

How to wire a stereo device such as an MP3 player to output a mono signal to feed into Athena.

Introduction

The Athena audio matrix mixer requires 2 input connectors for a stereo source. Many times a mono input signal is adequate because distributed audio is typically a mono output. Most CD players, Tuners, MP3 players and other background music sources output stereo audio. These instructions are the preferred method for wiring a stereo source into a mono input of the Athena audio matrix mixer.

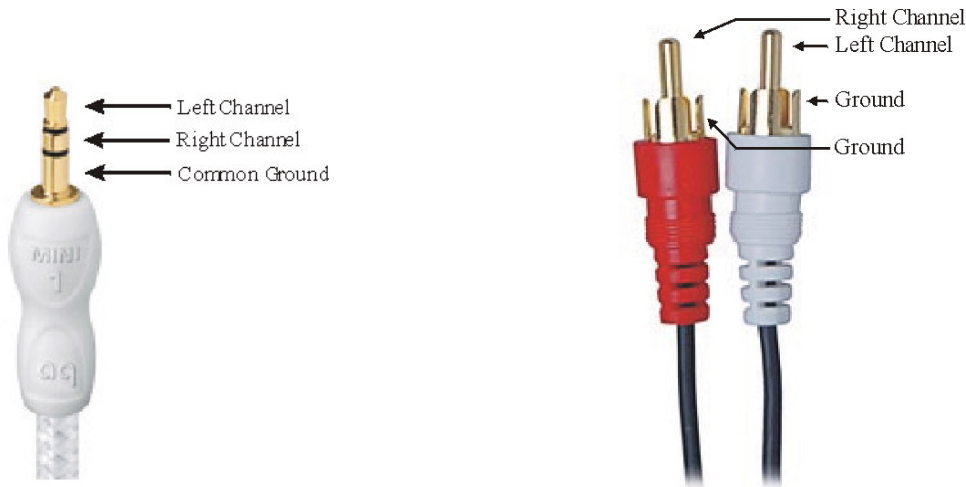
**With regards to wire colors and what signals are on those wires, these instructions are based on "typical" audio cables and source devices.*

Instructions

Difficulty: Moderate

- 1) Locate the audio output connectors on the device you wish to sum mono. Typically, it will be two RCA female connectors, one RED and one WHITE. If unsure, refer to device's manual. Some devices will have an 1/8" mini receptacle as the audio output.
- 2) Next, locate the cable that connects to the audio output of the audio source device. Typically this will be a dual RCA male to dual RCA male cable or an 1/8" mini to 1/8" mini cable.

Typically a dual RCA cable contains two cables in one bundle for the left and right channels. An 1/8" mini, such as for an MP3 player, is a single cable with a "Tip, Ring, Sleeve" connection.



MP3 player 1/8" MINI Jack

CD Player Dual RCA Male Cable

- 3) The source device cable must be modified by cutting off the connector on one end. A typical dual RCA cable contains two cables for the left and right channels. Strip back the main insulation of the two cables 1/2". This will expose a bare wire (ground) and either a RED or WHITE insulated wire. RED is the right channel and WHITE is the left channel.

An 1/8" mini to 1/8" mini cable is basically the same, except the RED and WHITE and ground are all in one jacket. Tip is the left channel, Ring is the right channel, and the Sleeve is a common ground for both left and right channels.

Strip back the main insulation 1/2" to expose the bare wire, as well as RED and White insulated wires.

-Separate the insulated conductors from the exposed outer strands.

-Twist together the exposed strands into a single conductor.

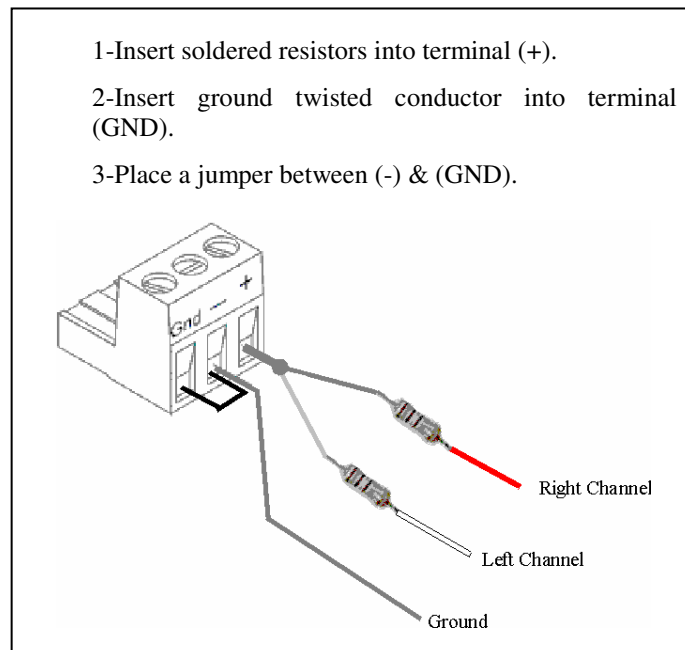
-Strip back the insulation of the internally insulated RED and WHITE cables 1/8". This is the signal "+" for the right channel and the signal "+" for the left channel.

Take care not to damage the conductors inside the cable.

4) Next, solder the resistors to the cable.

To sum a stereo pair to a mono signal it is recommended to terminate 2 1K ohm resistors to the Left and Right channels and then tie them together. Solder one side of the first resistor to the left channel followed by soldering one side of the second resistor to the right channel.

Next, connect the bare wire of the left channel to the bare wire of the right channel, this is the ground. Finally, connect the two resistor ends together and this will be "+" of the mono signal. Shrink tubing is recommended to protect the soldered connections to the resistors.



**Depending on the grounding scheme and the other components involved the jumper between (-) and GND may need to be removed.*

5) Terminating the cable. Remove the small green phoenix style audio input connectors from the back of the Athena. Connect the twisted conductors and soldered resistors to the Athena matrix connectors as indicated in the picture above.

6) Tighten screw terminal connections.