

CM-TLL Technical Specifications

Audio Output

Output Impedance 150 Ω (nominal), transformer coupled on XLR3M connector

Output Level Nominally 0dBu transformer coupled on XLR3M connector

2-Wire

Off-Hook Voltage 8V minimum 12V average.

2-Wire Connectors RJ11

Physical

Case Extruded aluminium natural anodised.

Dimensions: 43mm (H) x 78mm (W) x 95mm (L).

Weight: 220g.

SONIFEX

CM-TBU Line Powered Telephone Balance Unit & CM-TLL Line Powered Telephone Line Listen Unit User Handbook

Sonifex CM-TBU



Fig 1-1: Front and Rear View of the CM-TBU Line Powered Telephone Balance Unit

The CM-TBU line-powered telephone balance unit provides a high degree of separation between send and receive signals, enabling 4-wire communications systems to interface with the telephone network. In telephone IFB applications, the high drive capacity at the 4-wire output enables a presenter's earpiece to be connected directly to the unit without an external amplifier.

Features

- Isolated, full-duplex 4-wire interface to non-digital telephone direct exchange lines (PSTN).
- The unit is line powered, requiring no battery or external power.
- Simple optimization of sidetone rejection with any country's telephone system.
- LED's indicate "ring" and "off hook" conditions.
- Input level control with line-sensing limiter and limit indicator.
- High drive output with level control for direct feed to presenter's earpiece, etc.
- Loop-through RJ11 line sockets provide universal connection to line and telephone set.
- Connection to the telephone set is maintained while the unit is in use.
- Small, rugged metal case with XLR3 male & female 4-wire connectors.

Description

This extremely compact unit is powered from the telephone line and provides an interface to a 4-wire circuit with separate level control of send and receive signals. Optimum rejection

of the input signal on the 4-wire output is achieved in a bridge circuit by adjusting three elements which simulate the complex line impedance. This can be used to compensate for local line variations or to adapt to the telephone systems of other countries, where line characteristics may differ. Optimization of the sidetone rejection does not involve the use of any test equipment and can be easily carried out while the system is in use.

Although the signal level being sent to the line can be manually adjusted over a wide range, the level control is followed by a limiter which senses the available DC line voltage to ensure that the line signal is not distorted. The limiter drives an LED to indicate the onset of limiting.

Although the output stage can drive a presenter's earpiece in a telephone IFB application, the level control may not be accessible to the presenter, who will normally be situated some distance from the unit. The presenter may then require to have local control of the earpiece signal level, this should be provided by the use of a headphone belt pack unit.

To enable communication between the 4-wire circuit and the telephone network, the 4-wire and line connections are made to the unit and the "hook" switch is pressed to power the unit from the line. This will be indicated by the ON LED, and can either be done after an outgoing call has been dialled on a telephone set connected to the unit, or to answer an incoming call after the RING LED is seen to flash, (a telephone set is not required for incoming calls unless an audible ring is required). If the sidetone level at the 4-wire output is found to be excessive, the outgoing signal level should be reduced or the balance controls adjusted to minimise it. In addition to the RJ11 line sockets there is a cable set including converters for British Telecom standard UK telephone connectors as necessary.

CM-TBU Technical Specifications

4-Wire Input

Input Impedance: 10k Ω , transformer coupled on XLR3F connector.

Input Level Range: -10dBu to +4dBu before limiting, with average line.

4-Wire Output

Output Impedance: 150 Ω , transformer coupled on XLR3M connector.

Output Level Range: -10dBu to +6dBu, for average line level.

Sidetone Rejection 30 to 40dB average on a tone, depending on line characteristics.

2-Wire

Off-Hook Voltage 8V minimum 12V average.

2-Wire Connectors 2 x RJ11 (American).

Physical

Case Extruded aluminium natural anodised.

Dimensions: 43mm (H) x 78mm (W) x 95mm (L).

Weight: 270g.

SONIFEX CM-TLL Line Powered Telephone Line Listen Unit



Fig 1-2: Front and Rear View of the CM-TLL Line Powered Telephone Line Listen Unit

The Sonifex CM-TLL provides a professional level audio output from a telephone line. The line-powered unit is compatible with all analogue direct exchange lines, and includes LED indication of incoming calls and line connection. The unit is intended to be used with an earpiece amplifier to receive an audio feed by telephone from the studio.

Features

- Audio interface from analogue direct exchange lines to receive audio with electrical isolation from line.
- Line powered - requires no battery or external power.
- Indicator LED's show "ring" and "in use" conditions.
- Loop-thru line sockets provide in-line connection with existing telephone.
- Line connections via RJ11 connectors.
- Existing telephone remains connected when the unit is in use.
- XLR3 male audio connector.
- Small, rugged metal case.

Description

The line and telephone set are connected to the unit in order to make an outgoing call. A telephone may not be required if calls are only incoming, as telephone line ringing is indicated by a flashing LED built into the unit. In either case, the "LINE CONNECT" switch is pressed to make the line connection. The ON LED then indicates that the unit is powered and that the audio circuit is routed to the line via the output XLR plug. If needed, suitable adaptors can be connected to either of the RJ11 line sockets to enable the unit to be used with the public telephone system in any country.