



Installing iPhone 4 Speaker Enclosure Assembly

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Tools used in this guide

- [Paper Clip](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Plastic Opening Tools](#) (1)
- [Small Flathead Screwdriver](#) (1)
- [Spudger](#) (1)

Use this guide to remove the speaker enclosure and its integrated lower antenna.



Step 1 — Rear Panel

- Before disassembling your iPhone, be sure it is powered off. 
- Apple has recently substituted the two Phillips screws with 5-Point "Pentalobe" screws. If your iPhone 4 has 5-Point "Pentalobe" screws instead of Phillips, please refer to the second picture. 
- Remove the two 3.6 mm Pentalobe screws next to the dock connector.
- During reassembly, we recommend you replace the 5-point screws with equivalent Phillips screws. Our [Liberation Kit](#) provides the tools and screws needed to replace the Pentalobe screws with Phillips screws. 
- The 5-Point Screwdriver should only be used once, as it has the potential to strip the screws. 



Step 2

- Push the rear panel toward the top edge of the iPhone.
- The panel will move about 2 mm.



Step 3

- Lift the rear panel away from the iPhone.



Step 4 — Battery

- Remove the single 2.5 mm Phillips screw securing the battery connector to the logic board.
- Some devices may have two screws, one of which holds down the contact pad which is located above the screw indicated in red in the photo.





Step 5

- Use an iPod opening tool to carefully pry the battery connector up from the ends closest to the top and bottom edges of the iPhone.

- Do not pry against the contact clip.



- Remove the contact clip from the iPhone.



Step 6

- Use the clear plastic pull tab to gently lift the battery out of the iPhone.
- Be careful when removing the battery with the plastic pull tab. On some units, Apple uses an excessive amount of glue, making it virtually impossible to remove the battery in this fashion (with the tab possibly tearing due to excessive force).

- For batteries that "stick", you could use the iPod opening tool to assist (take extra care whilst doing so).

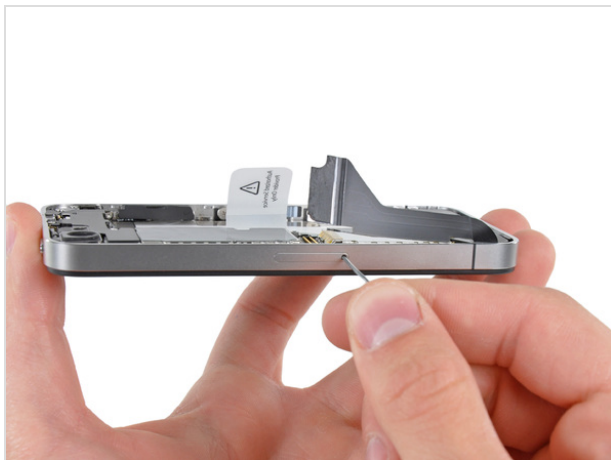
- Remove the battery.

- Before reconnecting the battery connector, be sure the pressure contact (shown in red) is properly positioned next to the battery connector.



- Before reassembly, be sure to clean all metal-to-metal contact points on the pressure contact as well as its contact point on the rear panel with a de-greaser such as windex. The oils on your fingers have the potential to cause wireless interference issues.





Step 7 — Logic Board

- Use a SIM card eject tool or a paperclip to eject the SIM card and its holder.
- This may require a significant amount of force.
- Remove the SIM card and its holder.



Step 8

- Remove the following two screws:
 - One 1.2 mm Phillips
 - One 1.6 mm Phillips
- Remove the thin steel dock connector cable cover from the iPhone.
- Before reassembly, be sure to clean all metal-to-metal contact points on the dock connector cable cover with a de-greaser such as windex. The oils on your fingers have the potential to cause wireless interference issues.



Step 9

- Use an iPod opening tool to gently pry the dock cable connector up off the logic board from both short ends of the connector.



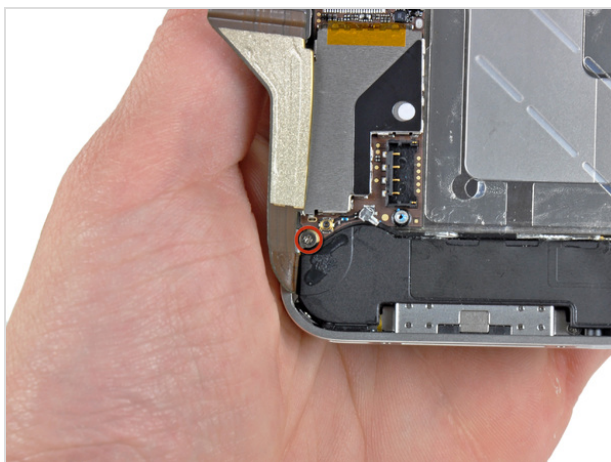
Step 10

- Carefully peel the dock ribbon cable off the logic board and the lower speaker enclosure.
- Warning! If you are having trouble peeling towards the end of the cable, stop! The cable is very likely to tear if more pressure is added.



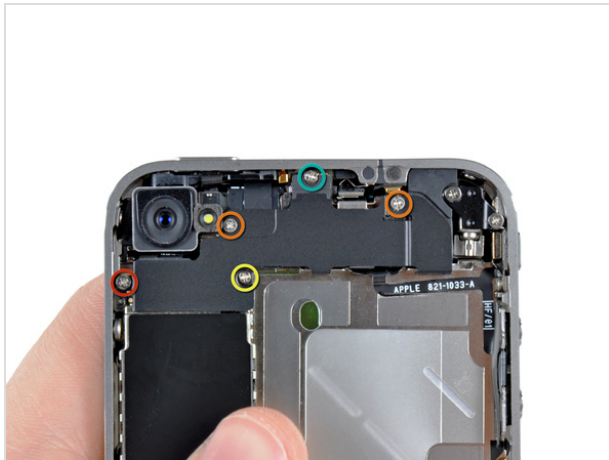
Step 11

- Use an iPod opening tool to pry the lower antenna connector up off its socket on the logic board.
- Make sure you don't damage the blue inductor while prying the antenna connector. If you end up having no service message, double check that the blue inductor is still there and soldered properly





Step 12

- Remove the 1.9 mm Phillips screw securing the bottom of the logic board to the inner case.




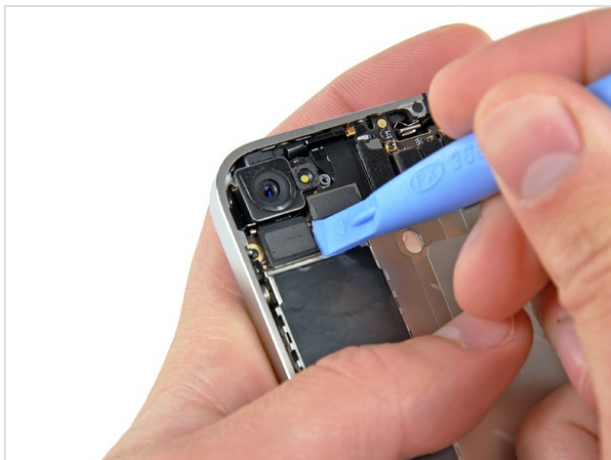
Step 13

- Remove the following five screws securing the wi-fi antenna to the logic board:
 - One 2.3 mm Phillips
 - Two 1.6 mm Phillips
 - One 1.4 mm Phillips
 - One 4.8 mm Phillips
- When re-assembling, start off with replacing the 4.8 mm Philips screw first, then the 2.3 mm. *This is to ensure there is no mix-up, and avoid rendering the LCD and digitizer useless.* 
- Also make sure to put the long 4.8 mm Philips back in correctly when reassembling. This is the ground for the Wi-Fi antenna and is often the culprit if you are having bad wi-fi reception after reassembly. 



Step 14

- Use an iPod opening tool to slightly lift the top edge of the wi-fi antenna away from the logic board.
- Use the tip of a spudger to pull the wi-fi retaining clips away from the inner frame.
- Remove the wi-fi antenna from the iPhone. Make sure you don't lose the metal clips on the top of the cover where the 4.8mm screw attaches or the 4.8mm screw. That's the primary reason for abnormal Wi-Fi performance after the reassembly.
- Before reassembly, be sure to clean all metal-to-metal contact points on the connector cover with a de-greaser such as Windex. The oils on your fingers have the potential to cause wireless interference issues. **Do not** clean the connectors themselves with Windex. 



Step 15

- Use an iPod opening tool to carefully lift the rear camera connector up off its socket on the logic board.
- Remove the rear camera.



Step 16

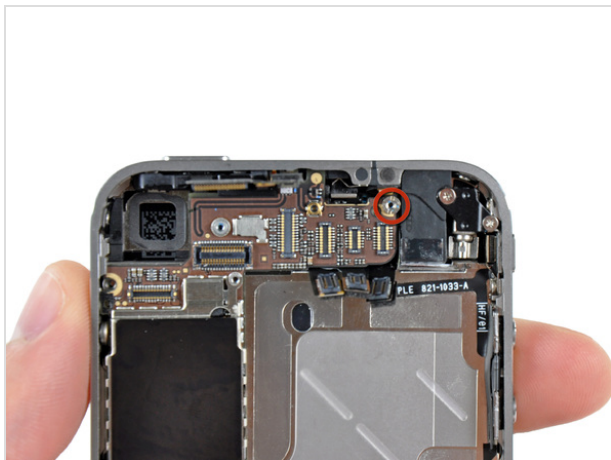
- Remove the small circular white sticker (warranty sticker and water indicator) covering the screw near the battery pull tab.
- Remove the 2.4 mm Phillips screw that was hidden underneath the sticker.



Step 17

- Disconnect the following connectors from the top of the logic board:
 - Digitizer cable (From Bottom)
 - LCD cable (From Bottom)
 - Headphone jack/volume button cable (From Top)
 - Top Microphone/sleep button cable (From Top)
 - Front camera cable (From Top)
- It is helpful to use the edge of an iPod opening tool to gently lift the connectors up and out of their sockets on the logic board.





Step 18

- Use a small flathead screwdriver to remove the 4.8 mm standoff near the headphone jack.
- When reassembling the device, this standoff sets the height of the wi-fi shield removed in step 14. If not torqued down, the shield will be above the plane of the frame and the back will not slide into place in step 2. The shield should be flush with the headphone jack.



Step 19

- Carefully remove the logic board from the iPhone, minding any cables that may get caught.
- Note that there is a rubber guard on the edge of the logic board where the Digitizer and LCD ribbon cables bend over the logic board. Make certain it is there before replacing the logic board during reassembly.





Step 20 — Speaker Enclosure Assembly

- Remove the single 2.4 mm Phillips screw securing the speaker enclosure to the side of the inner frame.



Step 21

- Remove the speaker enclosure from the iPhone.
- Before re-fastening the speaker enclosure to the inner frame, be sure the four small EMI fingers rest below the lip of the LCD frame. 
- Before reassembly, be sure to clean all metal-to-metal contact points between the EMI fingers and the internal frame as well as the brass screw mounting point with a de-greaser such as Windex. The oils on your fingers have the potential to cause wireless interference issues. 

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

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