



AMU1-CA
AUDIO MONITORING
UNIT

Handbook

TSL
Vanwall Road, Maidenhead, Berkshire, SL6 4UB
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EC DECLARATION OF CONFORMITY

Application of Council Directives Nos:

EC Low Voltage Directive (73/23/EEC)(OJ L76 26.3.73)(LVD).

Amendment: (93/68/EEC) (OJ L220 30.8.93).

Conformity Standards Declared:

EN 60950

EMC Directive: 89/336/EEC, Amended 92/31/EEC.

Conformity Standards Declared:

EN 50081-1: 1992- EMC- Generic Emissions, Part 1.

EN 50082-1: 1997- EMC- Generic Immunity, Part 1.

EN61000-3-2: 1995- Current Harmonic Emissions.

EN61000-3-3: 1995- Voltage Fluctuations & Flicker.

Manufacturer's Name: Television Systems Ltd
Manufacturer's Address: Vanwall Road
Maidenhead SL6 4UB
England
United Kingdom

Type of Equipment: Audio Monitoring Unit

Model No: AMU1-CA

Part Number: TSLP- AMU1-CA

Date CE Mark Affixed:

I, the undersigned, declare that the equipment specified above conforms to the quoted Directives and Standards.

Place: Maidenhead, England

Signature: _____

Date: _____

Print: R CHAMBERS

Position: PRODUCT MANAGER

SAFETY

Installation.

Unless otherwise stated TSL equipment may be installed at any angle or position within an operating temperature range of 5° - 30° C .

All TSL equipment conforms to the EC Low Voltage Directive:

| |
|---|
| EC Low Voltage Directive (73/23/EEC)(OJ L76 26.3.73)(LVD). Amendment: (93/68/EEC) (OJ L220 30.8.93). |
|---|

In all cases the frame of the equipment must be earthed on installation.

The earth pin on the IEC mains inlet connector is connected to the metal frame of the equipment, to 0 volts on the internal DC PSU and to signal ground, unless otherwise stated. All metal panels are bonded together.

Check that the voltage selector setting (if fitted) and the fuse rating is correct for the local mains supply.

WARRANTY, MAINTENANCE AND REPAIR

All TSL equipment is guaranteed for one year from the date of delivery to the customer's premises. If the equipment is to be stored for a significant period, please contact TSL concerning a possible extended warranty period.

Failure during warranty

If any TSL product should fail or become faulty within the warranty period, first please check the PSU fuses.

All maintenance work must be carried out by trained and competent personnel.

If equipment has to be returned to TSL for repair or re-alignment, please observe the following overleaf:

TSL Returns Procedure

Please telephone +44 (0)1628 676200 (Fax: +44 (0)1682 676299) and ask for Sales who will provide a Returns Number. This will enable us to track the unit effectively and will provide some information prior to the unit arriving.

For each item, this unique Returns Number must be included with the Fault Report sent with the unit.

A contact name and telephone number are also required with the Fault Report sent with the unit.

Fault report details required.

- Company:
- Name:
- Address:
- Contact Name:
- Telephone No:
- Returns Number:
- Symptoms of the fault (to include switch setting positions, input signals etc):

Packing

Please ensure that the unit is well packed as all mechanical damage is chargeable. TSL recommends that you insure your equipment for transit damage.

The original packaging, when available, should always be used when returning equipment..

If returned equipment is received in a damaged condition, the damage should be reported both to TSL and the carrier immediately.

YEAR 2000 CONFORMITY REQUIREMENTS

This product conforms to the following rules:

- | | |
|--------|--|
| Rule 1 | No value for the current date will cause any interruption in operation. |
| Rule 2 | Date based functionality will behave consistently for dates prior to, during and after the Year 2000. |
| Rule 3 | In all interfaces and data storage, the century in any date is specified either explicitly or by unambiguous algorithms or by inferencing rules. |
| Rule 4 | The Year 2000 is recognised as a leap year. |

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1.0 Introduction

The AMU1-CA is a 1RU x 340mm deep Audio Monitoring Unit with two 26 segment bargraphs for audio level measurements.

The following features are standard:

- Two switch selectable stereo analogue inputs.
 - Out-of-phase error indication.
 - VU and PPM metering scales.
 - Integral loudspeaker system.
 - 24 Watt RMS.
 - Headphone outputs with LS muting.
 - 240V mains (IEC) and 12V DC inputs.
 - Fixed or variable line output.
-

2.0 Front Panel Controls and Indicators

2.1 Input and Meter Selection Switches

| | |
|-----------------------|--|
| Channel | Analogue I/Ps. A1 (Left Channel) is fed to the left bargraph and A2 (Right Channel) is fed to the right bargraph. |
| Phase | Momentary phase reverse between A1 and A2 pairs. A non latching push switch with Red/Green LED indicates phase. Push to reverse. |
| Volume Control | Allows the audio level to be varied. |

3.0 Rear Panel Controls

3.1 Configuration Switch Functions (Beta S/W Release X01)

| SWITCH SECTION | FUNCTION |
|----------------|-------------------------------------|
| 1 | PPM – down / VU – up |
| 2 | -18dBFS – down / -20dBFS - up |
| 3 | Not Used |
| 4 | Not Used |
| 5 | Not Used |
| 6 | Not Used |
| 7 | Not Used |
| 8 | Fixed Line Out – down / Variable up |

(See Notes 4.0)

3.12 LF Control

This allows the amount of low frequency present on the monitored signal to be altered according to the installation acoustics.

3.2 Pin-out Details

3.21 Auxiliary Connector – D25 Socket Pin out (Only reference to RS232 relevant)

| D 25 SOCKET ON AMU PIN NO | AUDIO OUTPUTS | FUNCTION |
|---------------------------|---------------|----------|
| 1 | -- | GND |
| 2 | ADX Ch1 + | Analogue |
| 3 | ADX Ch2 - | Analogue |
| 4 | -- | GND |
| 5 | ADX Ch3 + | Analogue |
| 6 | ADX Ch4 - | Analogue |
| 7 | -- | GND |
| 8 | -- | NC |
| 9 | Rx | RS232 |
| 10 | Tx | RS232 |
| 11 | | |
| 12 | | |
| 13 | -- | GND |
| 14 | ADX Ch1 - | Analogue |
| 15 | -- | GND |
| 16 | ADX Ch2 + | Analogue |
| 17 | ADX Ch3 - | Analogue |
| 18 | -- | GND |
| 19 | ADX Ch4 + | Analogue |
| 20 | -- | NC |
| 21 | -- | NC |
| 22 | -- | NC |
| 23 | | |
| 24 | -- | GND |
| 25 | | |

3.22 Analogue XLR-3 Connectors

| XLRS | PIN | FUNCTION |
|-------------|------------|-----------------|
| ANALOG 1 | 1 | GND |
| ANALOG 1 | 2 | 1 IN+ |
| ANALOG 1 | 3 | 1 IN- |
| ANALOG 2 | 1 | GND |
| ANALOG 2 | 2 | 2 IN+ |
| ANALOG 2 | 3 | 2 IN- |

4.0 Notes

This unit requires rear support when rack mounted.

In order to affect status changes of the unit using the rear DIP switch, the unit will require re powering.

References made to digital settings are not applicable to the AMU1-CA.

Output analogue levels are adjustable over the following range:

0dBm = 0.775V into 600Ω i.e. 1mW power dissipation.

0dBu = 0.775V RMS = PPM 4.

Please note that some American equipment has the function of the XLR pins 2 & 3 reversed.

TSL product is wired to the European standard.



5.0 AMU1- CA Technical Specifications

Power Supply

| | |
|-------------------|--|
| Supply Voltage | 100 -240V AC @ 50Hz/60Hz +/- 10% or 12V DC |
| Power Consumption | 35 watts. |

Physical Dimensions

| | |
|--------|-------------|
| Height | 44mm (1RU) |
| Width | 483mm (19") |
| Depth | 340mm |
| Weight | 6900gm |

Analogue Inputs 1 - 2

| | |
|--------------------|---|
| Connector Type | XLR Female 3 pin. Pin 1 Gnd, Pin 2 hot, Pin 3 cold. |
| Signal | Balanced line level audio. |
| Frequency Response | 30Hz to 25kHz |
| Impedance | >20k Ω |

RS 232 Auxiliary 25 Way D Type socket.

Line Output.

| | |
|-------------------------|--------------------------------------|
| Connector | XLR 3 pin Male |
| Impedance | 50 Ω |
| Output Levels | Through level control with 0dB gain. |
| Fixed/variable Line O/P | Available on D25 (selectable) |

Headphone Output.

| | |
|---------------|--------------------------------------|
| Connector | Stereo Jack socket type A |
| Impedance | 50 Ω |
| Output Levels | Through level control with 0dB gain. |

Performance

Response 70Hz to 20KHz

Electrical Distortion Better than 0.1%

Hum and noise Better than -80dB

SPL >98dB at 0.6 m

Amplifier Output 24 watts total power