



# Installing Mac mini (PowerPC) Speaker

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## Tools used in this guide

- [1.5" Thin Putty Knife](#) (1)
- [Phillips #0 Screwdriver](#) (1)
- [Phillips #1 Screwdriver](#) (1)
- [Spudger](#) (1)

Restore sound to your machine by replacing the speaker.



## Step 1 — Upper Case

- You can skip this step if you bought your [putty knife from iFixit](#). Putty knives purchased from iFixit come with pre-ground edges. 
- You'll need a putty knife in order to open the case. A 1.5 inch thin putty knife will work well, but you'll want to grind the edge down. Rub the putty knife's short edge back and forth on a sheet of all purpose rough grit sandpaper (100 grit will work fine) until it attains a beveled edge.



## Step 2

- Place the mini upside down on a cloth and turn it so that the apple leaf faces you.
- Insert the putty knife into the seam between silver outer case and the white plastic. If you have trouble, you can insert the putty knife at an angle or grind the knife's edge down further. Push the blade down until you meet firm resistance (roughly 3/8 of an inch).



### Step 3

- Pull directly back on the putty knife until the white plastics pops up. Don't worry about bending the putty knife too far or breaking the plastic tabs. Just continue to pull back on the putty knife until the case pops free.
- Repeat this procedure on the other side.




### Step 4

- Grasp the white lower case beneath the vent and rotate it up and away from you, pulling it free of the upper case.



### Step 5 — Mass Storage Unit

- If your mini does not have Airport installed, then skip this step. 
- Grasp the Airport antenna board and lift it off of the two plastic posts holding it in place. You may need to push back the black plastic tab jutting through the lower left corner of the board.



## Step 6

- Remove the yellow tape securing the power button cable to the black plastic framework.



## Step 7

- Remove the three black Phillips screws securing the plastic framework to the logic board and lower case.




## Step 8

- Grasp the optical drive and mass storage unit in one hand and lift up enough so that you can see beneath it.




## Step 9

- If your mini has neither an Airport card nor a Bluetooth board, you can simply lift the optical drive up and away. Otherwise, you need to disconnect the Airport and/or Bluetooth antenna cables first. 
- With your free hand, pull the Bluetooth cable up from Bluetooth board and unplug the Airport antenna cable from the right of the Airport card. Caution: both of these connections are very small. When re-assembling unit after repair, you may want to remove the two screws holding the airport card to the assembly and lift the card up and out to re-attach the cables.



## Step 10 — Hard Drive

- Remove the three long, black Phillips screws from the corners of the fan. These screws are strongly threaded, and will offer significant resistance.
- There is no screw in the bottom left corner. 



## Step 11

- Lift the fan out of the computer.



## Step 12

- Peel up the yellow tape securing the speaker and fan cables to the bottom of the hard drive.



## Step 13

- Use a #1 Phillips to remove the two screws attaching the right side of the hard drive to the plastic framework. You'll need to angle the screwdriver down to get access to the lower right screw. Be sure to apply steady force to the screws and turn slowly so as not to strip them.



## Step 14

- Use the same screwdriver and steady force to remove the two screws attaching the left side of the hard drive to the plastic framework.



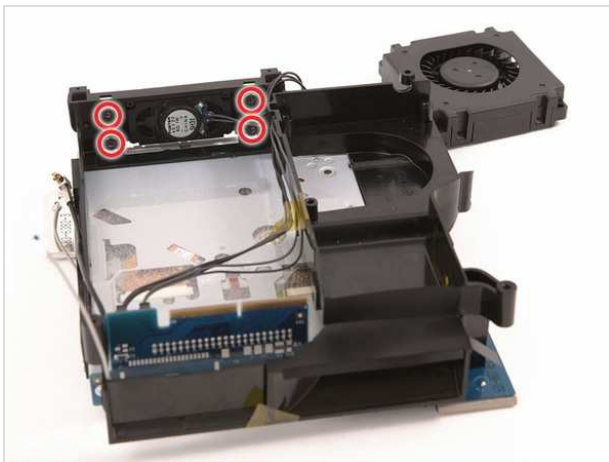
## Step 15

- Use a spudger to pry the hard drive away from the interface board. Wedge the flat end of the spudger between the interface board and the far right side of hard drive and wiggle back and forth until the hard drive slides out about a sixteenth of an inch. Then move to the other side and repeat the procedure. Go back and forth until the hard drive slides free.
- When reinstalling the hard drive, make sure that you don't slide the top pins into the lower row of holes.



## Step 16

- Lift the hard drive out of the assembly.



## Step 17 — Speaker

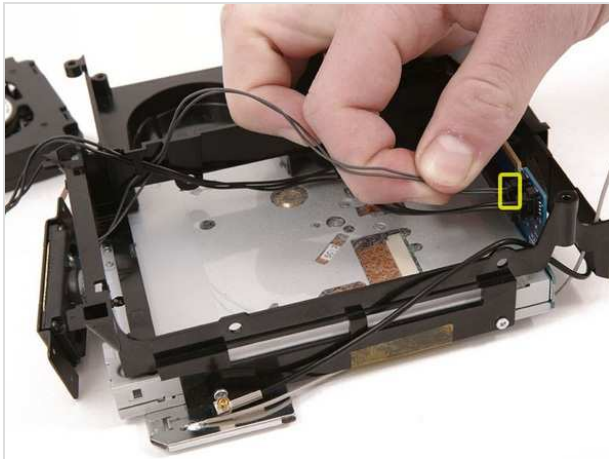
- While holding the assembly with the speaker resting on the table, remove the four black Phillips screws holding the speaker in place and their associated rubber bumpers.
- When replacing the speaker, place the rubber bumpers into the plastic casing first, then slide the screws into them, and finally line up the speaker with the screws. When working on the lower screws, you'll need to angle the end of the screw up a bit, as the speaker sits higher on the framework than you might expect.






## Step 18

- Deroute the speaker cable from the plastic framework, removing tape as necessary.





## Step 19


- The cable you're about to remove is very fragile - do not pull directly on the wires. Instead, try to pry up the connector directly, using your fingernails or a small flathead screwdriver if necessary. 
- Disconnect the speaker connector from the interface board.
- Pull the speaker out from the plastic framework.

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


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Mass Storage Unit  
3 Black Phillips



Optical Drive  
4 Silver Phillips



Optical Drive (Interface Board)  
2 Silver Phillips



Fan  
3 Black Phillips



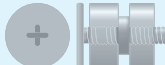

Hard Drive  
4 Silver Phillips



To organize your screws, simply place each screw in the appropriate box as you remove them from your laptop.

If you are not planning on immediately reassembling your laptop, you may want to tape the screws to this paper.


Due to model variations, the screws you remove may differ slightly from this guide.





Speaker  
4 Black Phillips



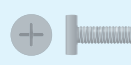
Wireless Interface Board  
2 Silver Phillips



Bluetooth Board  
2 Silver Phillips



Modem  
2 Silver Phillips



Logic Board  
1 Black Phillips

