

TEST SPECIFICATION: TL Audio

Issue 1: 29th January 1996.

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 **OFFSET SETUP:** -50mV +/- 5mV.
Compressor: Threshold, Ratio and Gain Make-Up anti-clockwise, Fast Attack and Release.

Adjust Offset trims RV1 and RV3 on PC136 whilst measuring at test points A and B respectively.

Perform tests 5.1 to 8.5 for both channels:

5. INPUTS:

5.1 LINE INPUT: Output 0dBu.

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

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

Adjust RV3 (Ch A) /RV4 (Ch B) on PC133 for 0dBu output.

Adjust RV1 and RV4 on PC133 for A and B balance respectively.

5.2 INPUT GAIN:

A2: -20dBu.

Compressor: Check input gain variation +/-20dB.

Return A2 level to 0dBu.

5.3 COMPRESSOR IN: Output 0dBu.

Adjust RV2 (channel A) and RV7 (channel B).

5.4 HUM AND NOISE: Limit -80dBu.

A2: Mute Output.

5.5 AUX INPUT, LO GAIN: Output -14dBu.

A2: -20dBu.

Compressor: Input to Aux Jack, Gain 0dB, Lo Gain.

5.6 AUX INPUT, HI GAIN: Output +3dBu.

Compressor: Hi Gain.

5.7 UNBALANCED INPUT AND OUTPUT: Output -20dBu.

Compressor: Input to unbalanced jack, output from unbalanced jack.

6. **DISTORTION:** Limit 0.02%
- A2: 22-22K Filter out, THD.
- Compressor: Input and output via XLR. Comp out.
7. **THRESHOLD ADJUSTMENT.**
- A2: Level, output -20dBu.
- Compressor: With Threshold and Ratio fully anti-clockwise, check output -20dBu. Set Threshold and Ratio fully clockwise, increase A2 output to +4dBu, and adjust Threshold trim for -7.0dBu output (RV5 and RV6 on PC136 for A and B respectively).
8. **METERS:**
- 8.1 **AUDIO LEVEL:** +4dBu = 0VU.
- Compressor: Threshold +20dB, check output +4dBu.
- Adjust Meter REF (RV4) to just illuminate 0dB LED.
- 8.2 **GAIN REDUCTION:** -6dB.
- Compressor: Threshold -20dB, adjust Ratio for -2dBu output. Meter Gain Redn. Adjust RV8 to just illuminate -6dB LED.
- 8.3 **GAIN MAKE-UP:** +24dBu.
- Compressor: Threshold +20dB, GMU maximum.
- Return GMU to minimum after test.
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.**
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