



# How to Add Multiple Audio Inputs to a Set of Powered Monitor Speakers

This guide will walk you through how to add multiple audio inputs to a set of powered monitor speakers. This project can be done in 30-45 minutes.

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## INTRODUCTION

The procedure to add multiple audio inputs to a set of powered monitor speakers will be given in this guide. Usually a set of powered monitor speakers only comes with one audio input, and with this procedure one can add as many audio inputs as one wishes to the set of speakers. The only limit on how many audio inputs one can put in is the size of the project box being used. I followed this procedure to get better sound from a kitchen tv, an Amazon Echo Dot, and an Apple Mac mini, all from one set of speakers.

It is very useful to already have a knowledge about how to solder. If you do not know how, here is a link to a very useful guide:

[How To Solder and Desolder Connections](#)

### TOOLS:

- [Phillips #0 Screwdriver](#) (1)
- [Soldering Iron](#) (1)
- [Flush Wire Cutters](#) (1)
- [3/16 inch drill bit](#) (1)

### PARTS:

- [10 kΩ resistors](#) (2)

*Need two times as many inputs as wanted.  
So, if want to install 3 inputs, need 6 resistors  
or if want to install 5 inputs, need 10 resistors.*

- [Solder](#) (1)
- [1/8 inch stereo female panel mount input jacks](#) (1)

*Need as many as wanted inputs to be created*

## Step 1 — How to Add Multiple Audio Inputs to a Set of Powered Monitor Speakers



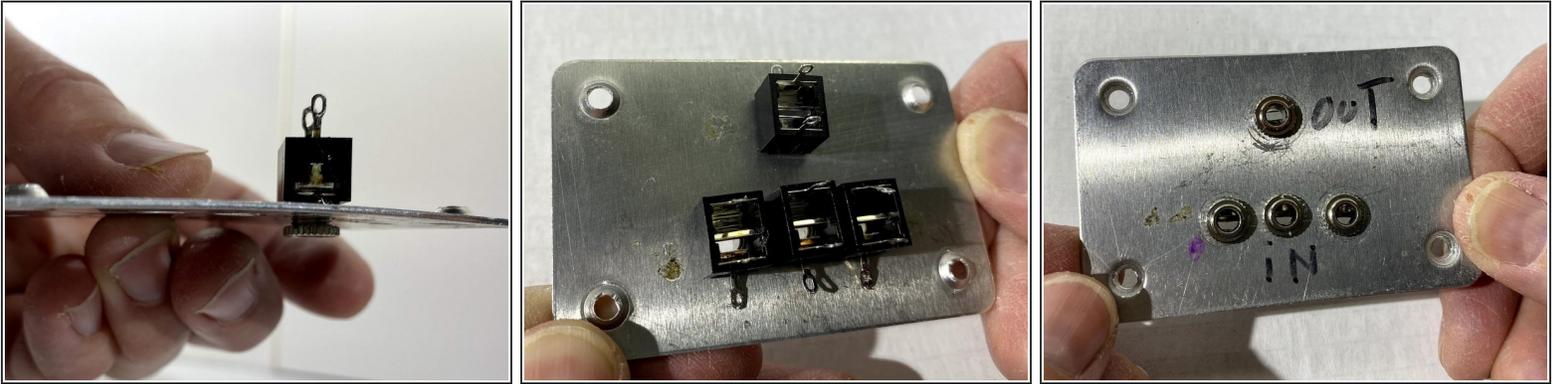
- Drill as many 3/16 inch holes, at least 1/2 inch apart, as wanted for audio inputs along the length of one side of the project box. These are the audio inputs.

## Step 2



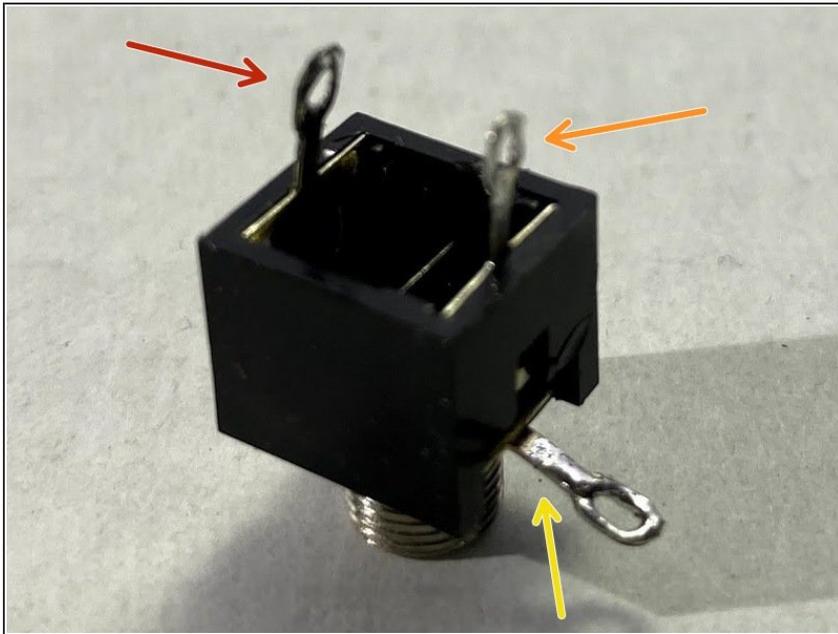
- Drill one 3/16 inch hole on the other side of the project box. This is the audio output.

### Step 3



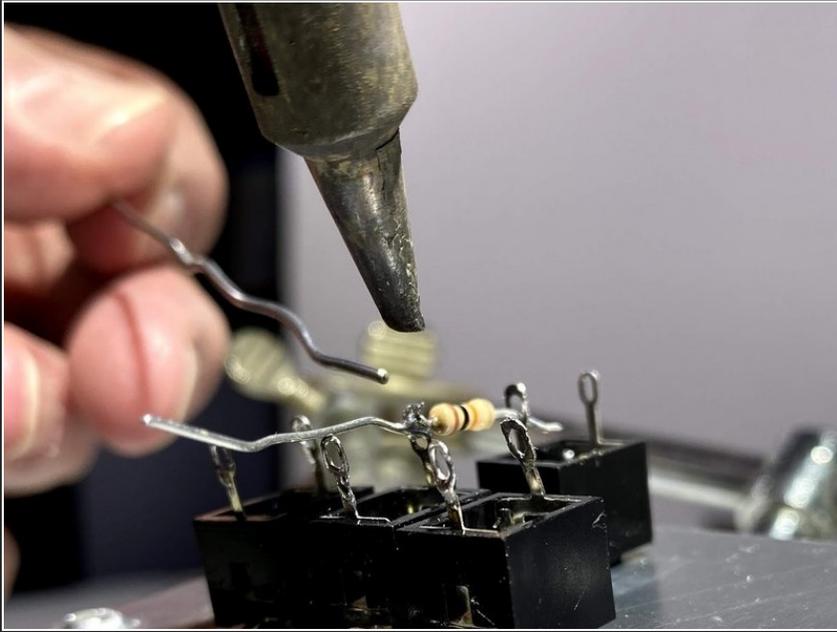
- Unscrew the two pieces of the audio jack apart and then reassemble them with the top of the project box in between.

## Step 4



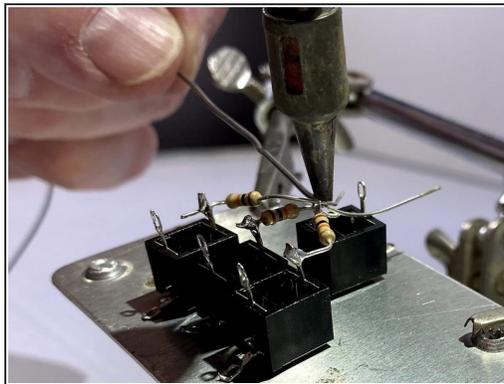
- For this step it is important to note the orientation of the audio input jack tabs.
- The yellow arrow points to the ground tab.
- The orange arrow points to the right tab, the tab above the ground tab.
- The red arrow points to the left tab, the tab not above the ground tab.
- When soldering the 10 k $\Omega$  resistors into the input and output tabs, it is imperative this process be done: using the 10 k $\Omega$  resistor, connect the right tab of the audio input jack to the right tab of the audio output jack.
- Similarly, the left tab of the audio input jack is connected by the 10 k $\Omega$  to the left tab of the audio output jack. If this process is not done, the speakers may not work correctly.
- Also, when soldering the resistors, it is important to remember the resistors cannot touch. If the resistors touch, it will produce sound feedback, creating an unpleasant listening experience.

## Step 5



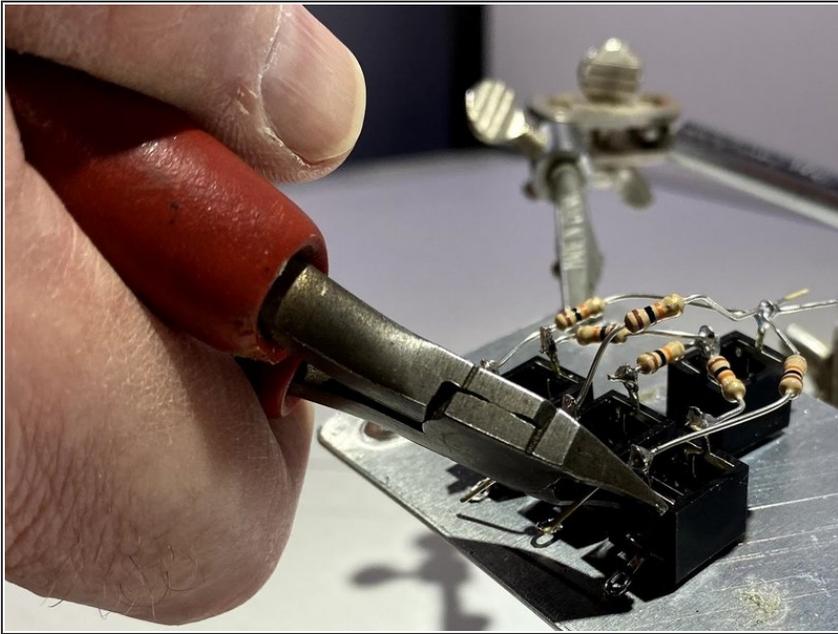
- To solder the resistors in place the following equipment will be needed: a soldering iron and solder. To solder the resistor to the tab of the audio jack, the soldering iron must be set to around 800 °F.
- Once the soldering iron is sufficiently hot, pick it up in one hand and in the other hand pick up the solder. To solder the resistor in place, touch the solder and the soldering iron together. This action will melt the solder, securing the resistor in place.

## Step 6



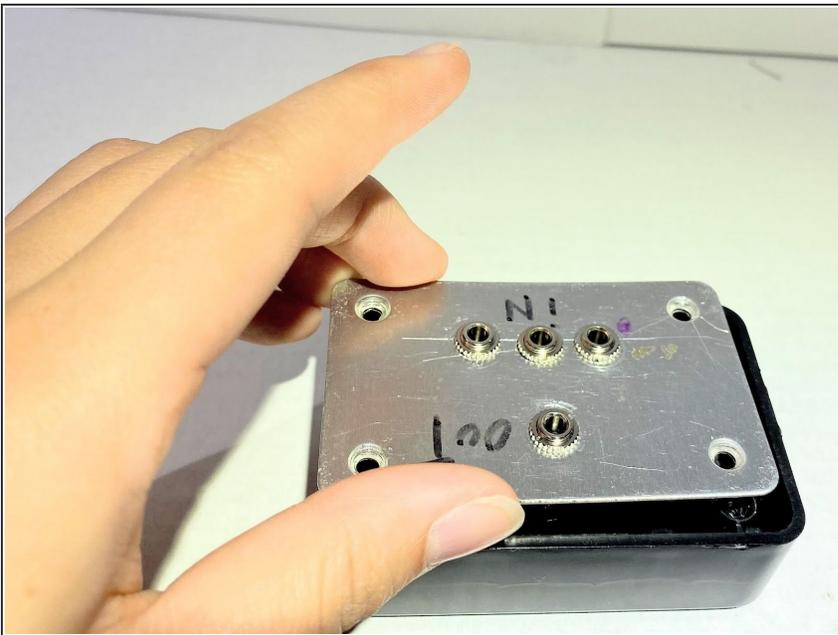
- Solder a 10 k $\Omega$  resistor between each input jack tab and the corresponding output jack tab on the input jacks. When soldering, ensure no part of the resistors will touch.

## Step 7



- Use the wire cutters to cut off the extra wire hanging off of the resistors.

## Step 8



- Place the top of the project box back to enclose the box.

## Step 9



- Screw the screws into the holes in the project box to finish putting the box back together.

To reassemble your device, follow these instructions in reverse order.