPUT GAIN switch to OUT.
- 11.8 DRIVE / PEAK LED's. Set Signal In to +2.0 dBu. Check that DRIVE LED is Off.  
 Set Signal In to +6.0 dBu. Check that DRIVE LED is just ON.  
 Set Signal In to +16 dBu. Check that DRIVE LED is fully ON.  
 Set Signal In to +25 dBu. Check that PEAK LED is ON.  
 Set Signal In to +15 dBu. Check that PEAK LED is OFF.  
 Increase OUTPUT GAIN control PEAK LED comes ON.  
 The reading should be +20 dBu +/- 1.0 dBu.  
 Set Signal In to 0.0 dBu.  
 Vary OUTPUT GAIN control so the reading is 0.0 dBu.
- 11.9 COMPRESSOR THRESHOLD. Set ATTACK and RELEASE switches clockwise.  
 Signal In = +4.0 dBu.  
 Set THRESHOLD & RATIO controls clockwise.  
 Set RV30(RV29) on LHS(RHS) Front Panel PCB for -9.0 dBu.
- 11.10 METER CALIBRATION. Set THRESHOLD control anti-clockwise.  
 Set RV5(RV14) for Zero dBu on Meter.  
 Set GAIN REDUCTION to ON.  
 Settings are interactive. Set RV4(RV13) for Zero dBu on Meter.  
 Set THRESHOLD control clockwise. Set RATIO until reading is -2.0 dBu.  
 Set RV3(RV12) for -6 dBu on Meter.  
 Set THRESHOLD control anti-clockwise and check Meter reads Zero  
 Repeat settings until correct readings are achieved.
- 11.11 GAIN MAKE-UP. Set THRESHOLD anti-clockwise and GMU clockwise.  
 Check reading is 24.0 dBu +/- 2.0 dBu.  
 Set all Compressor pots fully anti-clockwise.  
 Set COMP IN to Off.
- 12.0 GATE TEST. Set the GATE/EXPANDER control to the -40 dBu position.  
 Set Signal In to -40 dBu. Check GATE LED is OFF.  
 Check for a reading of -40 dBu +/- 2.0 dBu.  
 Set Signal In to -44 dBu. Check GATE LED is ON.  
 Check for a reading less than -80 dBu.  
 Set Signal In to -20 dBu. Check GATE LED is OFF.  
 Set the GATE/EXPANDER control clockwise until the GATE LED comes ON.  
 Check the control position is -20 dBu +/- 5.0 dBu.  
 Remove Input XLR lead from LINE XLR.  
 Set the GATE/EXPANDER control to OFF. Check GATE LED is OFF.  
 Set the GATE /EXPANDER control clockwise until the GATE LED comes ON.  
 Check the control position is between OFF and -40 dBu.

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