

C1 TEST SPEC

TEST SPECIFICATION: TL Audio

Issue 2: 21st November 1994.

Tolerance on inputs +/-0.3dB, outputs +/-1dB, unless stated otherwise.
Tests must be performed in sequence, with controls changed only as indicated.

1. **MAINS VOLTAGE:** Set to 230V .

2. **GROUND CONTINUITY:** Limit 0.01 ohms.
- 2.1 Measure the resistance between the ground pin of the IEC inlet to the chassis ground screw.

3. **VISUAL INSPECTION:** Inspect the unit, paying particular attention to the following:
 - 3.1 - the orientation of power supply diodes and capacitors,
 - 3.2 - the orientation of Ics,
 - 3.3 - all mains wiring,
 - 3.4 - check the solder side of the PCB for unsoldered joints and solder splashes,
 - 3.5 - the quality of external paint and silk screening,
 - 3.6 - check all knobs and switches operate freely and are uniformly spaced from the panel,
 - 3.7 - all XLR connectors are locked,
 - 3.8 - LED alignment with front panel,
 - 3.9 - check all screws are fully tightened.

4. **SWITCH ON,** and check for any sign of component stress or over-heating.

- 4.1 **PHANTOM POWER:** +48V +/-2V.
Compressor: MIC 48V, measure on pins 2 and 3 of Mic input socket, ref to pin 1 .

4.2 OFFSET SETUP: -50mV +/- 5mV.

Compressor: Threshold, Ratio and Gain Make-Up anti-clockwise, Attack and Release mid-point.

Adjust Offset trims whilst measuring at test points A and B respectively, ground connection to REF.

Perform tests 5.1 to 8.5 for both channels:

5. INPUTS:

5.1 LINE INPUT: Output 0dBu.

Compressor: Line Input, Gain 0dB, O/P switch +4dBu, Compressor Out, Threshold +20, Gain Make Up (GMU) 0dB.

A2: 1KHz, Sine, 0dBu, 22-22k Filter, Meter.

5.2 COMPRESSOR IN: Output 0dBu.

5.3 HUM AND NOISE: Limit -80dBu.

A2: Mute Output.

5.4 HIGH PASS FILTER: -3dB @ 90Hz.

Compressor: 90Hz filter switch on..

A2: 22-22K Filter out, Sweep 10Hz-40KHz.

Repeat sweep with 90Hz switch off, limit -1dB 10Hz-40KHz.

5.5 MIC INPUT: Output 0dBu.

Compressor: Input to MIC +48V, Gain Max, O/P Level +4dBu.

A2: Output -60dBu, 1kHz, 22-22K filter on.

Repeat at MIC position of input switch.

5.6 MIC INPUT NOISE: Limit -66dBu (EIN = -126dBu).

Compressor: Disconnect input and replace with 150R termination.

5.7 AUX INPUT, KEYB'D: Output -25dBu.

Compressor: Input to Aux, Aux Input, Aux Gain Max, Keyb'd..

5.8 AUX INPUT, GUITAR: Output -25dBu.

Compressor: Guitar, Gain to mid point.

5.9 UNBALANCED INPUT: Output -0dBu.

Compressor: Input to Unbal, Line Input.

A2: Output 0dBu.

6. DISTORTION: Limit 0.05%

A2: 22-22K Filter out, THD.

7. THRESHOLD ADJUSTMENT.

A2: Level, output -20dBu.

Compressor: With Threshold and Ratio fully anti-clockwise, adjust Gain for -20.0dBu output, then set Threshold and Ratio fully clockwise, increase A2 output to +4dBu, and adjust Threshold trim for -7.0dBu output

8. METERS:

8.1 AUDIO LEVEL: +4dBu = 0VU.

Compressor: Threshold +20dB, Adjust Gain until output +4dBu +/-0.1dBu.

Adjust Meter REF (RV22 for Channel A, RV23 for Channel B) to read 0VU.

8.2 COMPRESSION: 0dB.

Compressor: Meter Compression. Adjust 0VU (Ch A = RV17, Ch B = RV19).

8.3 COMPRESSION: -6dB.

Compressor: Threshold -20dB, adjust Ratio for -2dBu output. Adjust to read -6VU (Ch A = RV17, Ch B = RV19).

8.4 O/P LEVEL: -16dBu.

Compressor: Nominal O/P level to -10dBu.

8.5 GAIN MAKE-UP: +4dBu.

Compressor: Gain Make-Up to maximum for test, then return to minimum and return O/P level switch to +4dBu nominal.

8.6 COMPRESSION: STEREO TRACKING.

After adjusting both channels, check 0VU and -6VU tracking with Stereo Mode on Compressor.

9. SOAK TEST.

With top and bottom covers fitted.

10. DYNAMIC TEST.

Check operation of the compressor controls with the tone-burst generator, in mono and stereo mode.

11. QA CHECK.