

iPhone 5 Speaker Enclosure Replacement

Bring back the beats by replacing a blown out...

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INTRODUCTION

Bring back the beats by replacing a blown out speaker on your iPhone 5.

TOOLS:

Anti-Clamp (1)
Phillips #000 Screwdriver (1)
iFixit Opening Tool (1)
Suction Handle (1)
Spudger (1)
P2 Pentalobe Screwdriver iPhone (1)
Standoff Screwdriver for iPhones (1)

PARTS:

iPhone 5 Loudspeaker (1) iPhone 5 Cellular Antenna (1) iPhone 5 Loudspeaker Contact Clip (1)

Step 1 — Taping the display glass







- (i) If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPhone's display until the whole face is covered.

⚠ Wear safety glasses to protect your eyes from any glass shaken free during the repair.

Step 2 — Remove the Pentalobe screws



- A Before you proceed, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.
- Power off your iPhone before beginning disassembly.
- Remove the two 3.6 mm
 Pentalobe screws next to the
 Lightning connector.

Step 3 — How to prevent display separation







- (i) In the following steps you will be pulling the display up out of the phone body. The display is composed of a glass screen and a plastic bezel with metal clips.
- Regardless of the tool you use, you need to be sure you pull up the entire display.
- If the glass begins to separate from the plastic, as shown in the first image, slide a plastic opening tool between the plastic frame and the metal phone body to pry the metal clips out of the case.
- If you are reassembling a phone with a separated display bezel, you may want to place a thin strip of adhesive between the plastic bezel and the glass to keep the phone closed.

Step 4 — Anti-Clamp instructions







- (i) The next two steps demonstrate the Anti-Clamp, a tool we designed to make the opening procedure easier. If you aren't using the Anti-Clamp, skip down two steps for an alternate method.
 - i For complete instructions on how to use the Anti-Clamp, check out this guide.
- Pull the blue handle backwards to unlock the Anti-Clamp's arms.
- Slide the arms over either the left or right edge of your iPhone.
- Position the suction cups near the bottom edge of the iPhone just above the home button—one on the front, and one on the back.
- Squeeze the cups together to apply suction to the desired area.
 - (i) If you find that the surface of your iPhone is too slippery for the Anti-Clamp to hold onto, you can <u>use tape</u> to create a grippier surface.

Step 5







- Pull the blue handle forwards to lock the arms.
- Turn the handle clockwise 360 degrees or until the cups start to stretch.
 - (i) Make sure the suction cups <u>remain aligned with each other</u>. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.
- Insert an opening pick under the screen when the Anti-Clamp creates a large enough gap.
 - (i) If the Anti-Clamp doesn't create a sufficient gap, apply more heat to the area and rotate the handle a quarter turn.
- **Don't crank more than a quarter turn at a time, and wait one minute between turns**. Let the Anti-Clamp and time do the work for you.
- Skip the next two steps.

Step 6 — Manual Opening Procedure



- Press a suction cup onto the screen, just above the home button.
- i Be sure the cup is completely on the screen to get a tight seal.
- i If you're opening an iPhone with cracked glass, neatly lay a couple strips of packing tape across the front and squeeze out as many bubbles as you can. This will give the suction cup a surface to grab, and minimize the spread of broken glass.

Step 7 — Start lifting the front panel assembly



- (i) Make sure the suction cup is firmly attached to the front panel assembly.
- While holding the iPhone down with one hand, pull up on the suction cup to slightly separate the front panel assembly from the rear case.
- (i) Take your time and apply firm, constant force. The screen is a much tighter fit than most devices.
- With a plastic opening tool, begin to gently pry the rear case down, away from the screen, while you pull up with the suction cup.
- i There are several clips attaching the front panel assembly to the rear case, so you may need to use a combination of the suction cup and plastic opening tool to free the front panel assembly.

Step 8 — Detaching the front panel side clips



 Continue to pry up around the sides of the front panel assembly, detaching the clips along the left and right side.

Step 9 — Opening up the phone

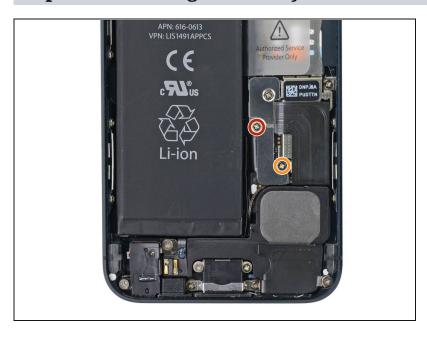






- ⚠ Do not try to completely remove the front panel assembly from the rear case, as there are several ribbon cables still attached at the top of the iPhone.
- Once the clips have been released on the bottom and sides of the front panel assembly, pull the bottom of the assembly away from the rear case.
- Open the display to about a 90° angle, and lean it against something to keep it propped up while you're working on the phone.
 - Add a rubber band to keep the display securely in place while you work. This
 prevents undue strain on the display cables.

Step 10 — Removing the battery connector bracket screws



- Remove the following two screws securing the metal battery connector bracket to the logic board:
 - One 1.8 mm Phillips screw
 - One 1.6 mm Phillips screw

Step 11 — Removing the battery connector bracket



 Remove the metal battery connector bracket from the iPhone.

Step 12 — Disconnecting the battery connector



- Use a plastic opening tool to gently pry the battery connector up from its socket on the logic board.
- A Be careful not to dislodge the small surface-mounted components surrounding the socket.
- ⚠ Be very careful to only pry up on the battery connector itself and **not** the socket on the logic board. If you pry up on the logic board socket or the board itself, you may destroy the socket or damage nearby components on the board.

Step 13 — Removing the front panel assembly cable bracket screws



- Remove the following screws securing the front panel assembly cable bracket to the logic board:
 - Two 1.2 mm Phillips screws
 - One 1.6 mm Phillips screw
 - This screw tends to not be attracted to a magnetized screwdriver. Take care not to lose it when removing, and make sure it gets back into the right place—a magnetized screw may interfere with the compass.

Step 14 — Removing the front panel assembly cable bracket



- Lift the display cable bracket toward the battery to unhook it, and remove it from the iPhone.
- During reassembly, clip the left-hand hooks under the logic board and lower the bracket towards the outside of the phone.

Step 15 — Disconnecting the front panel assembly cables



- ⚠ Make sure the battery is disconnected before you disconnect or reconnect the cables in this step.
- Use a plastic opening tool or a fingernail to disconnect the three front panel assembly cables:
 - Front-facing camera and sensor cable
 - LCD cable
 - Digitizer cable

⚠ When reassembling your phone, the LCD cable may pop off the connector. This can cause white lines, or nothing at all to appear when powering your phone back on. If that happens, simply reconnect the cable and power cycle your phone. The best way to power cycle your phone is to disconnect and reconnect the battery.

Step 16 — Separating front panel assembly and rear case



• Remove the front panel assembly from the rear case.

Step 17 — Speaker Enclosure



• Use the point of a spudger to pry up and disconnect the antenna cable from the logic board.

Step 18



- Remove the following screws securing the speaker enclosure to the rear case:
 - One 2.5 mm Phillips screw
 - One 1.5 mm Phillips screw
 - One 2.5 mm Phillips screw
 - One 2.7 mm standoff screw
 - i Standoff screws are best removed using a standoff screwdriver or bit.

⚠ In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.

Step 19



• Slide the point of a spudger underneath the spring contact flex cable below the battery and gently loosen it from the speaker enclosure.

Step 20

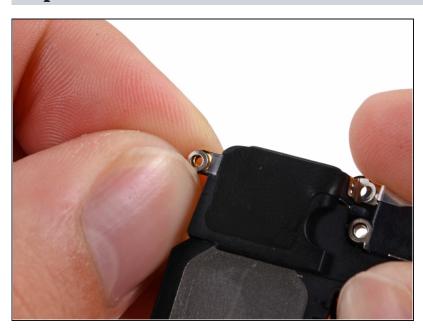






- Use the flat end of a spudger to pry up and loosen the speaker enclosure from the rear case.
- Pull the speaker enclosure out of its recess.
- During reinstallation, be sure to slide the speaker enclosure <u>underneath this metal</u> washer.

Step 21



 Remove the small double-sided metal washer on the speaker enclosure and transfer it to the replacement part. Compare your new replacement part to the original part. You may need to transfer remaining components or remove adhesive backings from the new part before installing.

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

Take your e-waste to an R2 or e-Stewards certified recycler.

Repair didn't go as planned? Check out our <u>iPhone 5 Answers community</u> for troubleshooting help.