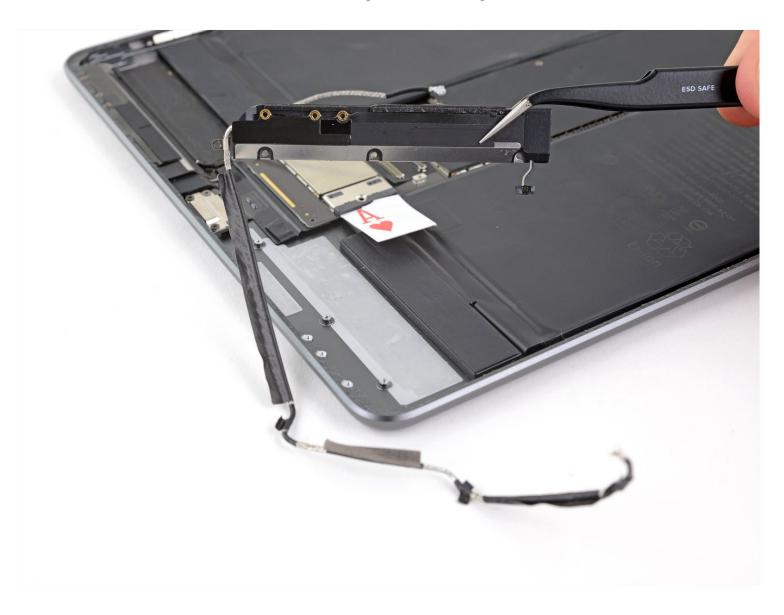


# iPad Air 3 Right Speaker Replacement

Follow this guide to replace the right speaker...

Written By: Robert Boyd



#### **INTRODUCTION**

Follow this guide to replace the right speaker in an iPad Air 3 for both Wi-Fi and cellular models.

Some photos in this guide were taken from a previous model. There are small differences between models, but the overall procedure is very similar.

# Anti-Clamp (1) Suction Handle (1) iFixit Opening Picks (Set of 6) (1) Battery Blocker (1) iOpener (1) Tweezers (1) Phillips #00 Screwdriver (1) Spudger (1) Isopropyl Alcohol (1) Deck of Cards (1) Safety Glasses (1) Packing Tape (1) iFixit Opening Tool (1) Coffee Filters or a lint-free cloth (1)

## PARTS:

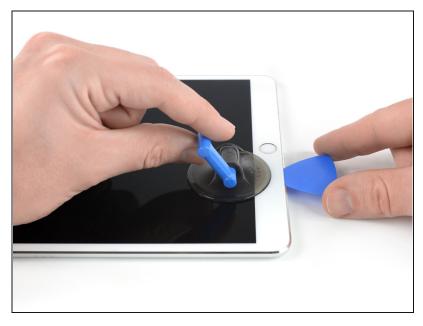
iPad Air 3 Adhesive Strips (1)

## Step 1 — Prepare an iOpener



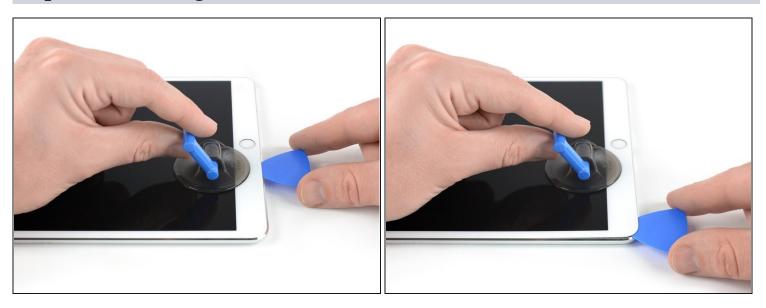
- i Strong adhesive holds the screen in place. In order to separate it, you'll first need to heat and soften the adhesive using an iOpener, hair dryer, or heat gun.
  - You may need to reapply heat repeatedly throughout this process to prevent the adhesive from cooling and hardening.
- Prepare an iOpener and place it on the bottom edge of the iPad's screen for about two minutes.

## Step 2 — Create an opening gap



- i If your iPad's screen is badly cracked, wear skin and eye protection. Cover the screen with a smooth layer of clear packing tape to contain glass shards and help the suction cup adhere. Alternatively, use a strong piece of tape (such as duct tape) and fold it into a handle.
- Place a suction cup next to the iPad's home button and press down to create a seal.
  - i To get the most leverage, place the suction cup as close to the edge as possible without going past the edge of the display.
  - (i) If you want to use the **Anti- Clamp**, a tool we designed to make the opening procedure easier, follow this guide.
- Firmly pull up on the suction cup to create a small gap between the front panel and the rear case.
- ⚠ Don't pull too hard, or you may shatter the glass. If necessary, apply more heat to further soften the adhesive.
- Once you've opened a sufficient gap, insert an opening pick into the gap.

# Step 3 — Slice through the bottom adhesive



- Slice through the adhesive under the screen by sliding the pick along the edge of the display, towards the bottom left corner.
- Leave the pick in place temporarily to prevent the adhesive from re-sealing.

# Step 4 — Slice through the left adhesive







- Apply heat to the left edge of the iPad for about two minutes, or until it's slightly too hot to touch comfortably.
  - If necessary, re-heat your iOpener for a few seconds or until it's a bit too hot to touch. Be careful not to overheat the iOpener, or it may burst.
- Insert a second opening pick at the bottom left corner of the iPad.
- Slide the second opening pick along the left side of the display to separate the adhesive underneath.
- Leave the opening pick inserted near the top left corner of the iPad to prevent the adhesive from re-sealing.

### Step 5



 Apply heat to the top edge of the iPad for about two minutes, or until it's slightly too hot to touch comfortably.







- Insert a third opening pick at the top left corner of the iPad.
- Use the opening pick to cut the adhesive under the top edge of the iPad by sliding it to the top right corner.

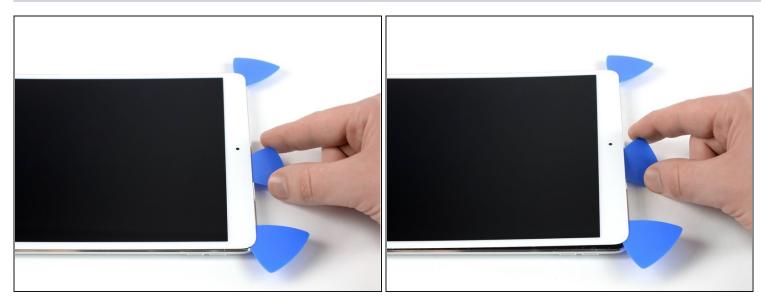
⚠ The front-facing camera is located right in the center of the iPad's top edge and can be damaged if the pick is inserted too far. Only insert the tip of the opening pick when cutting near the camera.



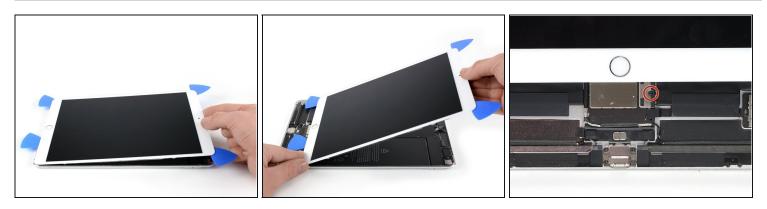




- Apply heat to the final, right edge of the iPad for about two minutes, or until it's slightly too hot to touch comfortably.
- Insert a fourth opening pick at the top right corner of the iPad.
- Slide the opening pick down to the bottom right corner to cut the adhesive.
- Slide the opening pick around the bottom right corner—pausing to apply more heat if needed—and cut the remaining adhesive on the bottom edge, but stop before you reach the home button.



- Insert a fifth opening pick at the top of the iPad near (but not directly on) the front-facing camera.
- Gently twist the pick to separate the display assembly from the iPad.
- ⚠ Don't try to remove the display all the way yet! It is still connected to the iPad's motherboard.
- If needed, apply more heat and/or cut any remaining adhesive that prevents the display from separating.



• Lift the display assembly from its top edge and carefully slide it up (towards the front-facing camera and headphone jack), until the screw that secures the battery power connector is revealed at the bottom.

 $\triangle$  Don't lift the display more than 70° or you may damage the attached ribbon cables.



- Remove the 1.9 mm Phillips screw that secures the battery power connector.
- (i) Throughout this repair, keep track of each screw and make sure it goes back exactly where it came from to avoid damaging your device.

## Step 11 — Battery connector information

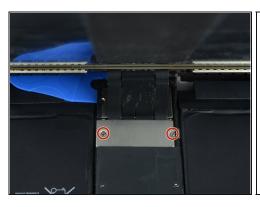


- (i) These photos show what the battery connector looks like underneath the logic board. Use these photos as a reference while you safely disconnect the battery.
- (i) Notice that the battery connector has cantilever springs on the logic board that press against the battery contact pads. Since both the logic board and battery are glued down, you'll need to slide something thin and flexible between the contact points to disconnect the battery.

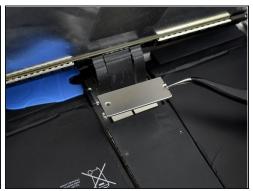
### Step 12 — Disconnect the battery



- ⚠ Be careful when you isolate the battery using a battery blocker. The battery contacts are easily bent or broken, resulting in irreversible damage.
- To disconnect the battery, slide one prong of a battery blocker or the tip of an opening pick under the battery power connector to ensure the power circuit is interrupted.
  - Don't push the battery blocker underneath the connector with excessive force. If you're having trouble fitting the battery blocker underneath the logic board, you can try using a playing card to disconnect the battery instead.
  - i The battery blocker or playing card ideally should slide under the logic board without encountering any blockages.
- Leave the battery blocker in place as you work.



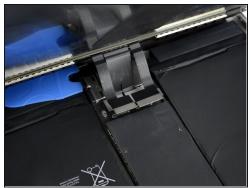




- Slowly lift the display from its top edge, being careful not to strain the attached ribbon cables.
- Remove the two 1.3 mm Phillips screws securing the display connector cover bracket.
- ② You may need to angle the driver slightly in order to avoid straining the ribbon cables.
- Remove the display connector cover bracket.







- Use a spudger to disconnect the two visible display flex connectors by gently prying them straight up from their sockets.
  - (i) To re-attach <u>press connectors</u> like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend, causing permanent damage.



- ② Underneath, you'll find two additional display cable connectors.
- Use your spudger to gently pry them up and disconnect them.



- Remove the display assembly.
- During reassembly, before installing a display, remove any remaining adhesive from the iPad, and clean the glued areas with high concentration isopropyl alcohol (90% or greater) and a lint-free cloth. This helps prep the iPad for fresh adhesive and ensures that it will bond properly.
- If you plan to reinstall your existing display, remove any remaining adhesive from the back and clean the adhered areas with isopropyl alcohol.
- Test your iPad's functions and install <u>pre-cut adhesive</u> strips to the back of the display using our <u>display</u> adhesive application guide before sealing it up.

## Step 17 — Disconnect the antennas

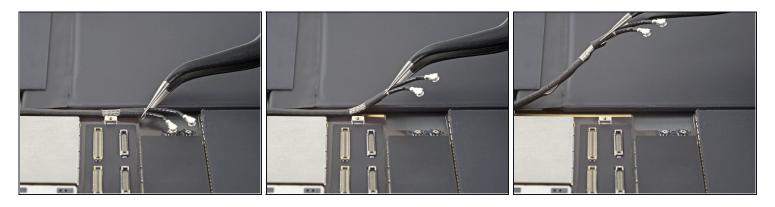


• Use a pair of tweezers to disconnect a logic board antenna cable by <u>lifting up on the cable as close to the connector as possible</u>.

⚠ Take care not to puncture or bend the battery with your tool—a punctured or bent battery may leak dangerous chemicals or cause a thermal event.

• Repeat for the other logic board antenna cable.

## Step 18 — Separate the antenna cables



• Use a pair of tweezers to lift the antenna cables away from the logic board.



• Use a pair of tweezers to unwrap the tape securing the two antenna cables together.



- Use a pair of tweezers to unwrap the lower tape strip securing the antenna cables together.
- Separate the two antenna cables.

## Step 21 — Peel up the right antenna cable



• Use a pair of tweezers to peel the right antenna cable away from the logic board.

## Step 22 — Disconnect the right speaker

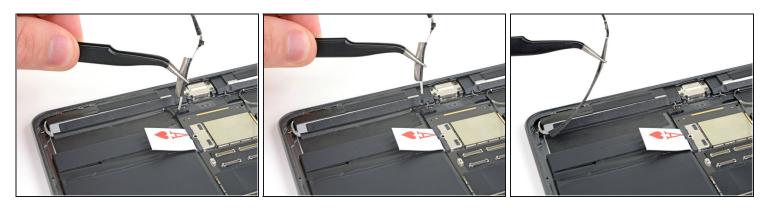


- Use a pair of tweezers to peel up the tape covering the right speaker connector.
  - (i) The right speaker connector will disconnect when you pull up on the tape.



• Use a pair of tweezers to remove the tape from the back of the speaker connector.

# Step 24



• Continue to peel the right antenna cable away from the rear case.

## Step 25 — Remove the speaker tape







• Use a pair of tweezers to remove the tape covering the right speaker screws.

## Step 26 — Remove the right speaker screws



- Use a Phillips screwdriver to remove the seven screws securing the right speaker to the rear case:
  - Four 1.2 mm-long screws
  - Three 1.4 mm-long screws

#### Step 27 — Loosen the right speaker



- Use an opening tool to pry up the right speaker from the rear case.
  - (i) If the speaker is extra stuck, apply a heated iOpener or a few drops of high concentration isopropyl alcohol underneath the speaker.

## Step 28 — Remove the right speaker



- Use a pair of tweezers to remove the right speaker from the rear case.
  - (i) There is a small lip covering the rear of the speaker and a small amount of adhesive holding it down.
- 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 you install it.

# 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? Try some <u>basic troubleshooting</u>, or ask our <u>iPad Air 3 Answers</u> <u>community</u> for help.