A WRITTEN GUIDE TO UPCYCLING A

Beovox RL6000

INTRODUCTION

This is a guide on how to upcycle a Beovox RL6000 loudspeaker using a BeoCreate 4-Channel amplifier and a Raspberry Pi.

The upcycling process will take roughly two hours and we advise you to prepare for the project by having all the required items at hand.

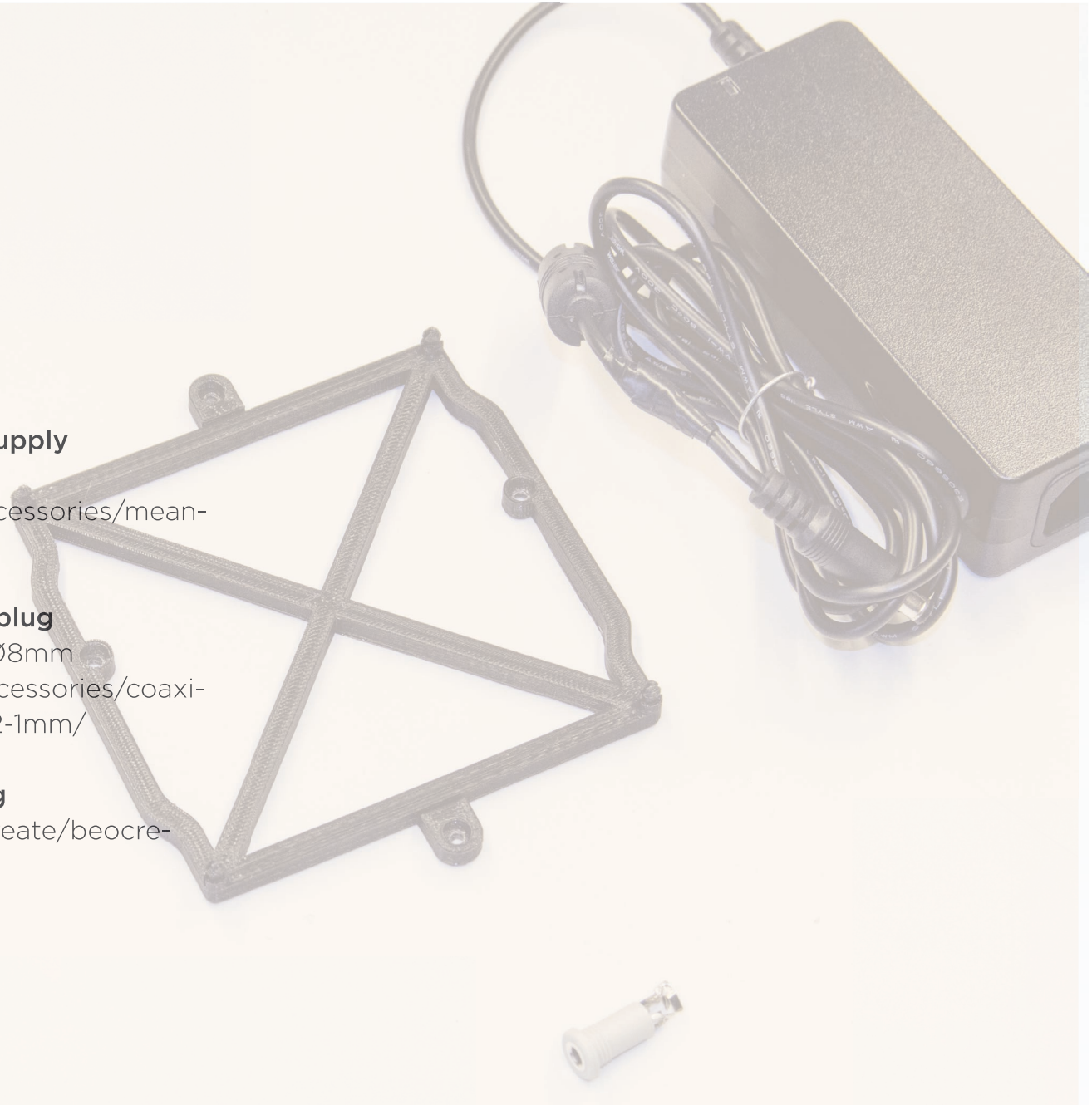
PARTS	TOOLS
· Beovox RL6000	· Soldering iron
· BeoCreate 4-Channel Amplifier	· Screwdrivers
· Raspberry Pi 3	· Wirecutters
· MicroSD card (at least 4GB)	· Wirestripper
· Power plug & supply (page 3)	· Electric drill
· 3D printed parts (page 3)	· 8mm drill bit
· Two insulated wires for the power connector (45cm)	

EXTRAS

Recommended power supply
18-24V, about 90W
https://www.hifiberry.com/shop/accessories/mean-well-gs60a18-p1j/

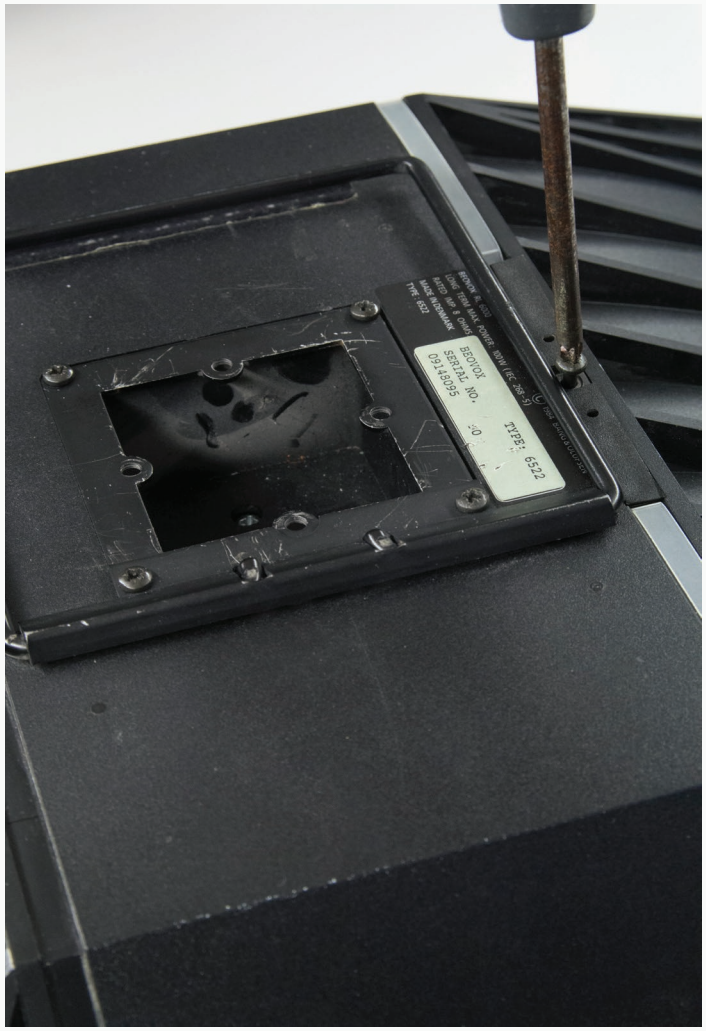
Recommended power plug
mouting hole diameter: Ø8mm
https://www.hifiberry.com/shop/accessories/coaxial-power-connector-5-5x2-1mm/

Files for 3D printing
https://www.hifiberry.com/beocreate/beocreate-doc/



TAKING APART THE RL6000

STEP ONE

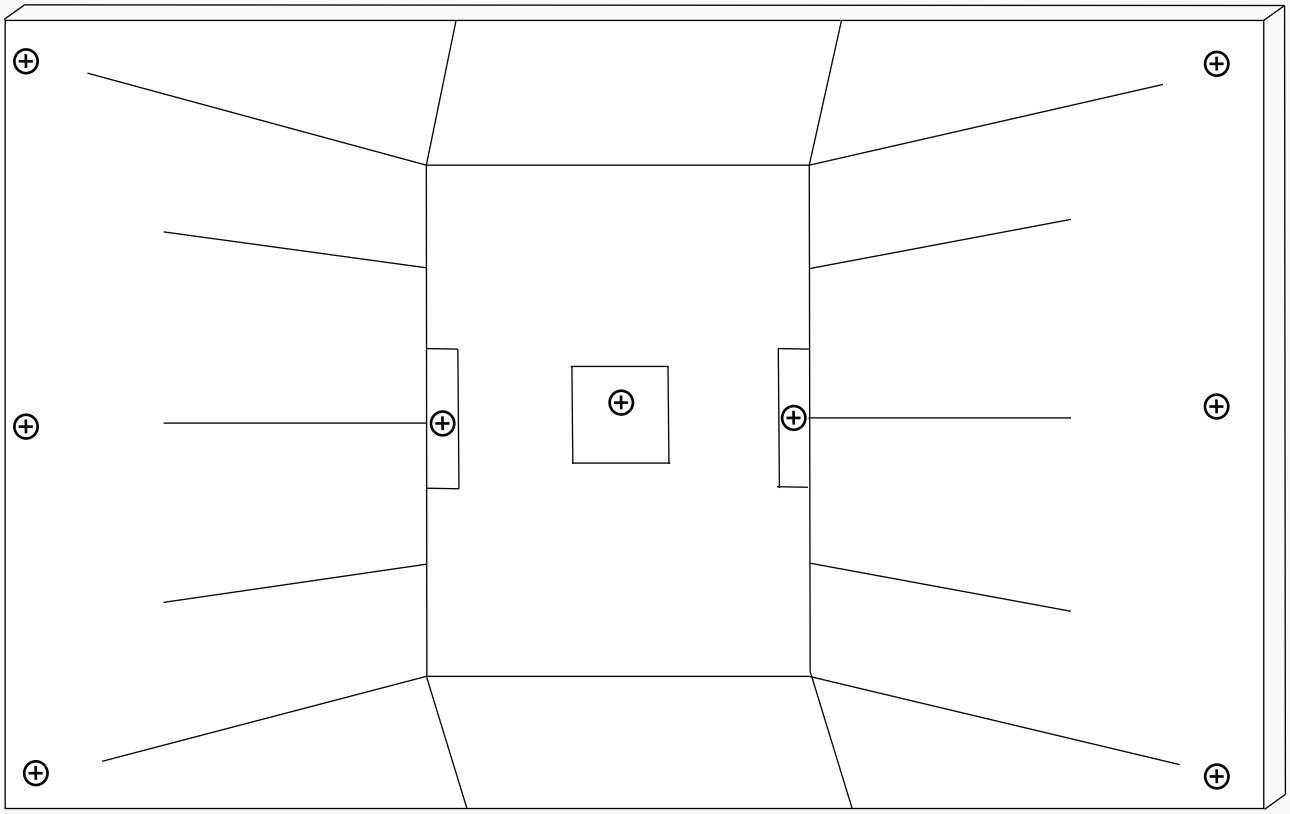


From the back of the RL6000 unscrew two screws holding the plastic stip around the speaker.

Remove the two plastic strips.

Unscrew the nine screws on the sides, corners and the center. The location of all the screws are shown on the next page.

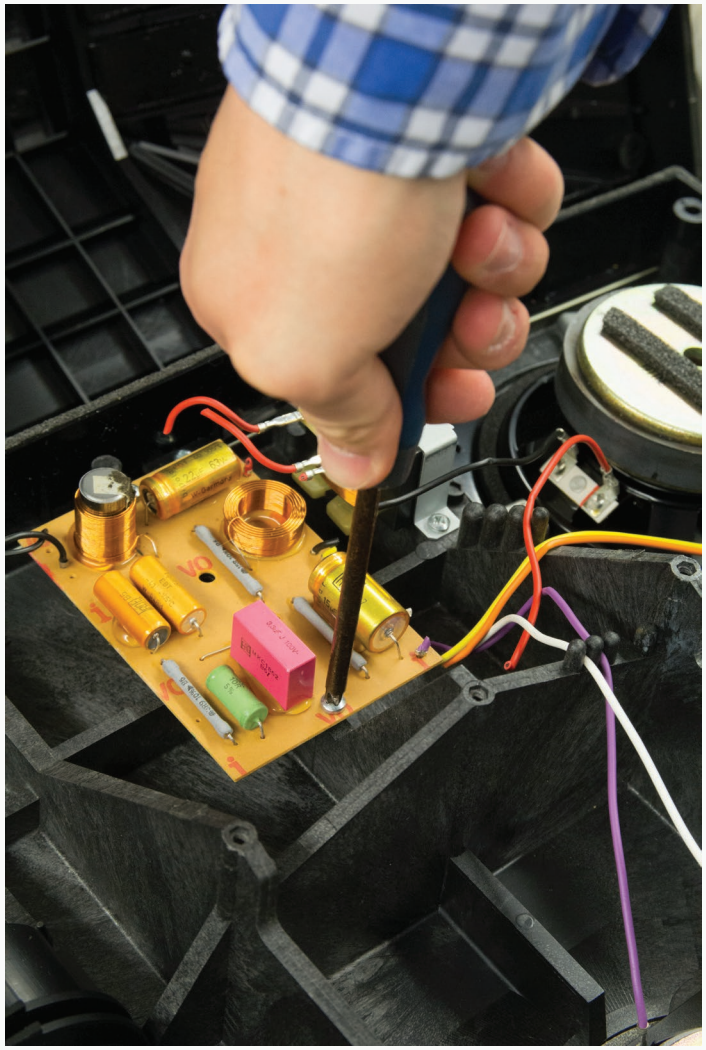
LOCATION OF SCREWS



Whilst being on the back of the speaker, unscrew the old connectors.

Open up the back plate and remove the dampening material.

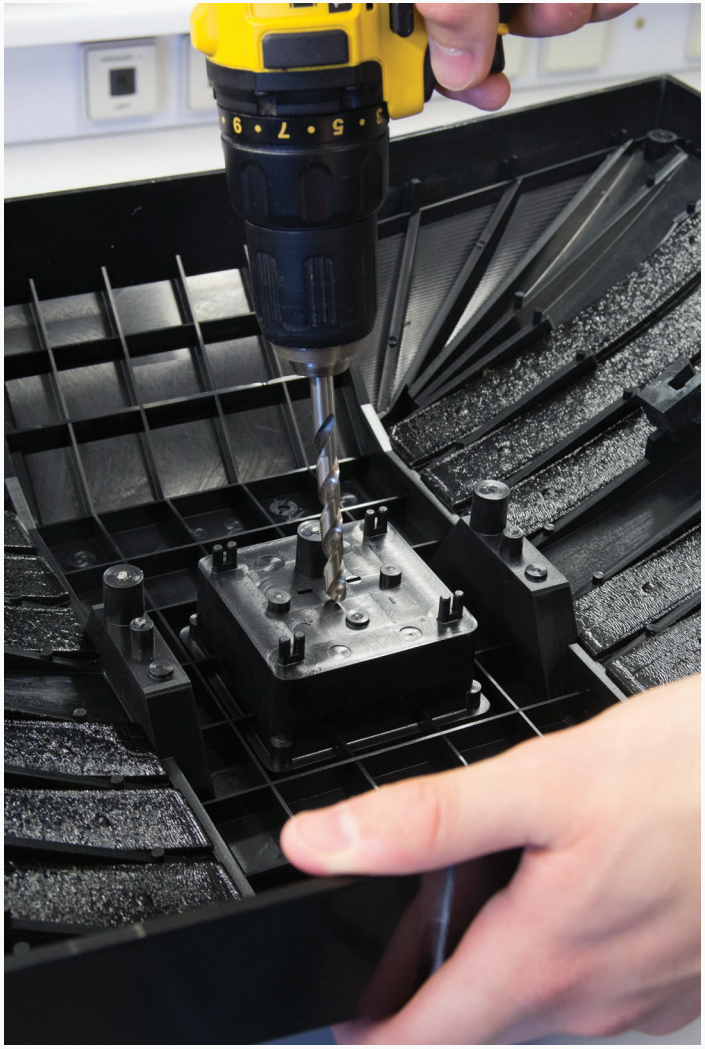
Cut all the wires connecting to the old crossover.



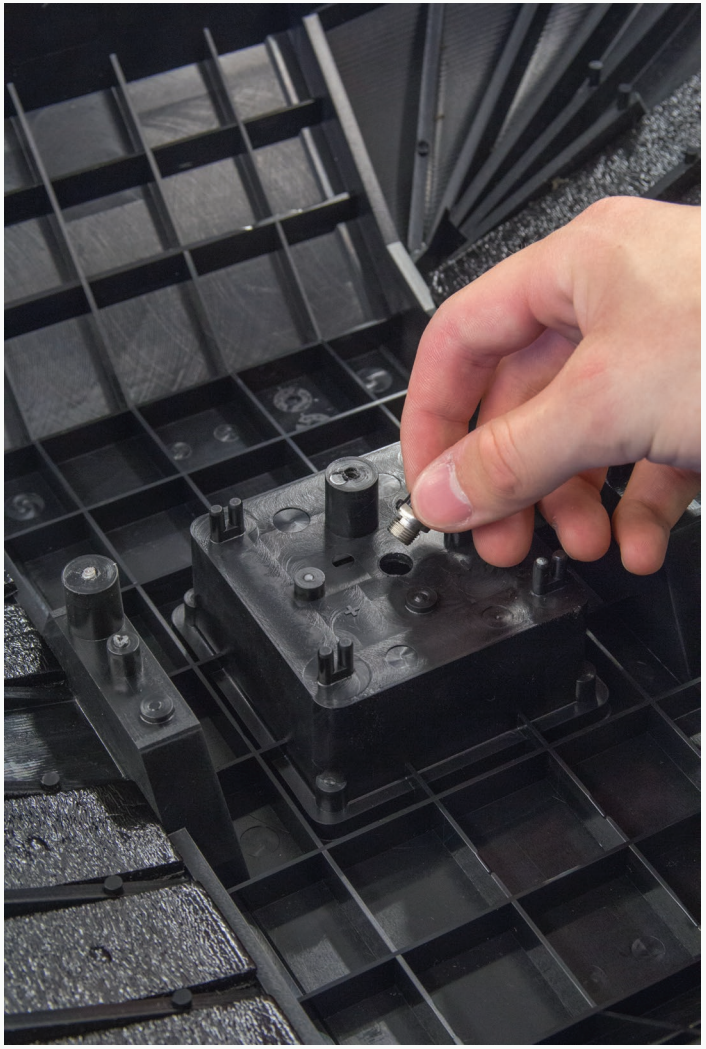
Unscrew and remove the old crossover.

CREATING A NEW POWER CONNECTION

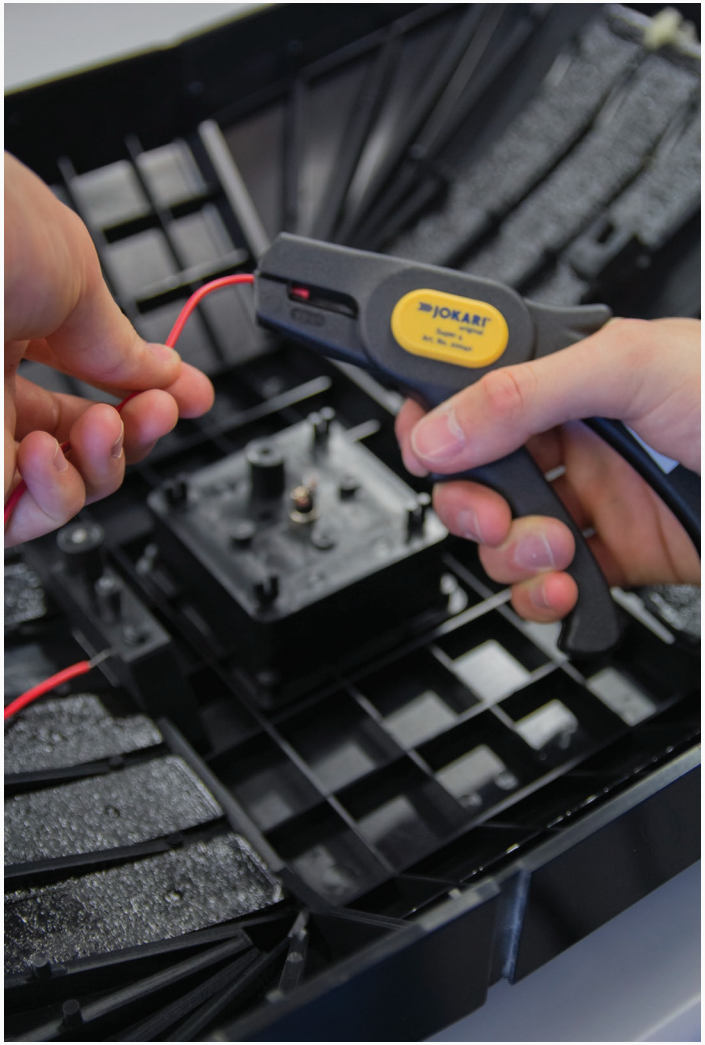
STEP TWO



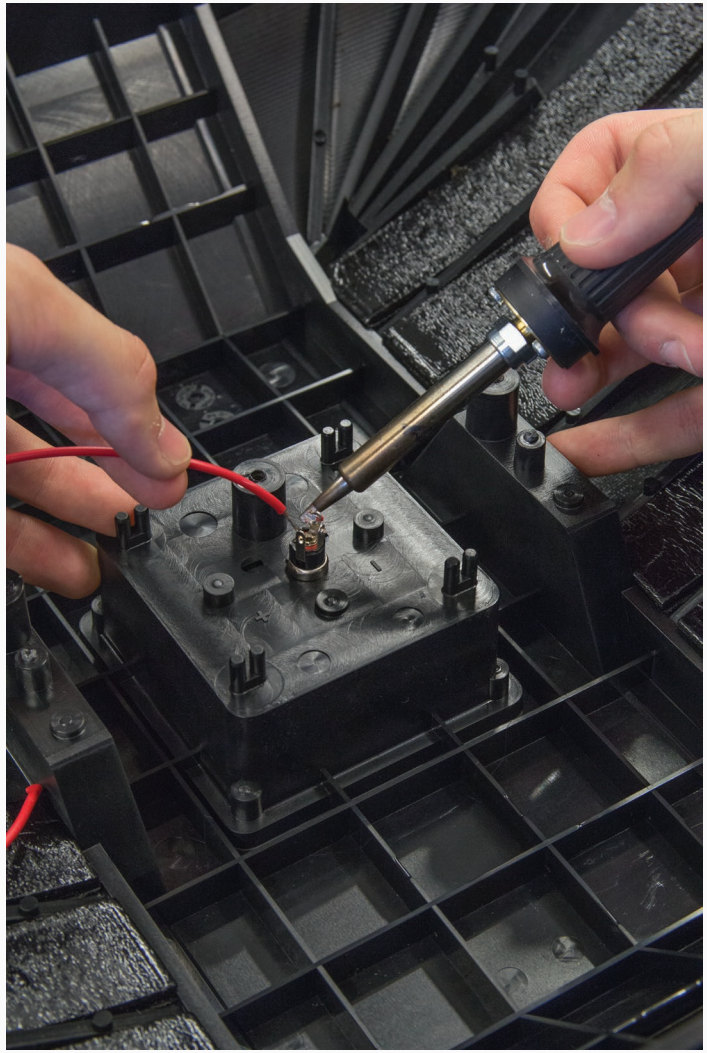
Drill a 8mm hole where the previous connections were located.



Screw the power connector to the back plate.



Strip the insulated wires you reserved for the power connector, so that approximately 1cm of wire is exposed.

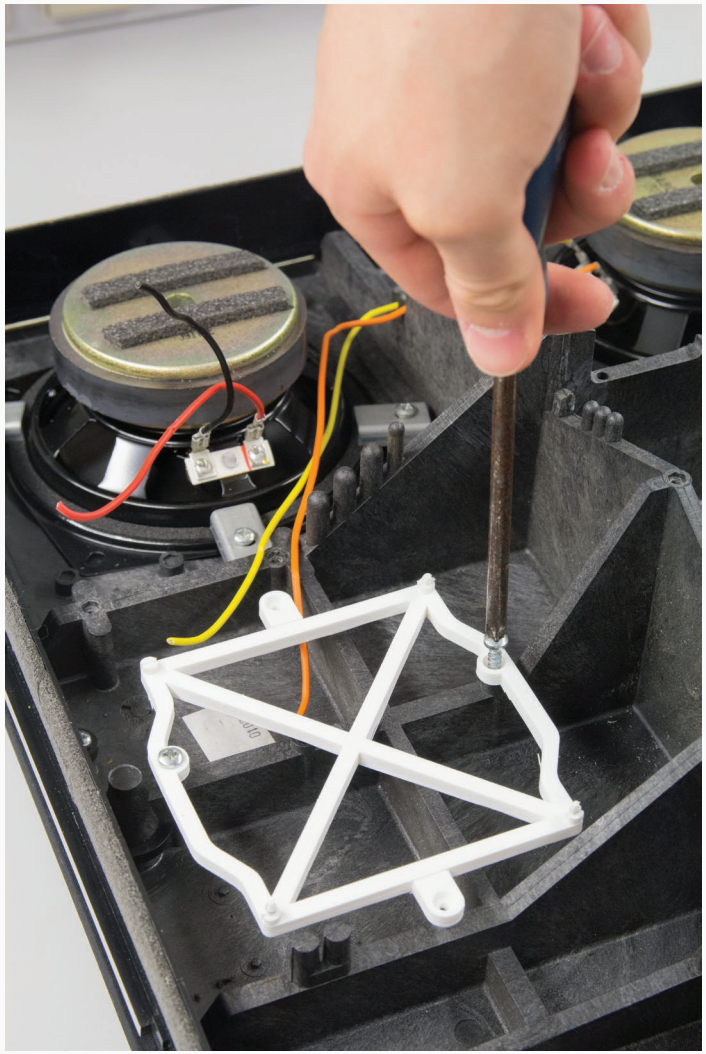


Check the polarity of the power supply (which is +/-) and identify the corresponding pin on the power plug. Solder both wires to the power plug pins.

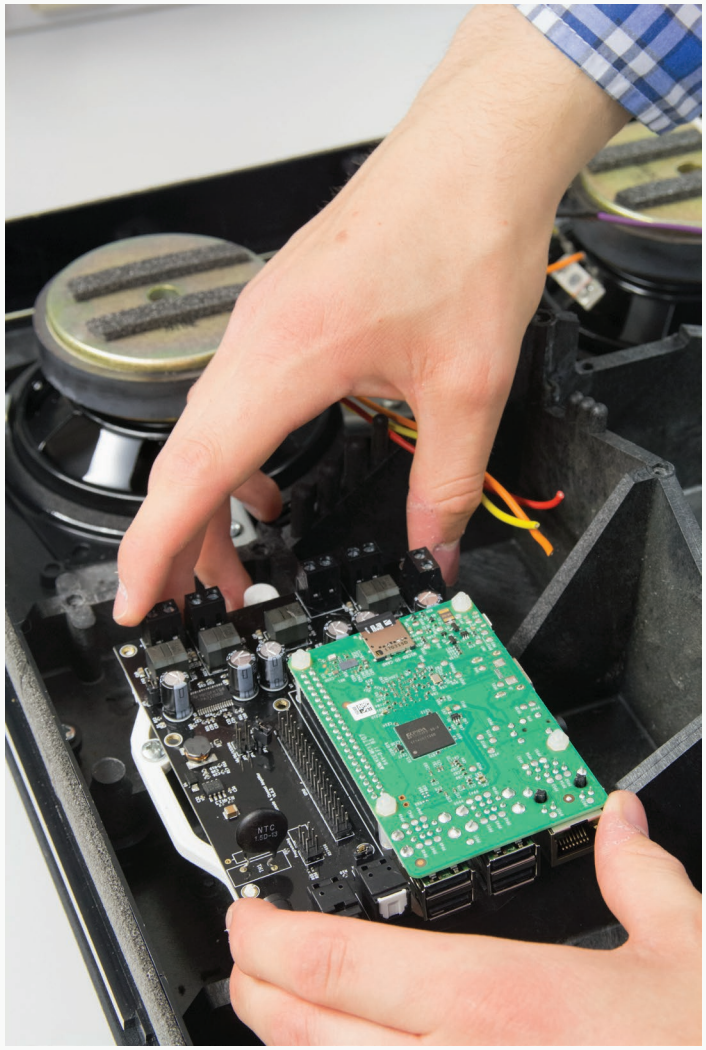
ASSEMBLE THE PARTS

STEP THREE

Place the Raspberry Pi upon the BeoCreate 4-Channel Amplifier. The supplied spacers will not fix the Pi to the board, but just prevent it from flexing and touching any components on it.



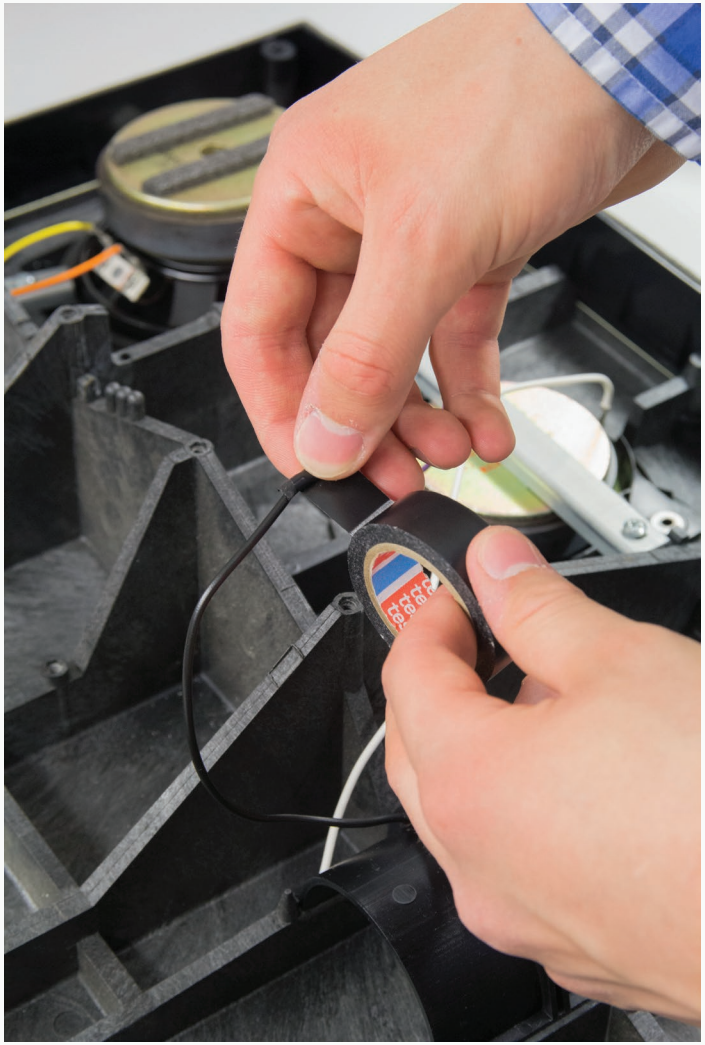
Using the existing mounting posts and screws, attach the 3D printed frame to the inside of the speaker.



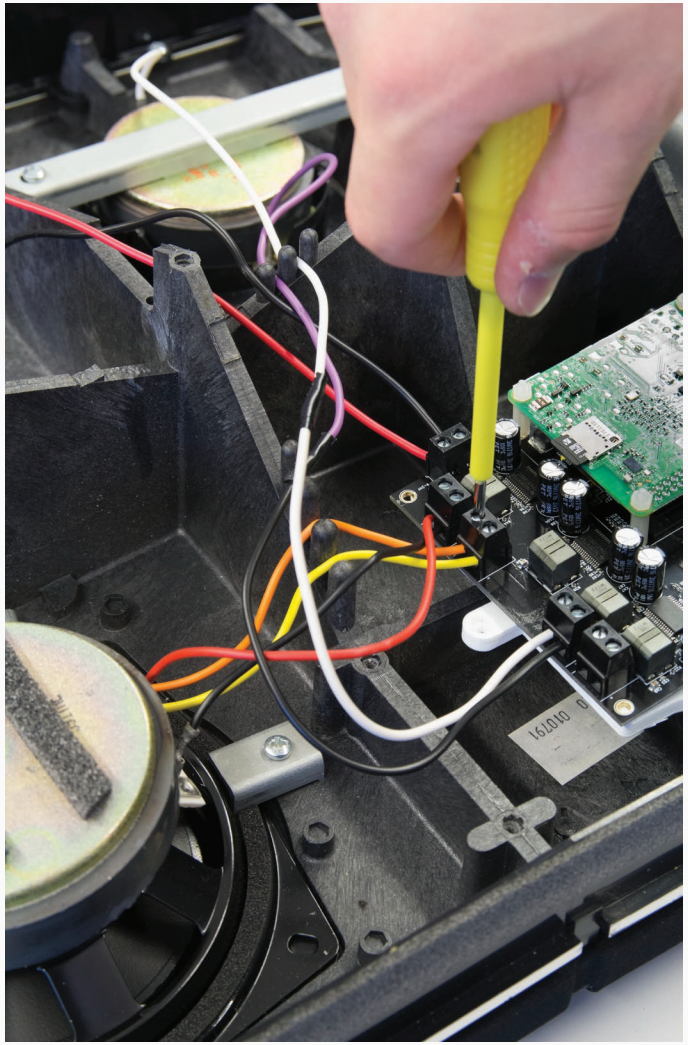
Press fit the amplifier to the 3D printed frame.

Strip the wires coming from the drivers, so that again approximately 1 cm of wire is exposed.

The tweeter will require an extension to be soldered onto it.

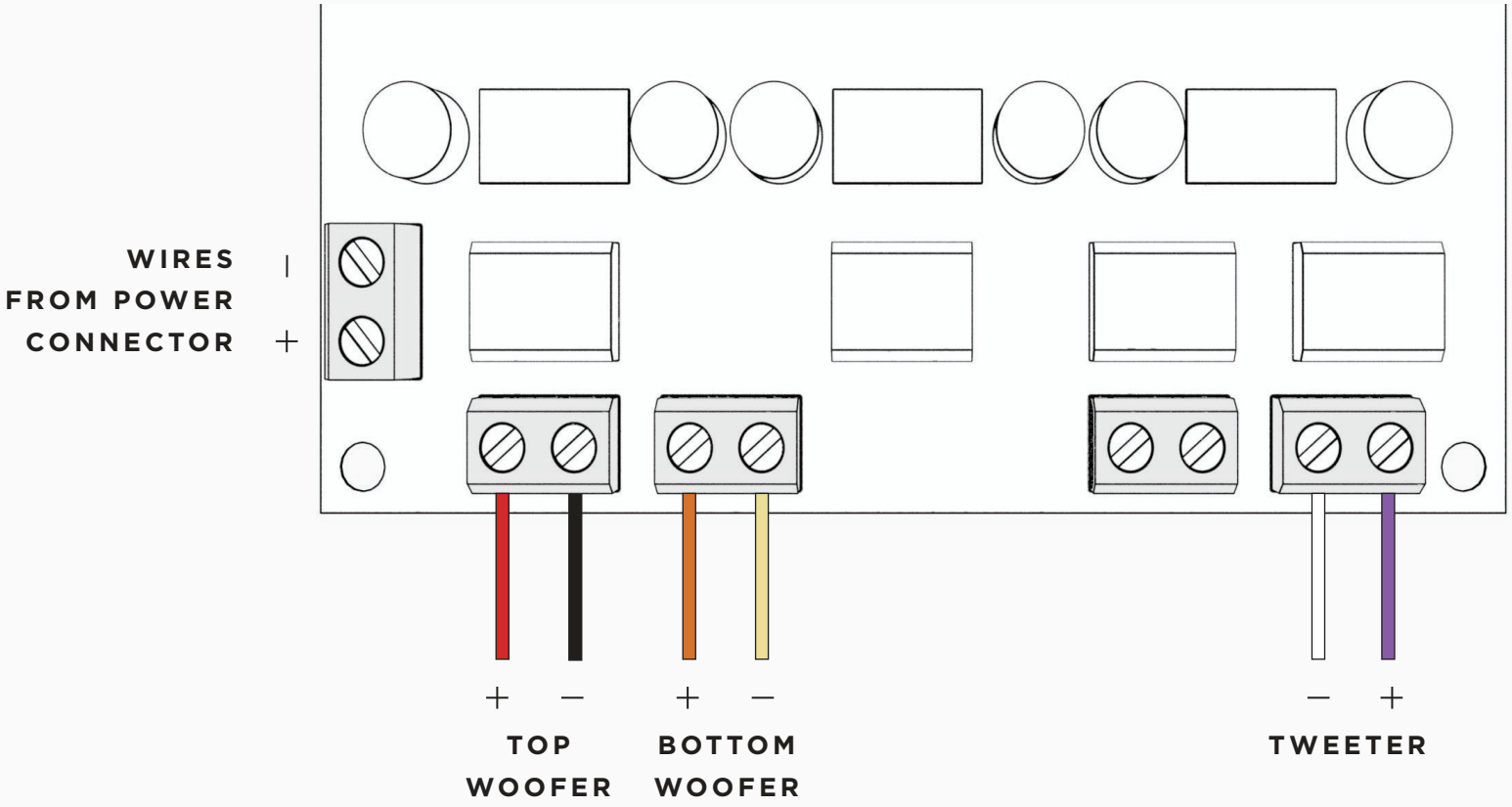


Insulate the wires soldered previously.



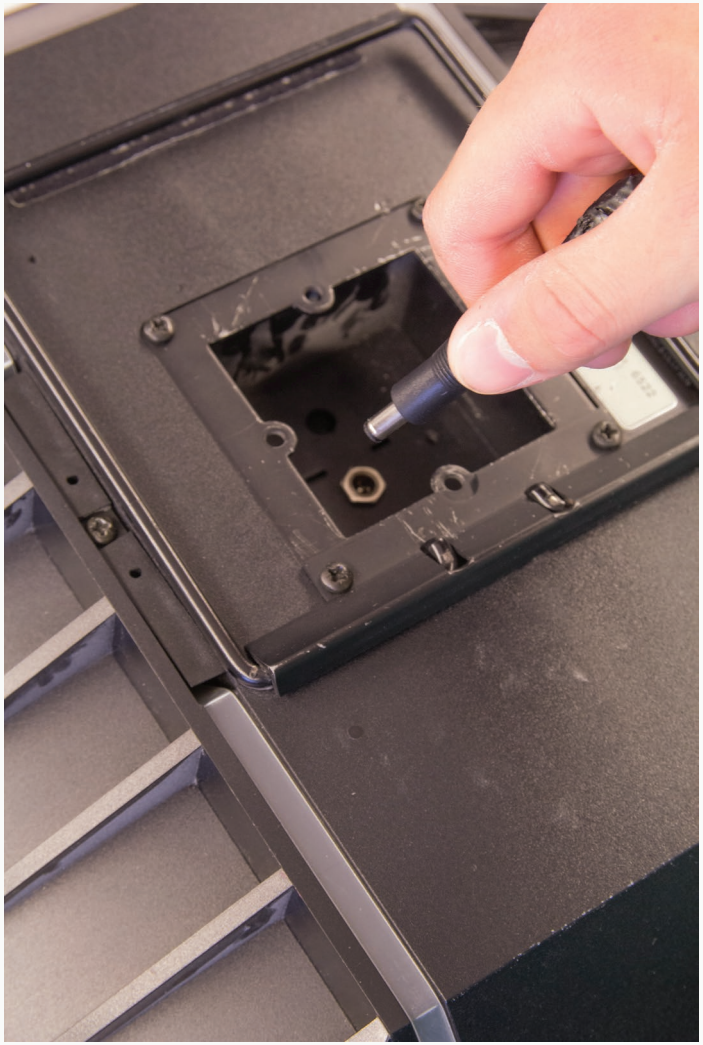
Connect the drivers and power to the amplifier. A detailed diagram is located on the next page.

AMPLIFIER OUTPUTS



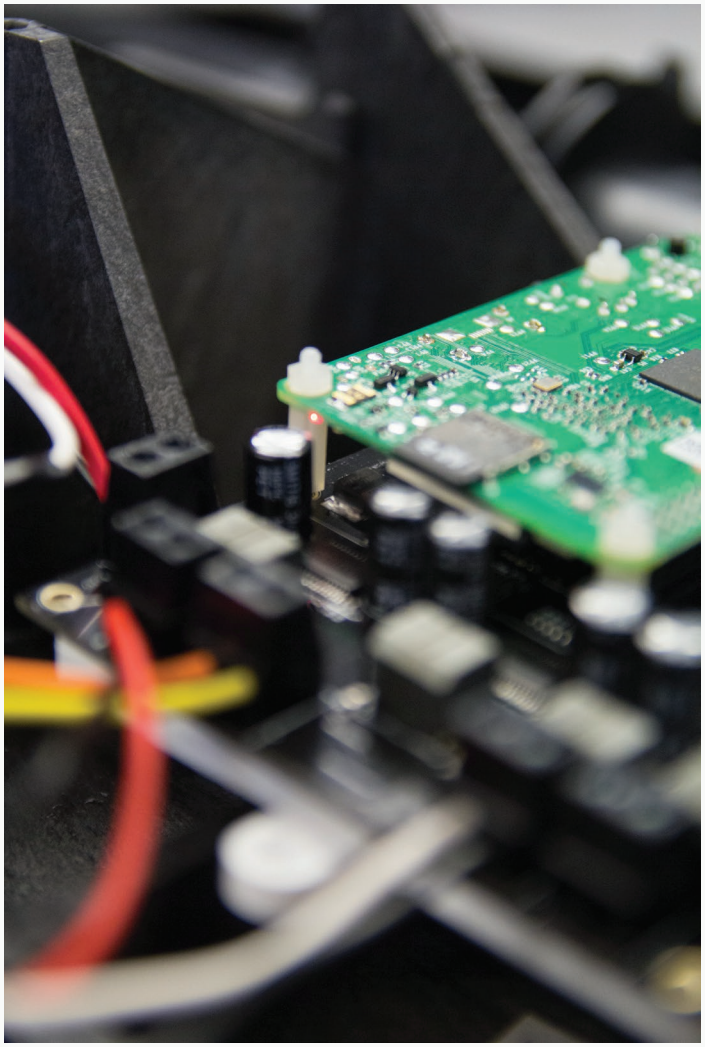
CLOSING UP

STEP FOUR



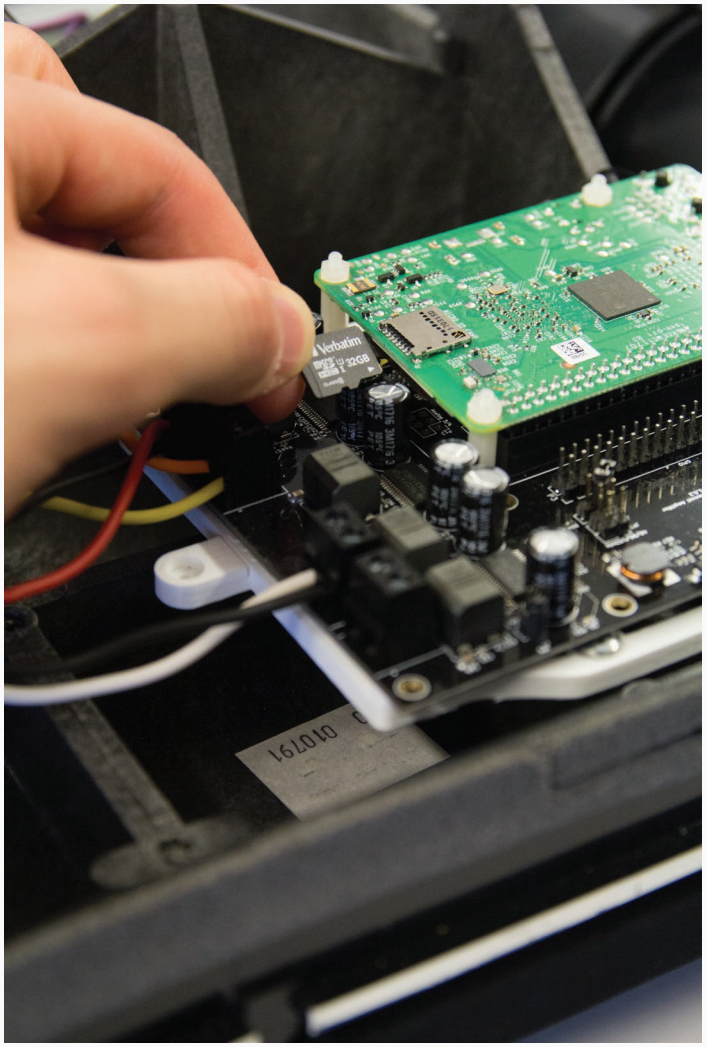
Connect the power supply

Plug the power supply into a wall socket.



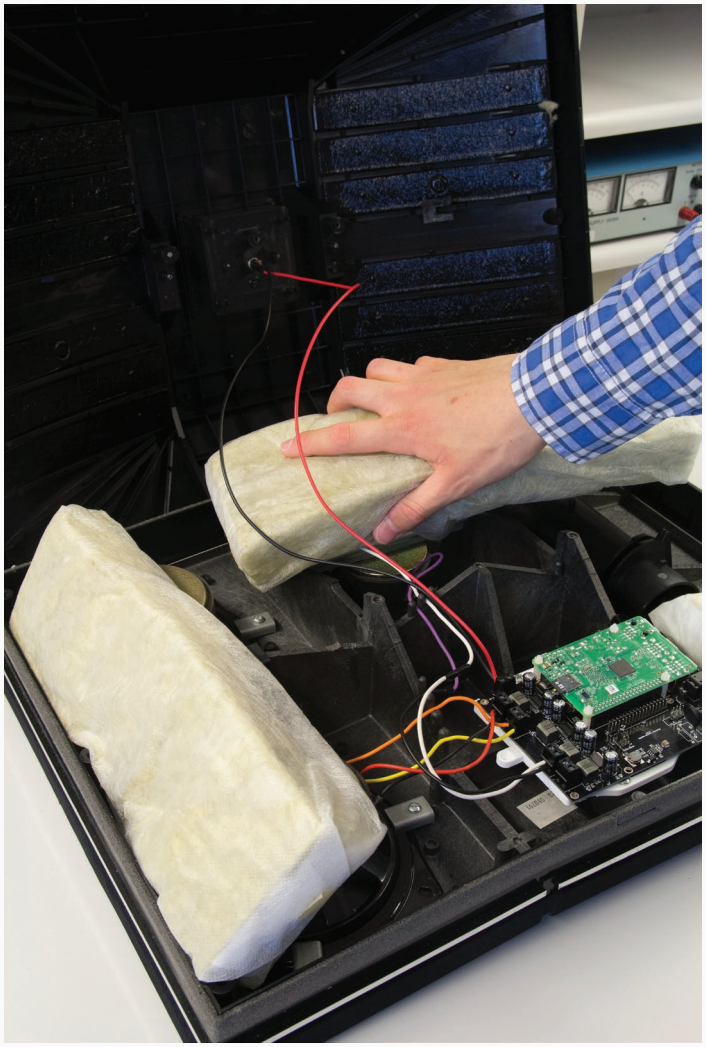
Make sure a red light turns on on the Raspberry Pi. If it does not turn on, you have switched the polarity of the power supply.

Unplug the power supply from the wall-socket to further proceed with the up-cycling.

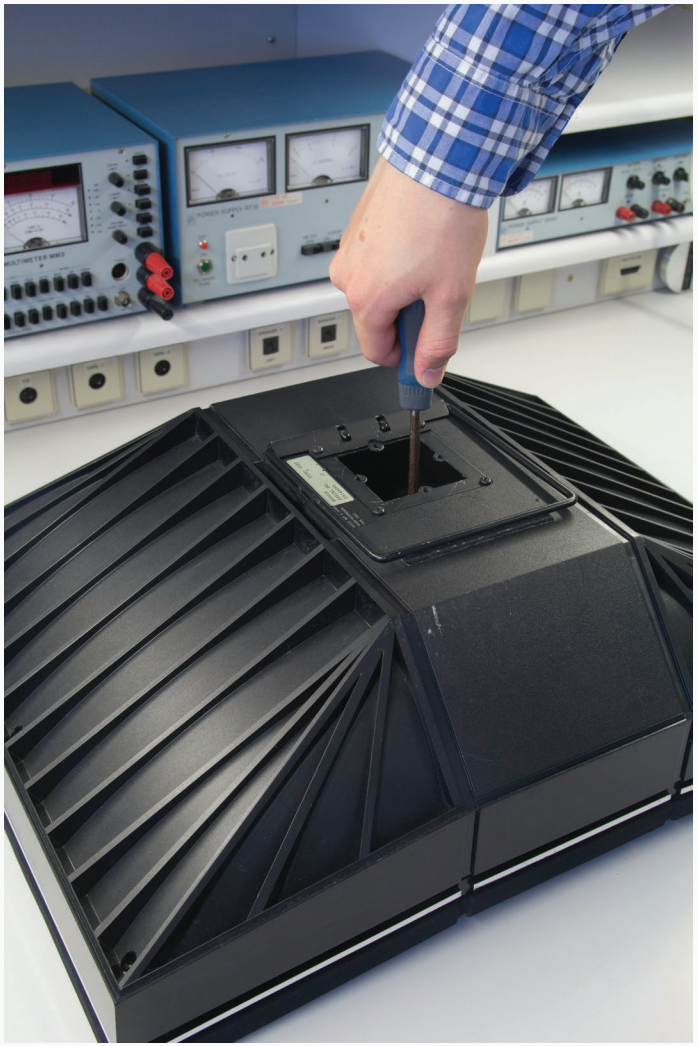


Insert the SD card with the BeoCreate software installed on it, and proceed to set up the amplifier.

https://www.hifiberry.com/beocreate/beocreate-doc/beocreate-first-steps/

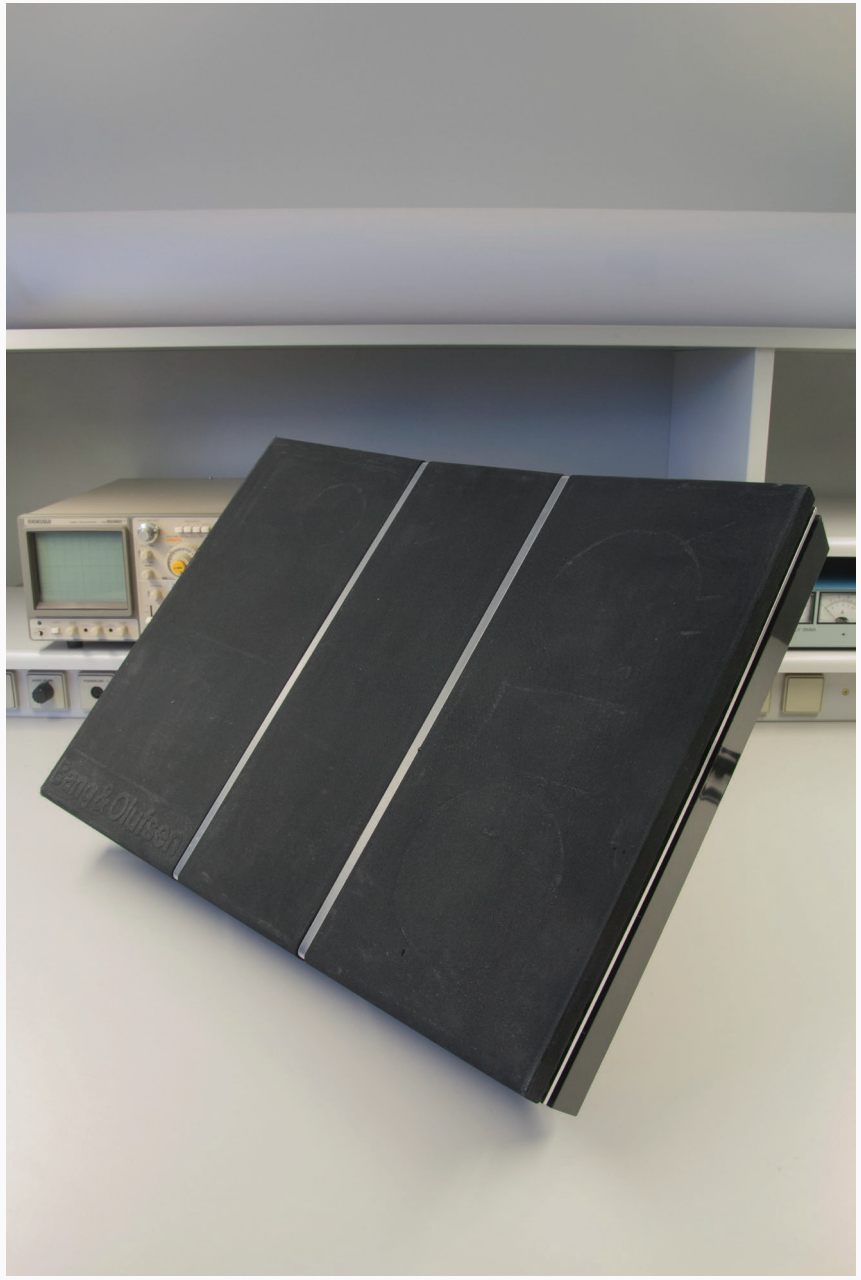


Install the sound dampening material.



Attach the 9 screws on the back cover.

Mount the plastic stips removed in the first step.



ENJOY

Your Beovox RL6000 is now upcycled.

You can find the further software features here:
https://www.hifiberry.com/beocreate/beocreate-doc/beocreate-software-documentation/