

Balanced Audio

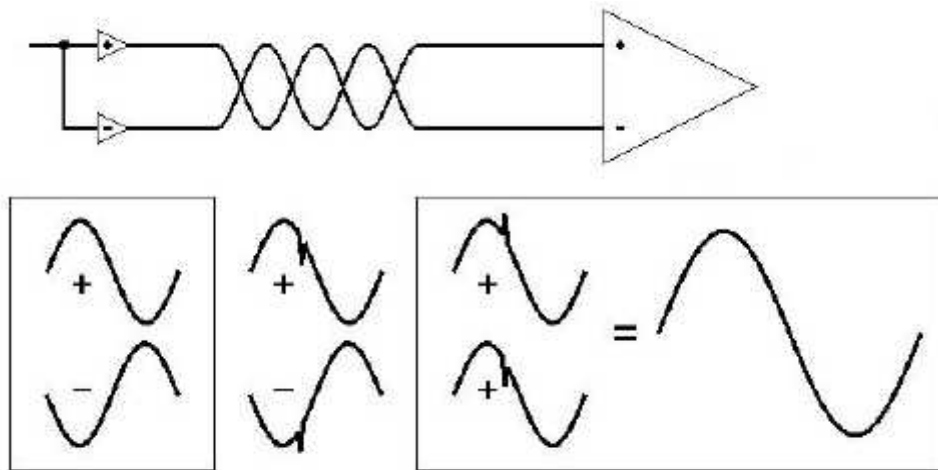
How to make audio connections between
different audio systems.

Ref: 1D-009049-EN-r03



1 BALANCED AUDIO

Balanced audio is a method used for the transmission of audio signal. The signal is duplicated in order to reduce possible interference caused by the environment in which it travels. The same duplicated signal is transported inverted to suppress possible interference when the source signal is composed again at the other end, since the interference from both will be symmetrical, and therefore their sum will be zero as seen in *Picture 1: Balanced Audio Signal*



Picture 1: Balanced Audio Signal

This method is normally used by industrial equipment, such as those supplied by LDA Audiotech.

2 MONO AND STEREO CONNECTIONS

To produce natural ear feeling, audio systems can transmit the split signal to two different amplification zones (these are now distinct signals). This connection scheme is called **stereo**. In contrast, transmitting a single signal is called **mono**.

The installation diagram **is independent of the use of balanced audio**.

2.1 Connection with stereo audio

To make balanced audio transmission from a stereo signal compatible, follow the connection diagrams shown in *Diagram 1: Connecting Jack to balanced audio* and *Diagram 2: Connection of RCA to balanced audio*

Since channels L and R are bridged, the indicated resistors must be placed to protect the output equipment.

NOTE: The resistances indicated are calculated for a line-level signal output. For higher voltage, it is recommended to use resistors of 1 k Ω .

Similarly, *Diagram 3: Balanced audio output connection to Jack* should be followed to transmit the balanced audio signal.

Balanced Audio

Stereo OUT

Balanced IN

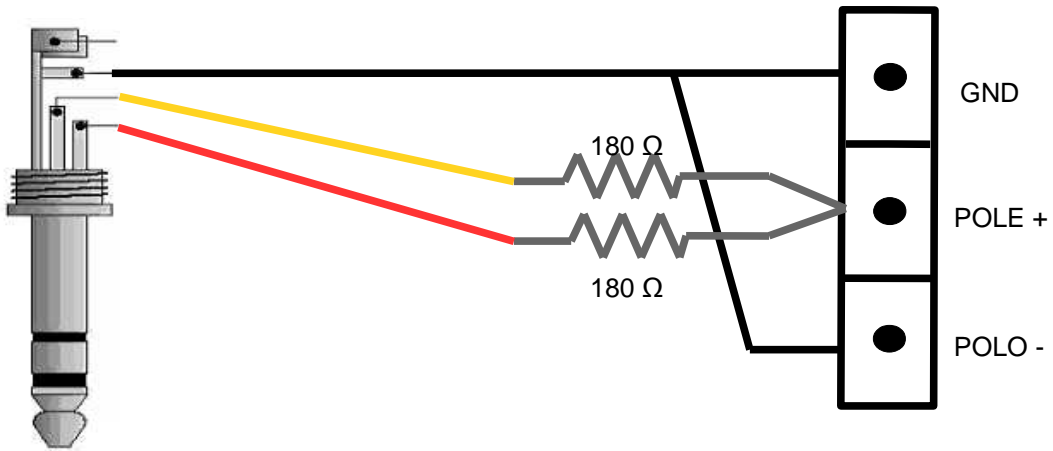


Diagram 1: Connecting Jack to balanced audio

Stereo OUT

Balanced IN

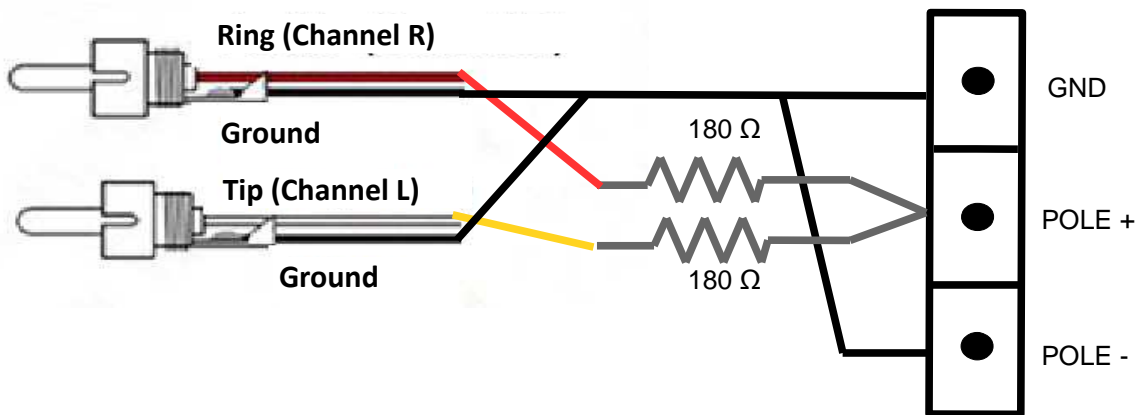


Diagram 2: Connection of RCA to balanced audio

Balanced OUT

Balanced IN



Diagram 3: Balanced audio output connection to Jack

2.2 Connection with mono audio

Similarly, to make a mono output compatible with a balanced audio input, you should follow *Diagram 4: Mono jack connection to balanced audio* and *Diagram 5: Connection of RCA mono channel to balanced audio*

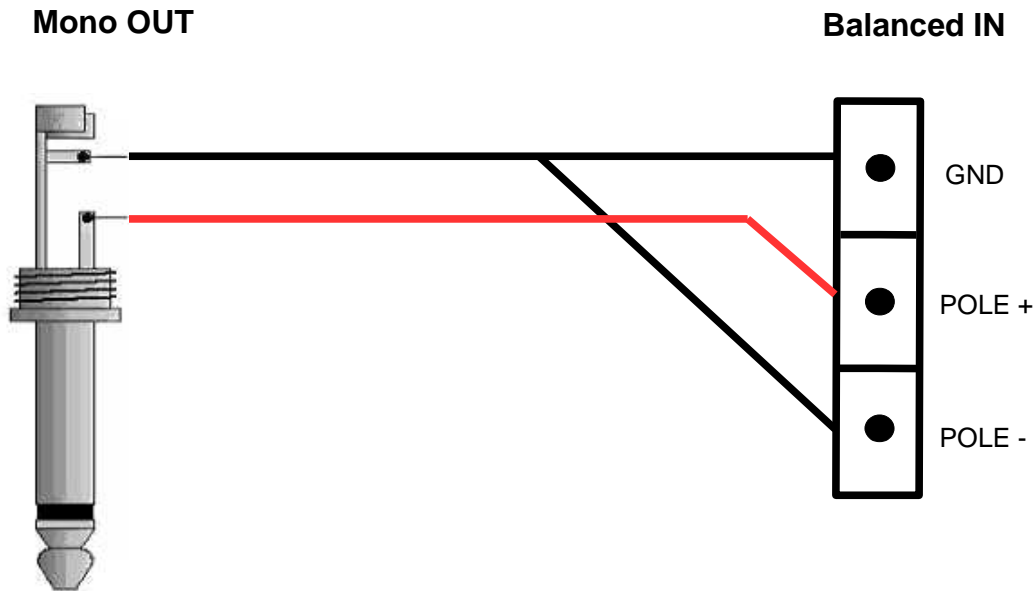


Diagram 4: Mono jack connection to balanced audio

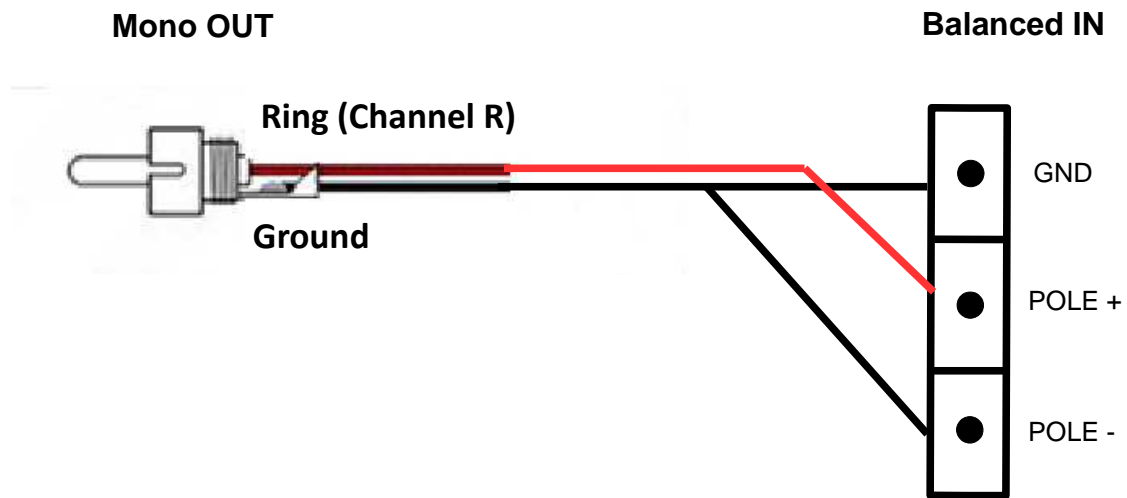


Diagram 5: Connection of RCA mono channel to balanced audio