



# Using Apple Pro Speakers with a class-d amplifier

This guide shows you how to revive the Apple Pro Speakers – but without a Griffin iFire or similar. You will need a standard audio amplifier. There are great sounding, small class-d amps, so you can also deploy the speakers on your desktop.

Written By: rafael



## INTRODUCTION

The Apple Pro Speakers (made by harman kardon) are a great piece of technology. They were specially designed for the iMac G4 and the Power Mac G4 MDD (mirrored door drives) series. Those computers had a special connector which supplied both – an audio signal and power – to the speakers.

There are some guides which explain how to connect the speakers using a 3.5 mm jack, but this will never be a real solution as these speakers need to be driven by a real amp – and not the line-out of a computer or other audio device.

As Griffin iFire converters are expensive and hard to get, this guide relies on a class-d amp, which means that you can revive the speakers for about 40 US dollars.

### TOOLS:

- Utility Scissors (1)
- Solder (1)
- Soldering Iron (1)
- Wire Stripper (1)

*Optional*

### PARTS:

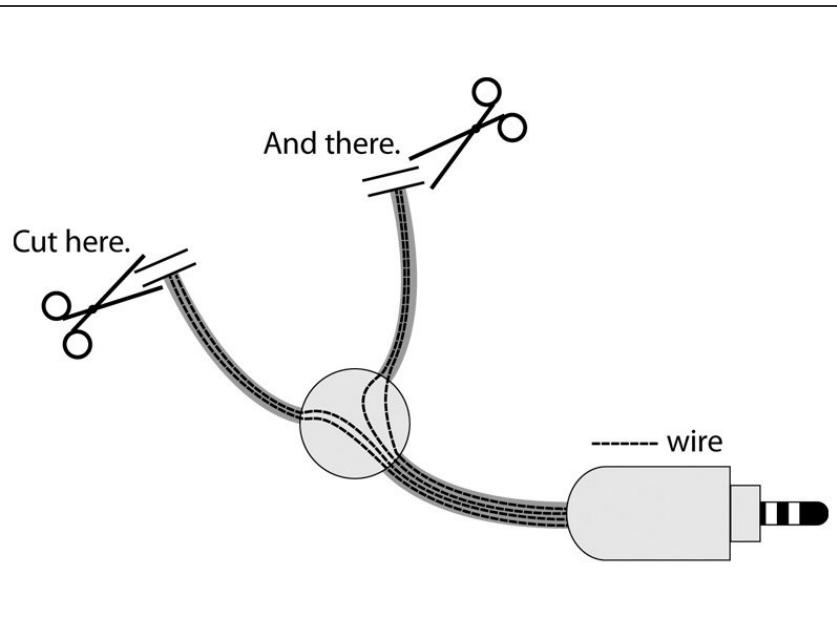
- Audio amplifier (1)  
Recommended: class-d / class-t, at least 15 watts per channel, 4-8 ohm
- Heat-shrink tubing various diameters (1)
- Electrical Tape in 6 Assorted Colors (1)
- Banana plugs (4)  
optional
- AA Batteries (1)

## Step 1 — Using Apple Pro Speakers with a class-d amplifier



- This image shows the complete setup with which you will end up. With a little bit of work you can soon enjoy the clear sound of true harman kardon speakers.
- **Please note: This guide will destroy the original cable/connector which is used to connect the Apple Pro Speakers to an iMac, Power Mac or the Griffin iFire.**
- **Please also note that – as with every electronical repair or modification guide – you alone are responsible for your own health and the health of others. Also be aware that you alone are responsible for any damaged electronic equipment.**

## Step 2

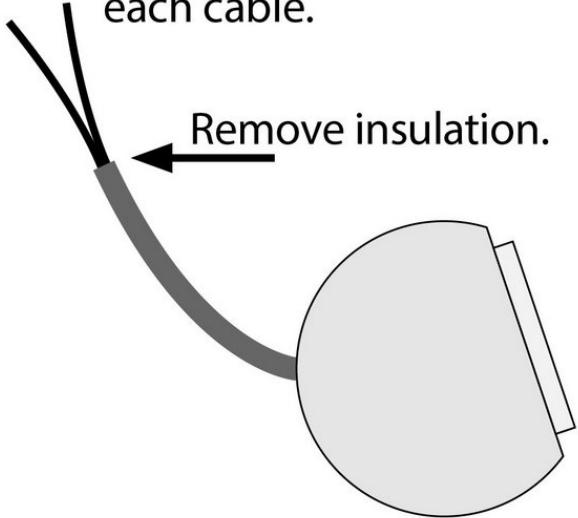


- Cut each of the speaker cables. To get the maximum length you can cut the cables near the white "knob" which merges the two cables.

## Step 3

One pair of wires on each cable.

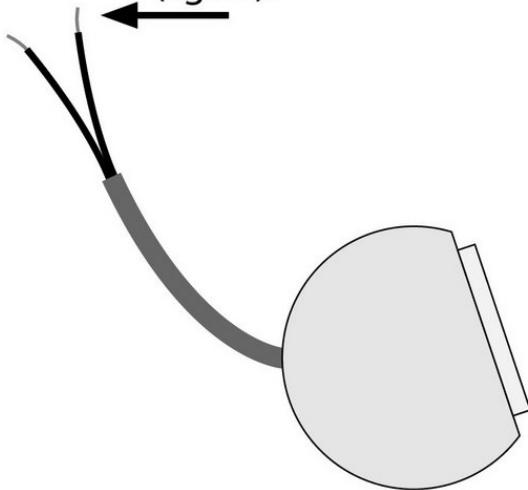
Remove insulation.



- Remove the outer insulation on each speaker cable. Remove up to two inch of isolation. You can use a scissor or a wire stripper. **Be ultra careful not to damage or cut the inner wires.**
- Two wires are inside each speaker cable.

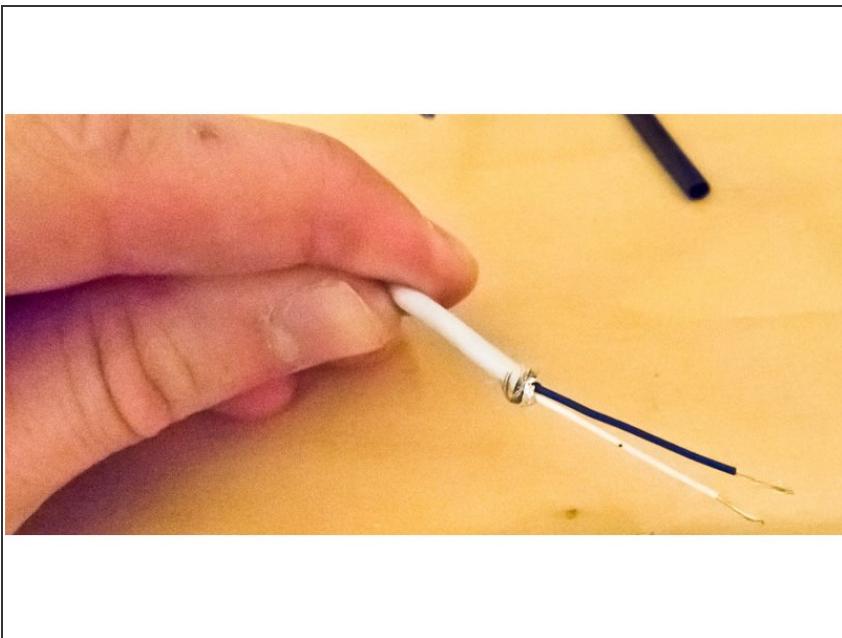
## Step 4

Remove insulation (again).



- Now also remove the insulation of the small inner wires. Again be careful not to cut the cables as they are very small.

## Step 5



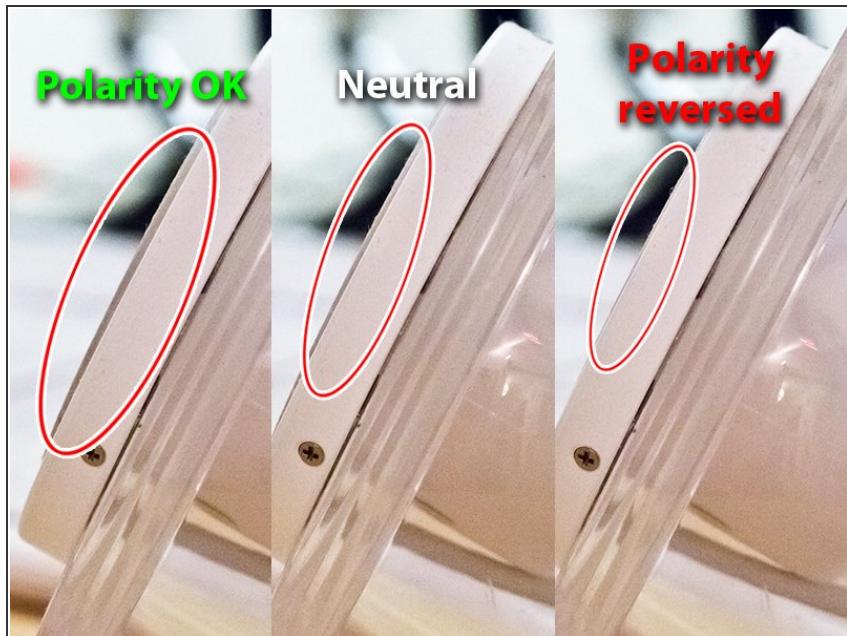
- You should end up with something like this.

## Step 6



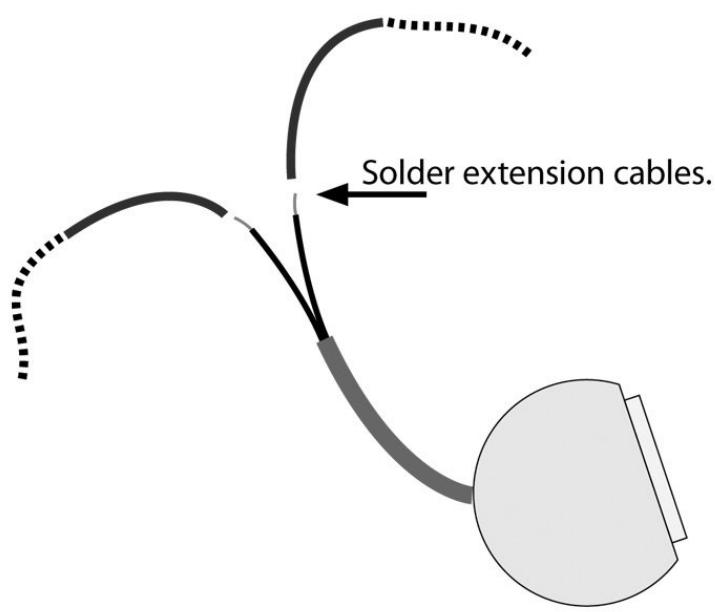
- Now you will need to find out the proper polarity of the speakers, i.e. which cable is negative (-) and which is positive (+).
- Unfortunately – at the time where I did this conversion – I did not photograph the cable colors. But there is an easy trick to find out the polarity:
- In this image you see two banana plugs and a AA battery. Just imagine these are two stripped wires from one of the speaker cables.

## Step 7



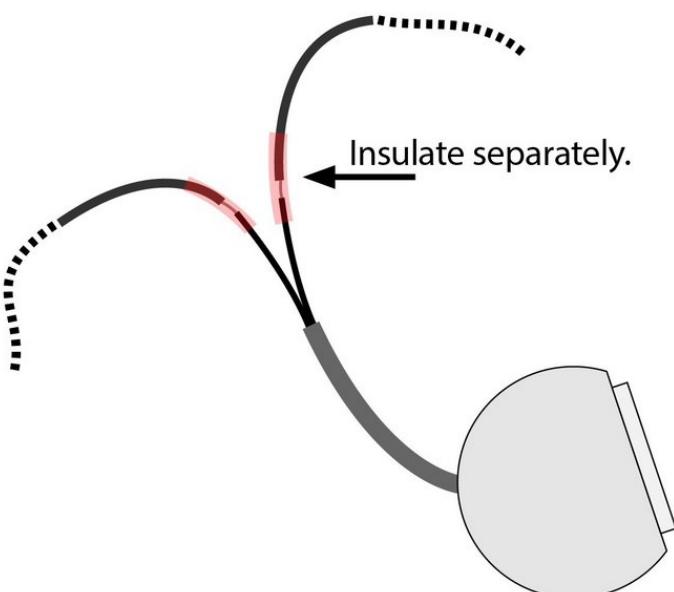
- Now connect one wire to the negative terminal (-) and the other to the positive terminal (+) of the AA battery.
- If the speaker cone bulges out (left image), you've got the proper polarity. You now know that the wire on the positive terminal of the AA battery is your "+" wire, i.e. it will connect with the "+" output of your amp.
- If the speaker cone moves in (right image), the polarity is reversed. You now know that the wire on the negative terminal of the AA battery would be your "+" wire, i.e. it will connect with the "+" output of your amp.

## Step 8



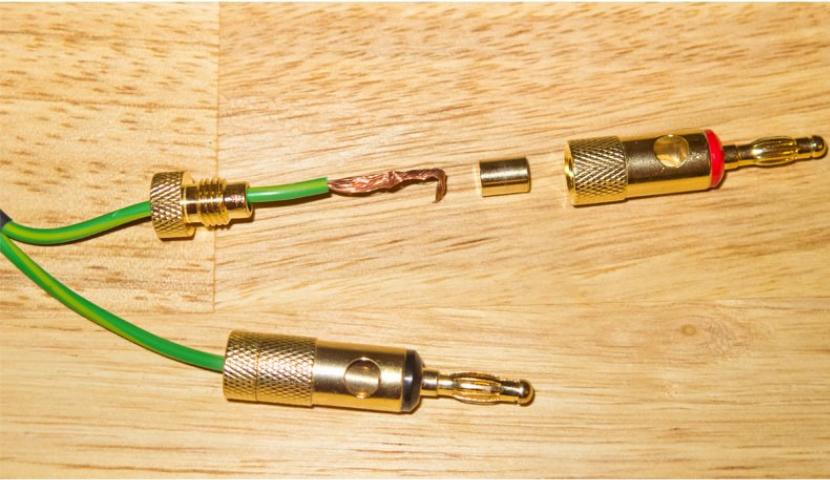
- Now solder an extension cable to each of the stripped wires. If you want you can use a red wire for positive (+) and a black wire for negative (-) so you can easily connect the speakers with the amp later.

## Step 9



- Finally insulate the wires properly. Use shrinking tube and/or electrical tape.
- If you like you can also use shrinking tube on the previously insulated wires, so you end up with a single cable (per speaker) again.

## Step 10



- Now strip the extension cables of each speaker. You are now ready to connect the speakers to your amp.
- If you like you can use banana plugs with the stripped cables (like seen in the image).

## Step 11



- You are almost done. Now properly connect the speaker cables/banana plugs with your amp. Connect your Mac or PC or some other audio device with the amp and enjoy your old new Apple Pro Speakers.
- Please note that the Apple Pro Speakers don't sound too loud, but that's by design. Still, their sound is very clean and detailed (on a class-d amp).