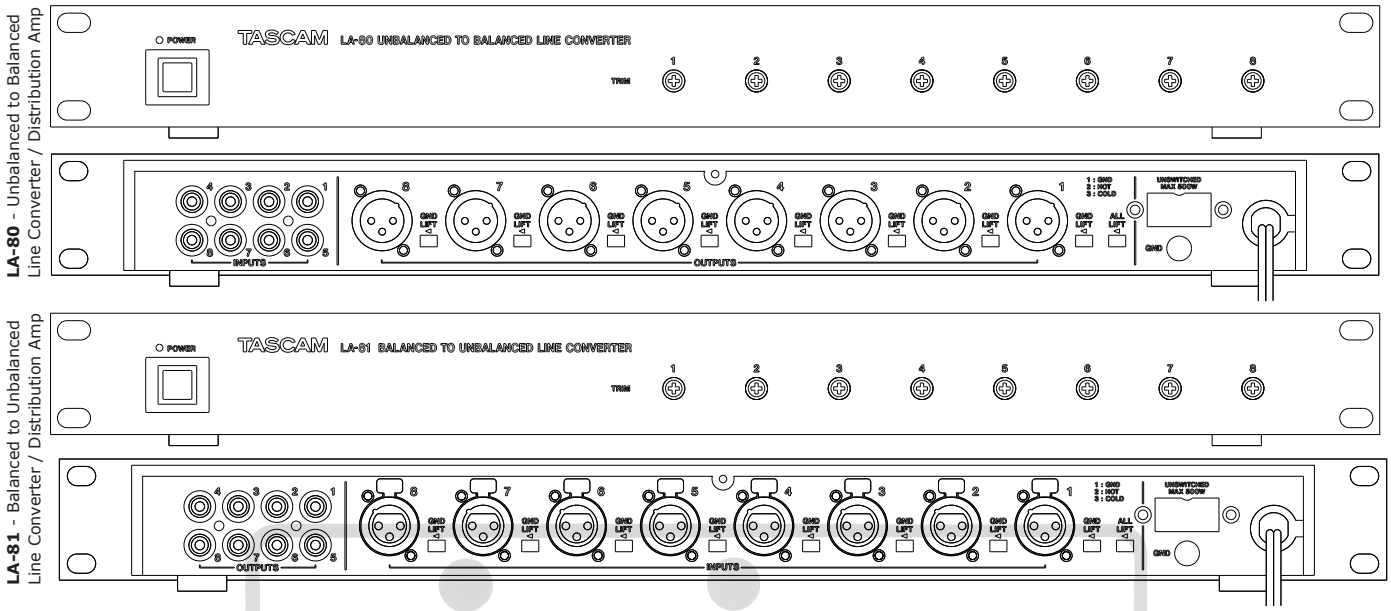
TASCAM®

LA-80 & LA-81
Technical Documentation

PRODUCT OVERVIEW



TASCAM's LA-80 and LA-81 line level converter boxes were built for studio quality conversion between balanced and unbalanced line levels, offering the best integration of all types of equipment. Fine tuning trim pots are accessed on the front panel, offering ±6dB adjustment on individual outputs. Ground lift controls are available on each channel or globally for eliminating ground loops. On the bottom of the LA-80 is a channel link matrix that allows channels to be linked, utilizing the Line Amp as a distribution amplifier. This is great for splitting signals for distribution to multiple recorders, or for multizone sound routing applications.

- Converts between Balanced and Unbalanced Line Levels
- Distribution Amp Function with Channel Uplink *(LA-80 Only)*
- ±6dB Fine Tuning Trim Pots On Each Output
- Ground Lift Switches Per Output or Global
- Cascade 500W Power Outlet *(US/Canada Model Only)*
- Single Space Rack Mount Design
- Selectable +4/-20dBm Balanced Nominal Level

APPLICATIONS

The LA-80 and LA-81 are designed to offer top quality line level conversion and audio distribution capabilities for studios, live installations, and mobile production systems.

Restaurants - Retail Stores - Live Theaters

In situations where a common audio source needs to be split into multiple signals, the LA series splitters are incredibly useful. In theaters, the audio from the main PA system could be split and sent to separate amps so patrons can still hear the show in the lobby or restrooms. In retail outlets and restaurants, the same source can be sent to separate systems feeding the entrance, restaurant, bar, restrooms, and office individually.

The LA-80 is especially helpful in many low budget installations where the audio source is starting out as unbalanced, but the amplifiers may not be located directly near the audio equipment. The LA-80 not only splits the unbalanced signal, but also converts it to balanced for better performance over longer cable runs.

Personal, Project and Production Studios

When studios need to integrate a combination of balanced and unbalanced equipment, the LA-80 and LA-81 offer the best quality line level conversion. Also, it works in 8 channel banks, conveniently matching up with multitrack and mixer fader blocks.

SPECIFICATIONS

Performance Specifications:

Frequency Response:	20Hz-20kHz, ±0.8dB
Signal to Noise Ratio:	87dB (IHF A/DIN)
Total Harmonic Distortion:	<0.01% @ 1kHz
Crosstalk:	90dB @ 1kHz
Trim Range:	±6dB

LA-80 Electronics:

Input (Unbalanced RCA x8):	-10dBV, 34kOhms (Input Links Off)
Maximum Input Level:	+11dBV (3.5V), output set to +4dBm +35dBV (56V), output set to -20dBm
Output (Balanced XLR x8):	+4dBm (1.23V), output set to +4dBm -20dBm (0.0775V), output set to -20dBm
Maximum Output Level:	+25dBm (13.8V)

LA-80 Electronics:

Input (Balanced XLR x8):	+4dBm (1.23V), input set to +4dBm -20dBm (0.0775V), input set to -20dBm
Maximum Input Level:	+32dBm (30.8V), input set to +4dBm +8dBm (1.9V), input set to -20dBm
Output (Unbalanced RCA x8):	-10dBV, 10kOhms (1kOhm minimum)
Maximum Output Level:	+18dBV (7.9V)

General Specifications:

Power Requirements:	120V AC, 60 (US/Canada Model) 230V AC, 50Hz (Europe Model) 240V AC, 50Hz (Australia)
Power Consumption:	8W (LA-80); 6W (LA-81)
Dimensions:	482 x 48 x 196 mm 19" x 1-7/8" x 7-11/16"
Weight:	2.8Kg, 6.171 lbs

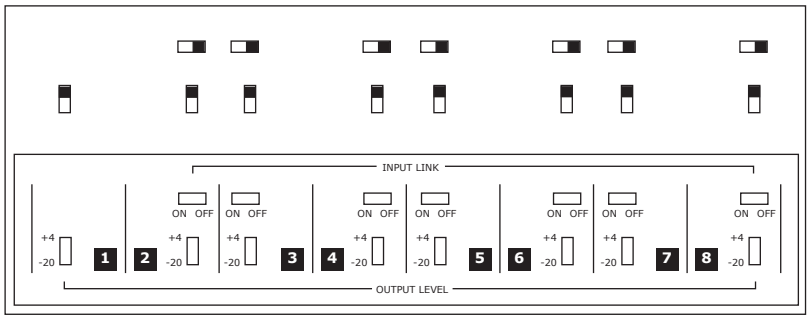
LA-80 CHANNEL INPUT LINK FUNCTION

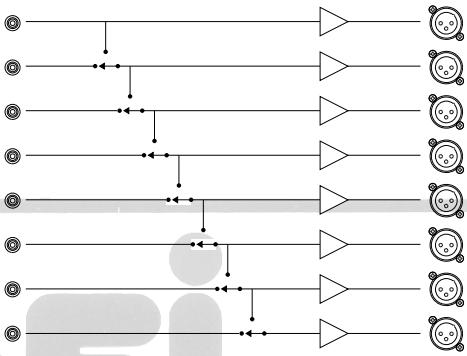
LA-80 ONLY:

On the bottom of the LA-80, you will find a small matrix of switches for balanced output level and channel input link. The input link groups the output of the given channel with the previous channel. This function allows the LA-80 to operate as a distribution amp, not just a level converter.

Each channel has its own switch, so the grouping is completely flexible. You can take one input to eight channels for simple distribution of a single mono source. You could make 4 splits of a stereo input. You could even make two copies of one signal, three of another, and have the remaining three inputs simply used as a line level amp.

This kind of flexibility lends itself to a number of installed sound applications, especially where a simple unbalanced stereo output may need to be sent to several different amplifiers for multiple zones.





Bottom panel drawing above.

Schematic of input link at left.

ARCHITECT'S SPECIFICATIONS

LA-80:

The line level converter shall be an eight channel balanced amplifier, converting unbalanced signals to a balanced levels. Inputs shall be provided on 8 RCA connectors; outputs shall be provided on 8 XLR connectors.

Each channel shall have a fine trim control offering a range of ±6dB on the front panel. On the bottom panel, a switch shall be provided for each channel offering +4dBm/-20dBm nominal balanced output level adjustment. On the back panel, a ground lift switch shall be provided for each channel; an overall ground lift switch shall also be present.

The line level converter shall also have an audio distribution amp function, allowing the individual linking of each channel (2-7) to the previous channel for flexible linking.

The line level converter shall be able to mount in a standard 19" rack mount, taking one space in height. Dimensions shall be 19" x 1-7/8" x 7-11/16" (W x H x D).

Metric measurements: 482x48x196mm

The line level converter/distribution amp shall be a TASCAM LA-80.

NOTE: This text is available in a standard text file on TASCAM's Sound Contractor CD-ROM. Contact TASCAM for details.

LA-81:

The line level converter shall be an eight channel balanced to unbalanced level converter. Inputs shall be provided on 8 XLR connectors; outputs shall be provided on 8 RCA connectors.

Each channel shall have a fine trim control offering a range of ±6dB on the front panel. On the bottom panel, a switch shall be provided for each channel offering +4dBm/-20dBm nominal balanced input level adjustment. On the back panel, a ground lift switch shall be provided for each channel; an overall ground lift switch shall also be present.

The line level converter shall be able to mount in a standard 19" rack mount, taking one space in height. Dimensions shall be 19" x 1-7/8" x 7-11/16" (W x H x D).

Metric measurements: 482x48x196mm

The line level converter/distribution amp shall be a TASCAM LA-81.

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