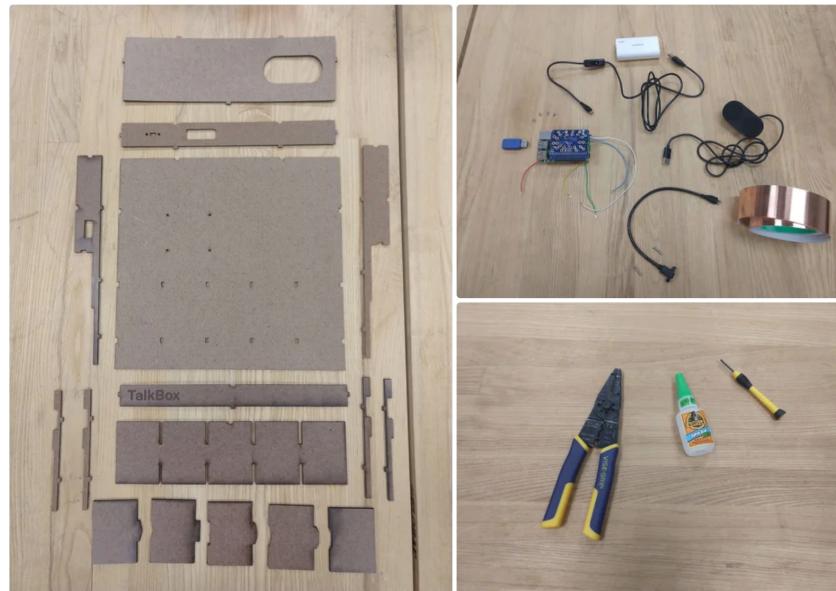


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## Talkbox

By SrutiVijaykumar 9

[Unpublished](#) [Stats](#)[PDF Download](#)[Favorite](#)**Supplies:****A. Laser-cut pieces**

Left panel

Right panel

Back panel

Top panel

Front panel

Tile bed panel

Base

4 Dividers

**B. Electronic components and Hardware**

Raspberry Pi 3B+

USB Speaker

USB extender

Portable USB battery

MPR121 Capacitive Touch Sensor hat

microSD card with TalkBox software

18 inches of 2" wide conductive tape

13 x M 2.5 screws

13 x M 2.5 spacers

**C. Tools**

Small Philips head screwdriver

Wood glue

Cotton swab applicators (for glue)

Soldering iron/solder

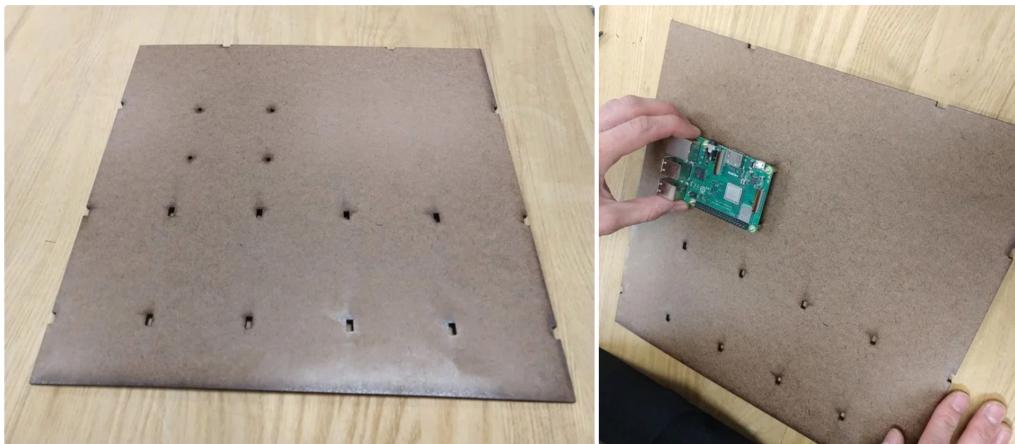
Wire cutter

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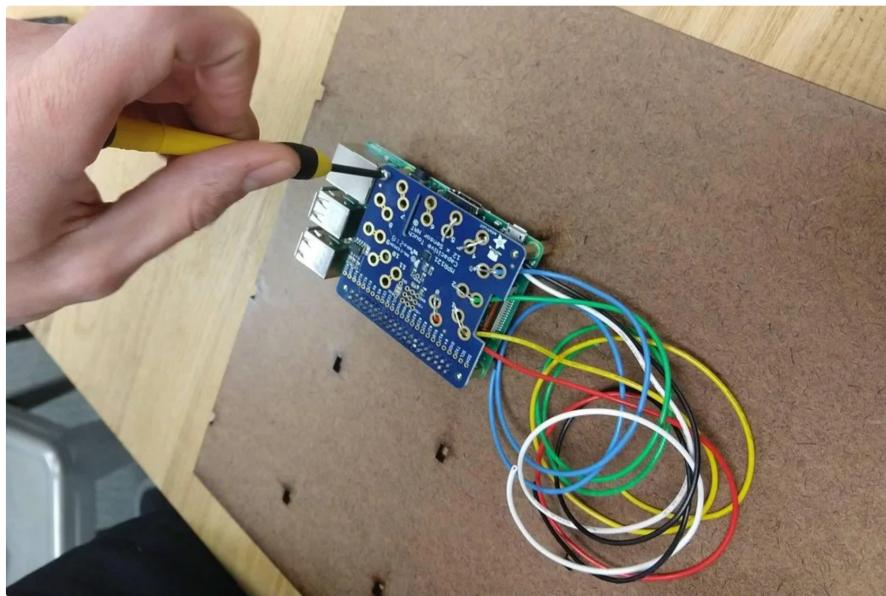
### Step 1: Fix the Raspberry Pi on the Base



Take the biggest piece in the kit - the Base and place it on a flat surface. Take the Raspberry Pi ensemble and put it on the top left corner over the four holes. Secure its position with screws.

Ensure that the USB ports are to the left!

### Step 2: Attach the TouchHat

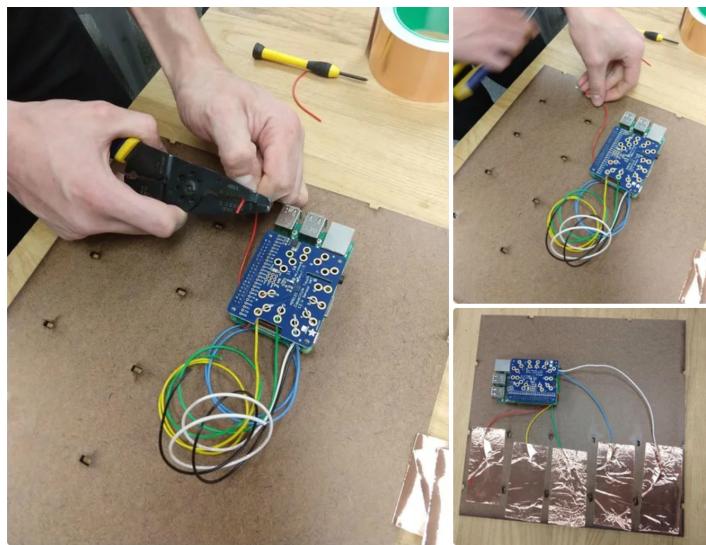


Place the TouchHat with the colorful wires on top of the Raspberry Pi and secure it with screws.

Ensure that the wires are to the right!

### Step 3: Tape the Wires to the Base





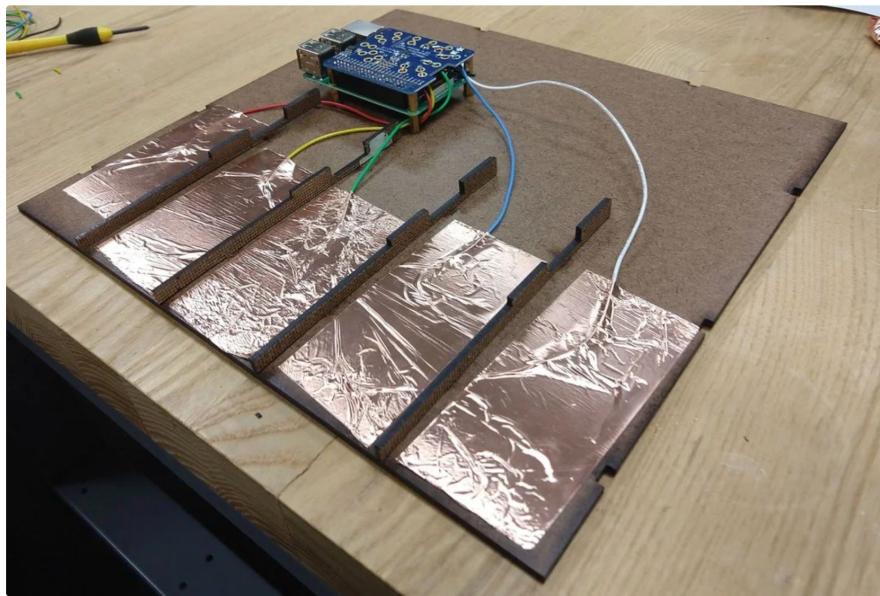
Cut an inch of the insulation from the tip of the wire to expose the conducting wire underneath.

Cut a 2-3 inch strip of contact tape and stick the open end of the first wire to the bottom left side of the Base.

Now continue cutting strips of contact tape of the same length and stick the ends of the other four wires to the board. Use the small holes on the bottom of the Base as a guide to space them out evenly.

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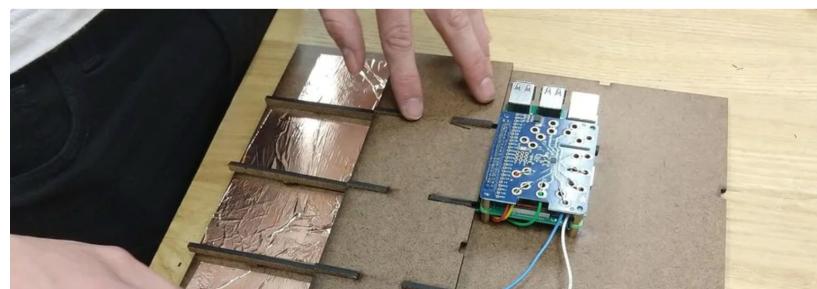
#### Step 4: Attach the F-shaped Dividers to the Base

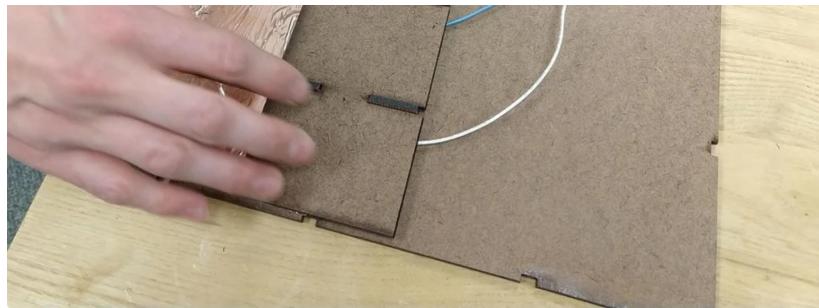


Take the small F-shaped dividers and place them as dividers between the 5 contact tapes.

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#### Step 5: Place the Tile Bed Panel on Top of the 4 Dividers.





This Tile Bed panel should fit snugly between the combs of the divider.

Make sure that the notch on the Tile Bed panel is on top!

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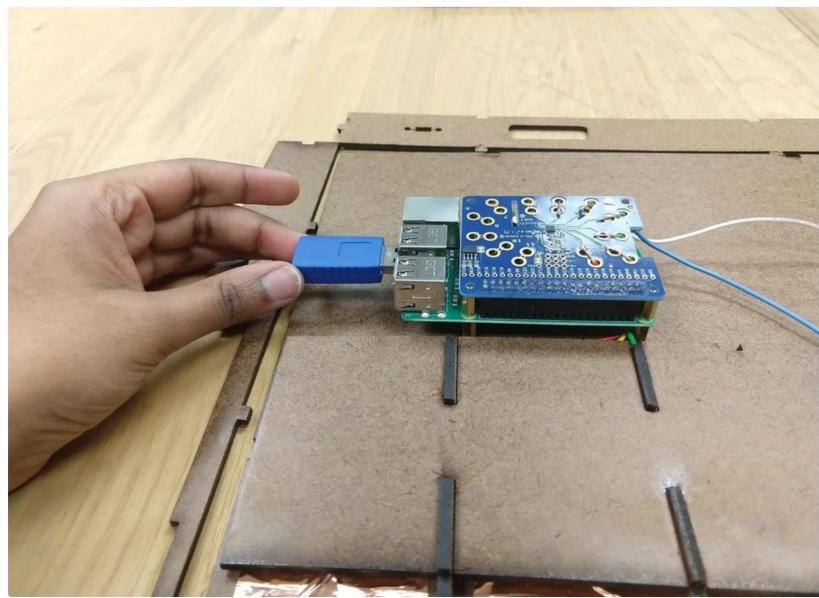
### Step 6: Attach the L-shaped Right Panel, Left Panel, and the Back Panel to the Sides of the Base



1. Take the two L-shaped pieces in the kit and attach them to the sides of the Base. Make sure that the one which has the small opening is on the left, closer to the Raspberry Pi.
2. Then attach the back panel.

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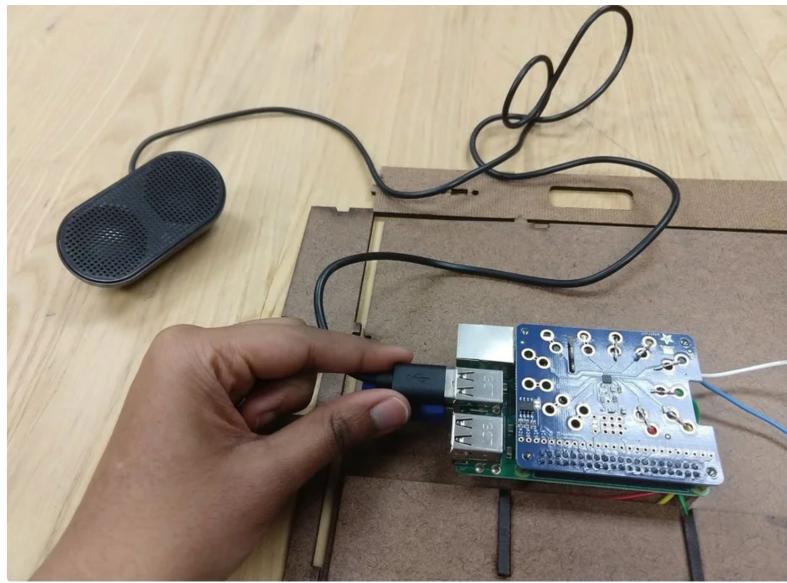
### Step 7: Plug the Extension Into the Raspberry Pi.



This is the USB drive that has all the sound files!

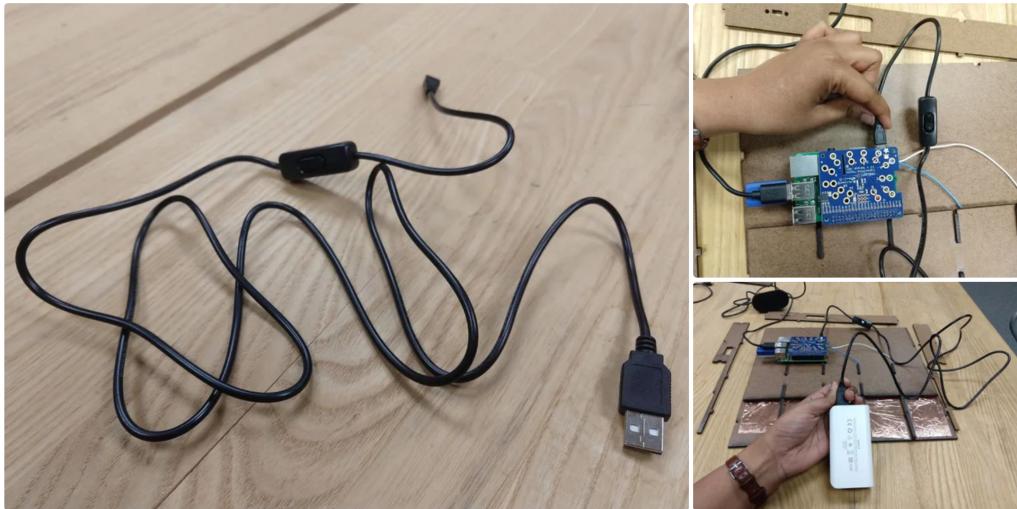
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### Step 8: Connect the Speaker to the Raspberry Pi



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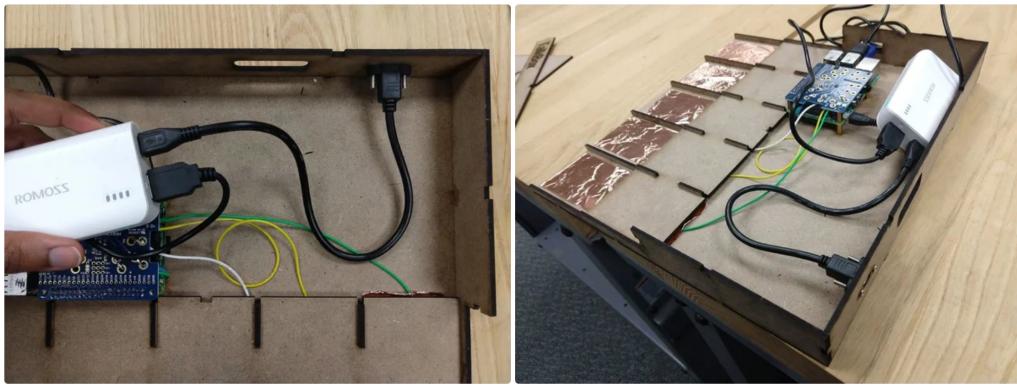
#### Step 9: Connect the USB Power Switch to the Raspberry Pi and the Battery



Take the USB power switch and connect one end to the Raspberry Pi and the other end to the battery.

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#### Step 10: Connect the MicroUSB Extension Cable to the Battery.



Connect the male USB Micro-B plug to the battery and mount the Micro-B female receptacle on the back panel using screws.

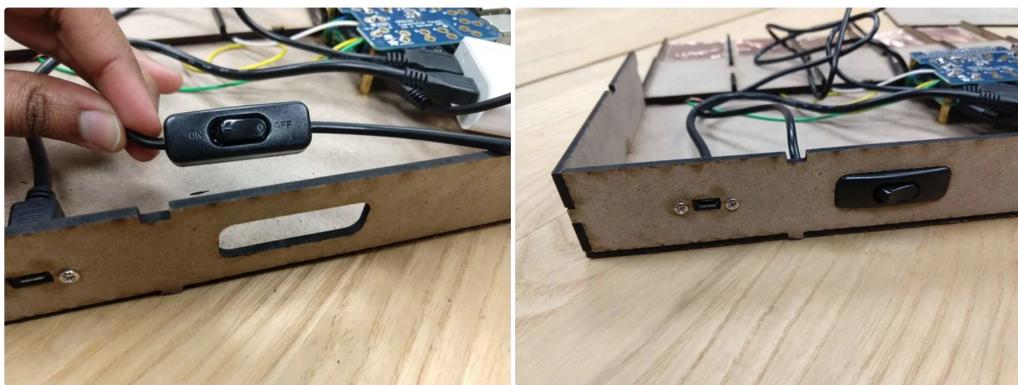
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### Step 11: Glue the Speaker to the Inner Surface of the Top Panel



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### Step 12: Fix the Switch in the Slot in the Back Panel



Push the switch into the slot in the back panel from the inside.

It should fit snugly in the slot.

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### Step 13: Place the Front Panel



Take the front panel that has "TalkBox" engraved on it and position it in a way that encloses the electronic components from all four sides.

Use the notch on the tile bed to fix it in place.

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#### Step 14: Place the Top Lid



Place the top panel to cover all the electronic components.

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#### Step 15: Arrange the Tiles on the Tile Bed Panel



Use the shape cut-outs on the tiles as a guide to place them in the correct sequence.

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#### Step 16: And You're Done!



Congratulations! You have successfully assembled the Talkbox!

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