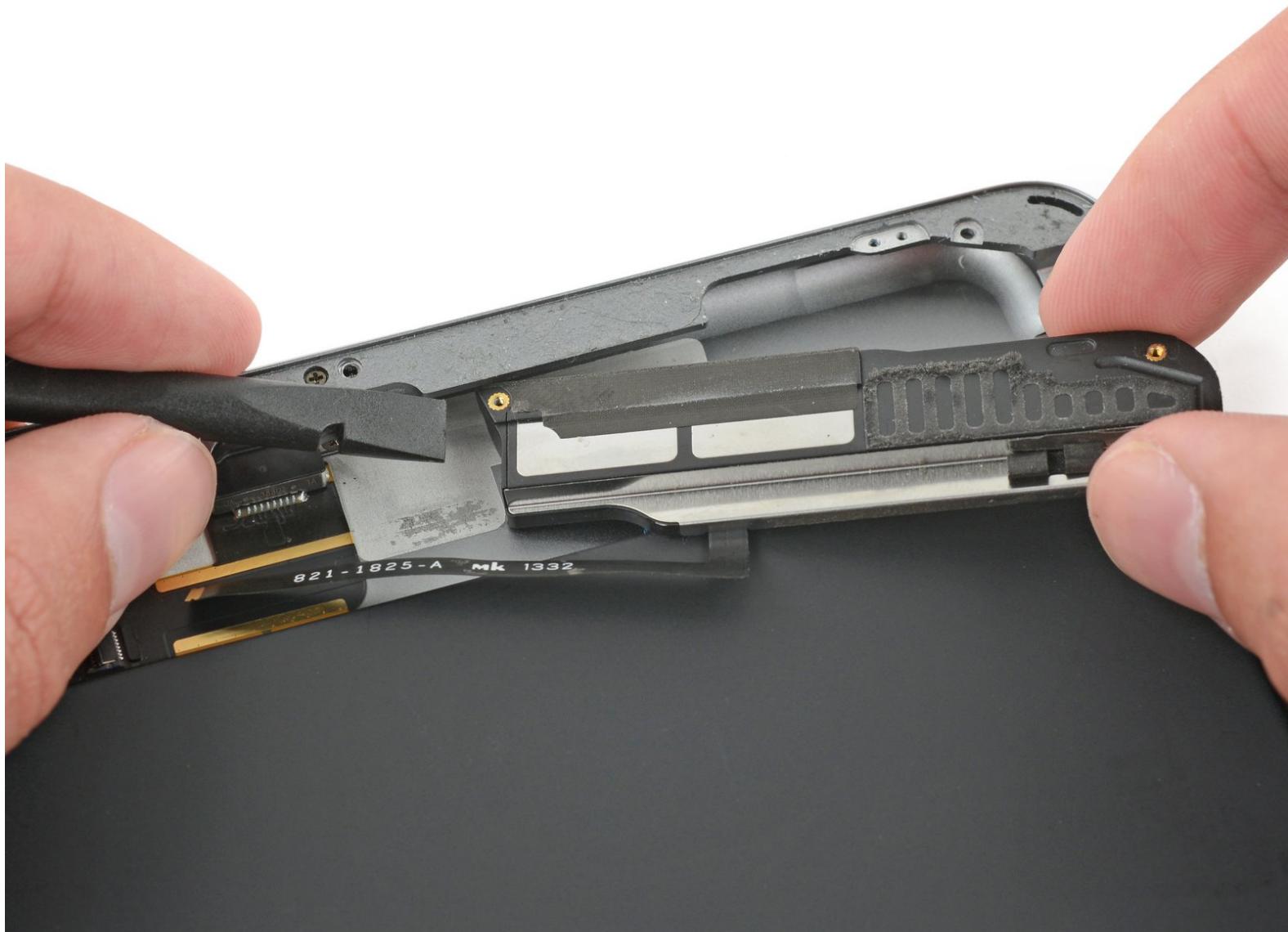




iPad Air Wi-Fi Left Speaker Replacement

Replace the left speaker in an iPad Air.

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INTRODUCTION

Use this guide to replace the left-hand speaker in your iPad Air.

TOOLS:

- iPad Battery Isolation Pick (1)
- iFixit Opening Picks set of 6 (1)
- iOpener (1)
- Suction Handle (1)
- Spudger (1)
- Tweezers (1)
- Phillips #00 Screwdriver (1)

PARTS:

- iPad Air, iPad 5, iPad 6 (Wi-Fi Only) Left Speaker (1)

Step 1 — iOpener Heating



- ⓘ We recommend that you clean your microwave before proceeding, as any nasty gunk on the bottom may end up stuck to the iOpener.
- Place the iOpener in the center of the microwave.
- ⚠ For carousel microwaves: Make sure the plate spins freely. If your iOpener gets stuck, it may overheat and burn.

Step 2



- Heat the iOpener for **thirty seconds**.
- Throughout the repair procedure, as the iOpener cools, reheat it in the microwave for an additional thirty seconds at a time.

⚠ Be careful not to overheat the iOpener during the repair. Overheating may cause the iOpener to burst.

⚠ Never touch the iOpener if it appears swollen.

⚠ If the iOpener is still too hot in the middle to touch, continue using it while waiting for it to cool down some more before reheating. A properly heated iOpener should stay warm for up to 10 minutes.

Step 3



- Remove the iOpener from the microwave, holding it by one of the two flat ends to avoid the hot center.

⚠ The iOpener will be very hot, so be careful when handling it. Use an oven mitt if necessary.

Step 4 — Front Panel



- 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 iPad's display until the whole face is covered.
 - ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.
- Do your best to follow the rest of the guide as described. However, once the glass is broken, it will likely continue to crack as you work, and you may need to use a metal prying tool to scoop the glass out.

 Wear safety glasses to protect your eyes, and be careful not to damage the LCD screen.

Step 5



- Handling it by the tag, place the heated iOpener on the side of the iPad to the left of the home button assembly.
- Let the iOpener sit for at least a minute to soften the adhesive beneath the glass.

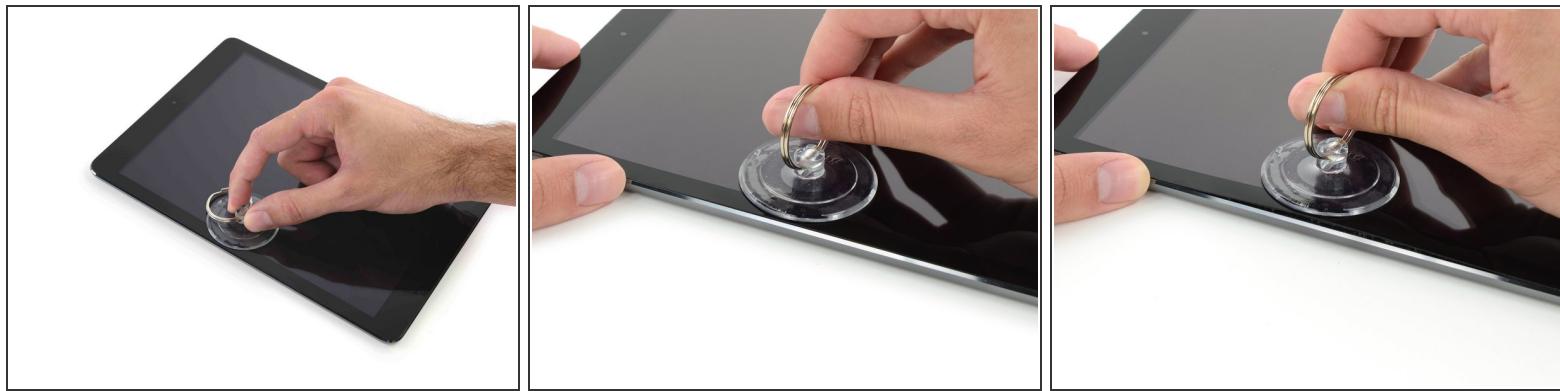
Step 6



(i) While the iPad looks uniform from the outside, there are delicate components under the front glass. To avoid damage, **only** heat and pry in the areas described in each step.

- As you follow the directions, take special care to avoid prying in the following areas:
 - Front-facing camera
 - Antennas
 - Display cables

Step 7



- Carefully place a suction cup halfway up the heated side.
- Be sure the cup is completely flat on the screen to get a tight seal.
- While holding the iPad down with one hand, pull up on the suction cup to slightly separate the front panel glass from the rear case.

i If your iPad's screen is badly cracked, covering it with a smooth layer of clear packing tape may help the suction cup adhere. Alternatively, use a strong piece of tape (such as duct tape) and [fold it into a handle](#).

Step 8



- Place an opening pick in the gap opened by the suction cup.
- ⚠ Don't insert the opening pick any deeper than the black bezel on the side of the display. Inserting the pick too far may damage the LCD.
- Pull the suction cup's plastic nub to release the vacuum seal and remove the suction cup from the display assembly.

Step 9



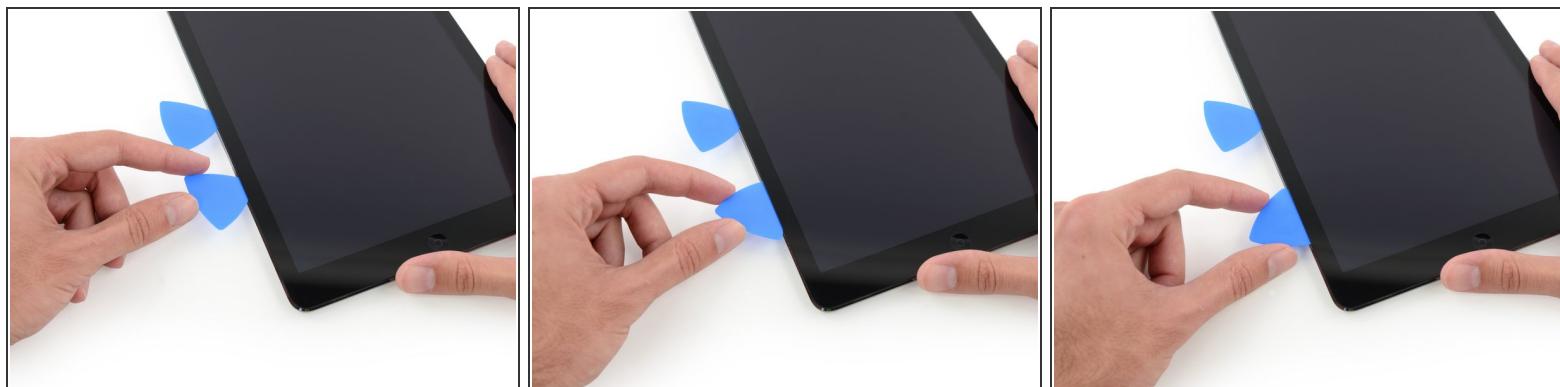
- Reheat and replace the iOpener.
- ⚠ Be careful not to overheat the iOpener during the repair procedure. Always wait at least ten minutes before reheating the iOpener.

Step 10



- Place a second opening pick alongside the first and slide the pick down along the edge of the iPad, releasing the adhesive as you go.

Step 11



- Continue moving the opening pick down the side of the display to release the adhesive.
- If the opening pick gets stuck in the adhesive, "roll" the pick along the side of the iPad, continuing to release the adhesive.

Step 12



- Take the first pick you inserted and slide it up toward the top corner of the iPad.
- If you can see the tip of the opening pick through the front glass, don't panic—just pull the pick out just a little bit. Most likely, everything will be fine, but try to avoid this as it may deposit adhesive on the front of the LCD that is difficult to clean off.

Step 13



- Reheat the iOpener and place it on the top edge of the iPad, over the front-facing camera.
 - ⚠ Be careful not to overheat the iOpener during the repair procedure. Wait at least ten minutes before reheating the iOpener.
- If you have a flexible iOpener, you can bend it to heat both the upper left corner and the upper edge at the same time.

Step 14



- Slide the opening pick around the top left corner of the iPad to separate the adhesive.

Step 15



- Slide the opening pick along the top edge of the iPad, stopping just before you reach the camera.

(i) The third image shows where the front-facing camera and housing are in the iPad.

 Avoid sliding the opening pick over the front facing camera, as you may smear adhesive onto the lens or damage the camera. The following steps will detail how to best avoid disturbing the front facing camera.

Step 16



- Pull the pick out slightly, and slide the very tip gently along the top of the front-facing camera section of the top edge.

Step 17



- Leave the opening pick in the iPad slightly past the front-facing camera.
- Take a second pick and insert it to the left of the camera, and then slide it to the corner of the iPad to finish cutting the adhesive on that edge.

Step 18



- Insert the previous pick deeper into the iPad and slide it away from the camera toward the corner.

Step 19



- Leave the three picks in the corners of the iPad to prevent re-adhering of the front panel adhesive.
- Reheat the iOpener and place it on the remaining side of the iPad—along the volume and lock buttons.

Step 20



- Slide the opening pick around the top right corner of the iPad, releasing the adhesive there.
- ⓘ Leave this pick in place to keep the adhesive from re-sealing itself, and grab a new pick for the next step.

Step 21



- Insert a new opening pick and slide it to the middle of the right edge of the iPad, releasing the adhesive as you go.

⚠ [The display cables](#) are located approximately halfway from the bottom of the iPad. Stop sliding the pick when you get ~4.5" from the bottom of the iPad.

Step 22



- Leave the opening picks in place, and set the reheated iOpener on the home button end of the iPad.

Step 23



- Slide the lower left pick to the lower left corner to cut the adhesive on that corner.
- Leave the pick at the corner. Do not pry any farther, and do not remove the pick from the iPad.

① The third image shows the two antennas and the home button cavity in the lower case of the iPad.

- The following steps will direct you where to pry to avoid damage to these components. Only apply heat and pry where directed.

Step 24



- ⓘ Leave the pick from the last step in place to prevent the adhesive from re-sealing.
- With a new pick, slice gently over the left-hand antenna, stopping before the home button.
 - ⚠ Only slide the pick from the outer edge toward the center of the iPad. Do not move the pick back toward the outer edge, as moving in this direction may damage the antenna.
- ⓘ If you need to slide the pick over the lower section more than once, remove it and re-insert at the outer edge, and slide inwards.
- Leave the pick in place before moving on.

Step 25



- Take a new pick and slip it in to the right of the previous pick.
- Slide across the home button and right-hand antenna using **only the very tip** to remove the adhesive.

Step 26



- With the adhesive loosened, you can now insert the pick near the right-hand corner. Slide the pick to the left, and stop just short of the Home button.

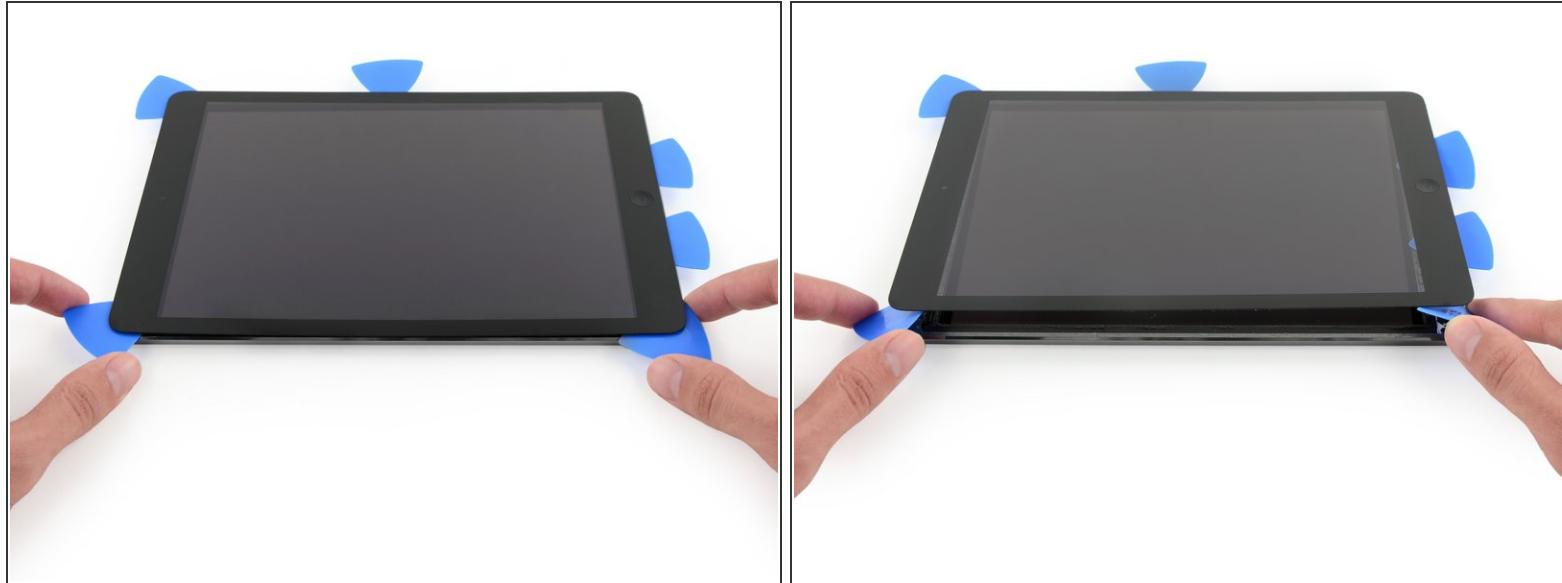
⚠ Just like with the left antenna, only slide from the outer edge toward the center. Reversing this direction may damage the antenna.

Step 27



- Reheat and reapply the iOpener to the volume control side of the iPad.

Step 28



⚠️ Be very careful with this step. Take your time and ensure the adhesive is hot and soft, and that you've been through all of the adhesive with an opening pick. Don't be afraid to stop and reheat.

- On the side of the iPad opposite the volume controls, you should have a pick lodged into each corner. Twist the picks to lift the glass slightly, separating the last of the adhesive along the display cable edge.
- ⓘ If you encounter a significant amount of resistance, leave the picks in place, reheat, and reapply the iOpener to the problem areas.

Step 29



- Lift slowly and gently to further detach the adhesive along the display cable edge.

Step 30



- While supporting the front panel glass, use an opening pick to cut the last of the adhesive.

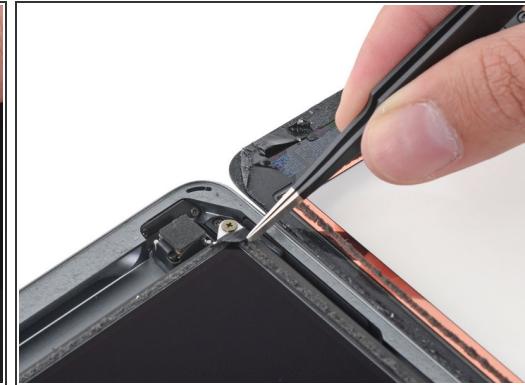
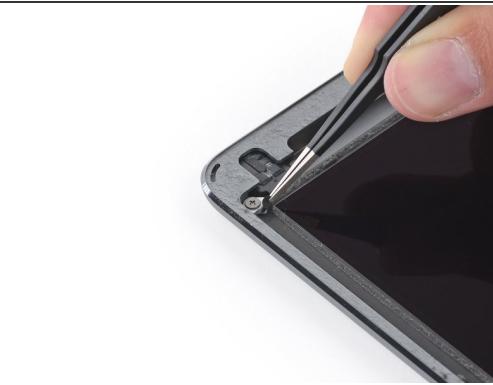
⚠ Be very careful not to cut or damage any of the display cables.

Step 31



- Once all of the adhesive has been separated, open the front glass like a page in a book and rest it on your workspace.
- During reassembly, clean the remains of the adhesive from the case (and the front glass if you are re-using it) with isopropyl alcohol, and replace the adhesive using our [display adhesive application guide](#) and [pre-cut adhesive strips](#).
- It's easy to pinch a flex cable between the front glass and the iPad's frame during reassembly. Be mindful of the flex cables and make sure they gently fold and tuck under the frame. If the folds in a flex cable are pressed completely flat, it may be damaged beyond repair.

Step 32 — LCD



- Remove any tape obscuring the LCD screws.

Step 33



- Remove the following Phillips screws securing the LCD.
 - Three 4.0 mm screws
 - One 4.8 mm screw

Step 34



⚠ Do not attempt to fully remove the LCD. It is still connected to the iPad by several cables at the home button end. Lift only from the front-facing camera end.

- Use the flat end of a spudger to pry the LCD out of its recess just enough to grab it with your fingers.
- Flip the iPad LCD like a page in a book, lifting near the camera and turning it over the home button end of the rear case.

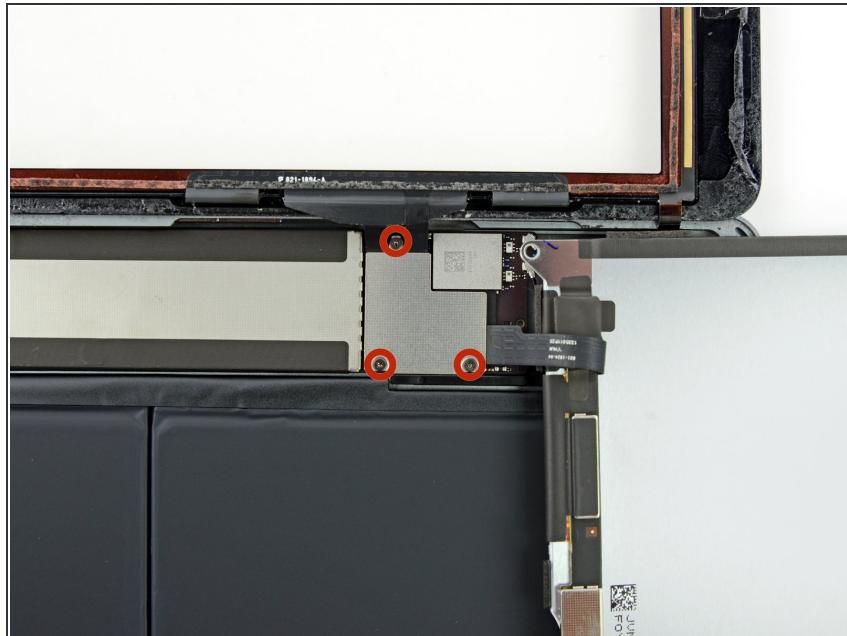
⚠ Be gentle and keep an eye on the LCD cables as you flip the display over.
- Lay the LCD on its face to allow access to the display cables.
- **i** Set the LCD down on a soft, clean, lint-free surface.

Step 35



- Remove the single 2.3 mm Phillips screw securing the battery connector to the logic board.
- To reduce the risk of a short, you can insert a [battery blocker](#) or a modified opening pick to disconnect the battery.
- Slide the battery blocker underneath the battery connector area of the logic board, and leave it in place while you work.

Step 36



- Remove the three 1.4 mm Phillips screws from the display cable bracket.

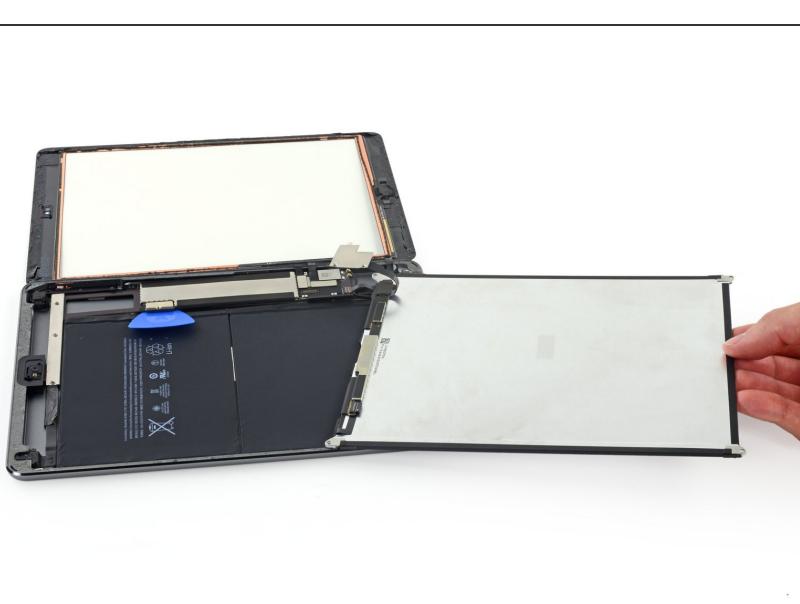
Step 37



- Use the flat end of a spudger to gently pry the display cable bracket straight up from the logic board.

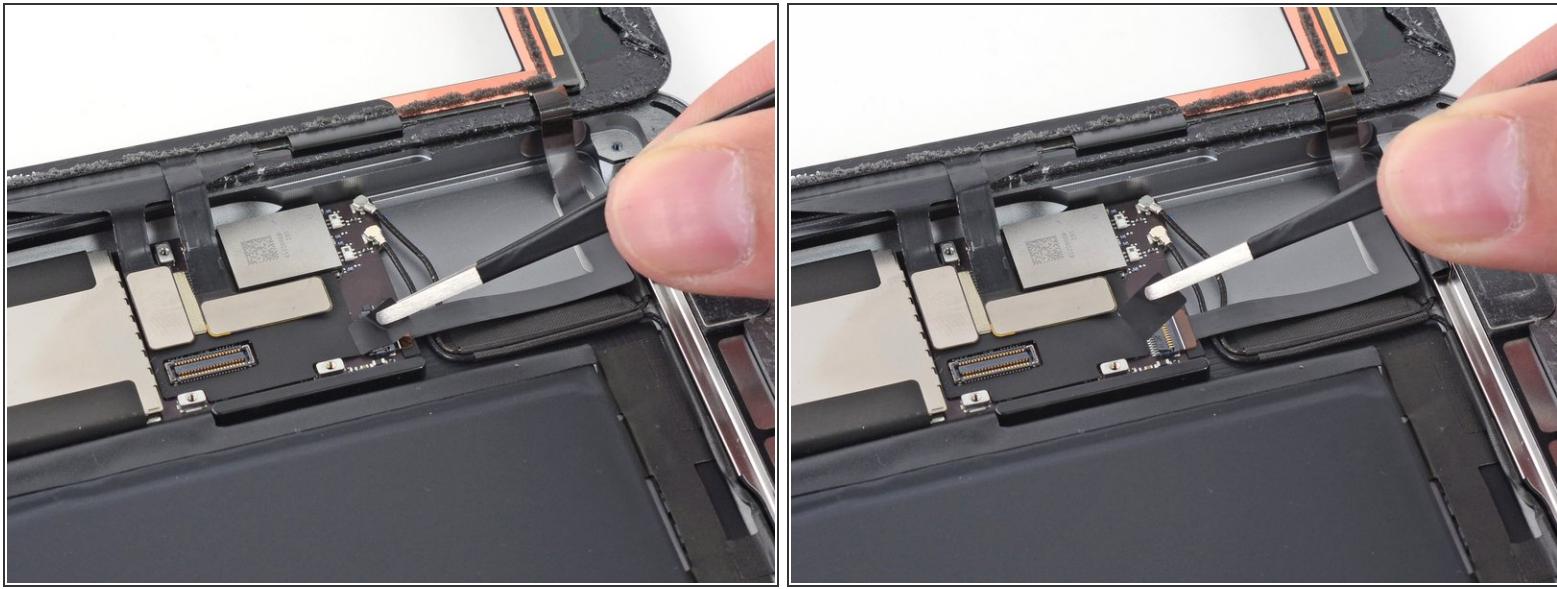
⚠ The display cable connector is adhered to the underside of the bracket, so don't push the spudger too far under the bracket, or you may damage the connector.

Step 38



- Remove the LCD.

Step 39 — Front Panel Assembly



- Remove any tape covering the home button ribbon cable connector.

Step 40



- Use the flat end of a spudger to flip the tab on the home button ribbon cable ZIF connector upward.
- Carefully pull the home button ribbon cable straight out of the ZIF connector.

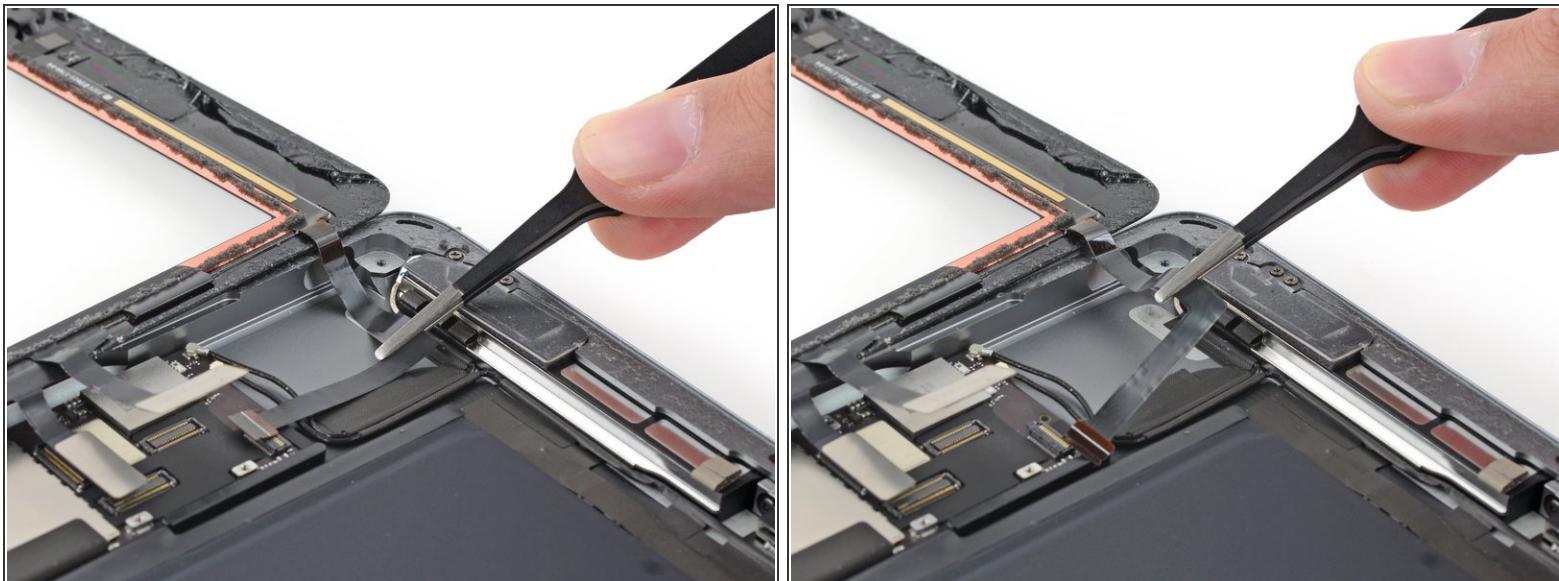
Step 41



- Use a the flat end of a spudger or a fingernail to carefully pop the two digitizer cable connectors straight up from their sockets.

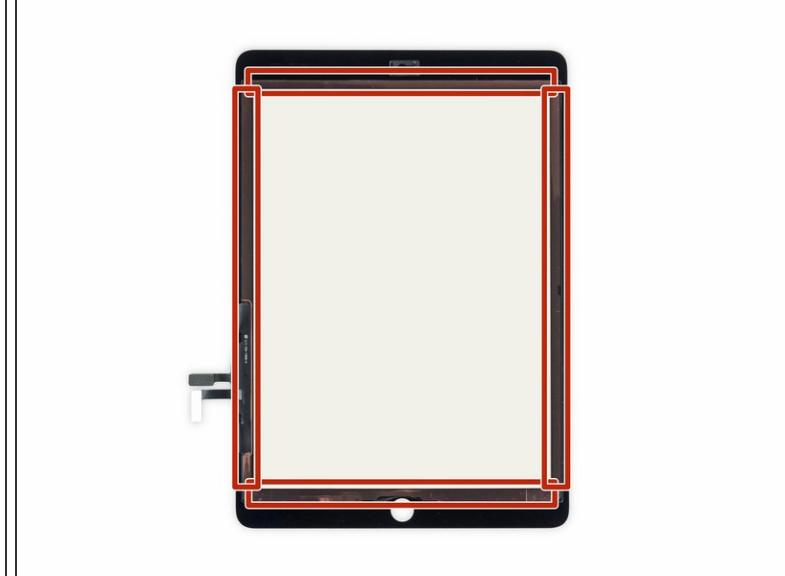
⚠ To avoid damaging your iPad, pry only on the connectors themselves, **not** on the socket on the logic board.

Step 42



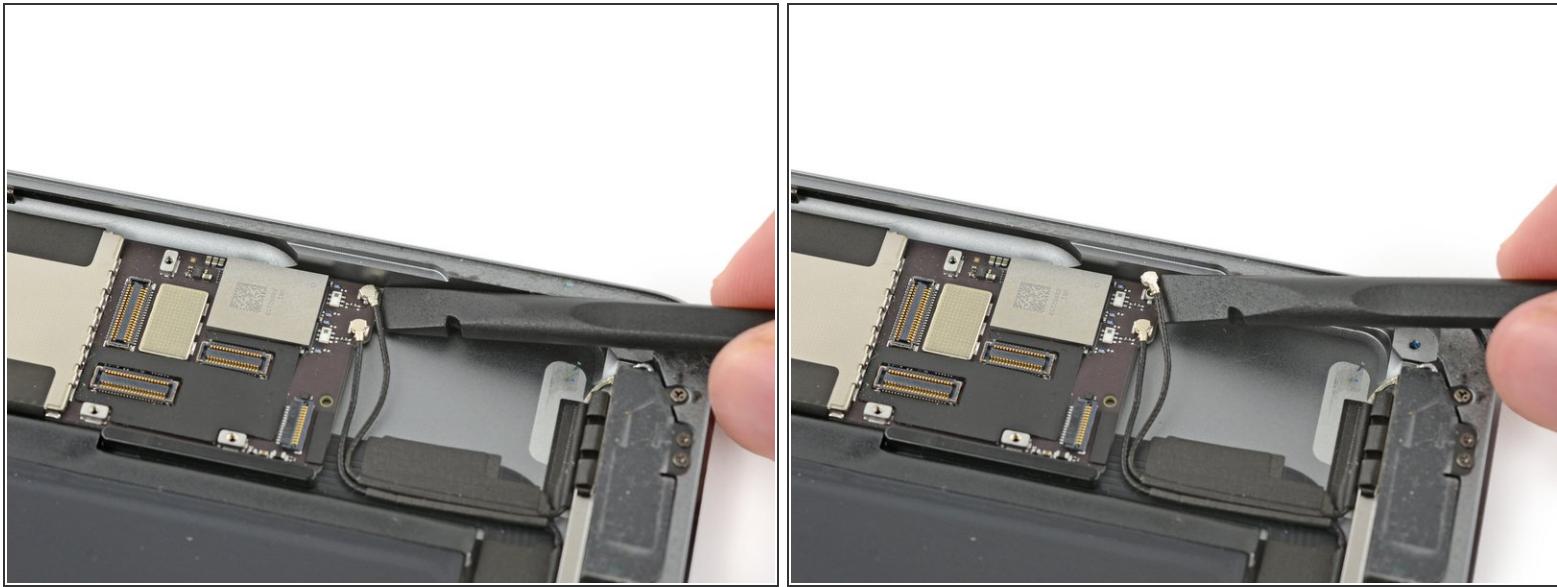
- Carefully peel the home button ribbon cable up off of the adhesive holding it to the rear case.

Step 43



- Remove the front panel assembly.
- During reassembly, wipe any dust or fingerprints off of the inside of the front panel assembly to ensure a clean display.
- If you experience "ghost" or "phantom" touch input issues with your new display, this can be resolved by adding a layer of very thin insulating tape, such as [Kapton \(polyimide\) tape](#), to the highlighted areas on the back of the panel. **iFixit panels come with the proper insulation, and should not require the addition of any tape.**
- Without the proper insulation, these areas of the digitizer can ground out against other components, causing touch input malfunction.
- The insulation is not visible to the naked eye, and is different from the foam dust barrier strips found on many iPads.

Step 44 — Left Antenna



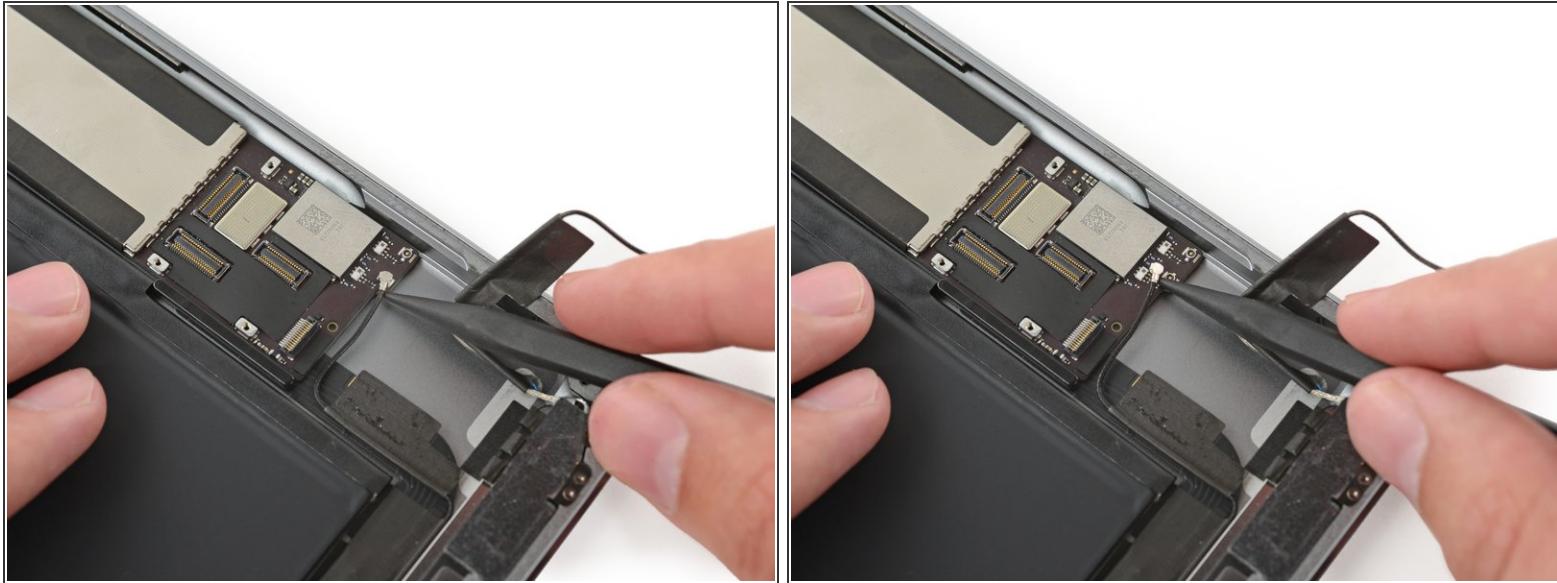
- Insert a spudger under the right antenna cable closest to the edge of the iPad and lift upward to disconnect the antenna cable connector.

Step 45



- There are two large pieces of tape wrapped around the right antenna cable, covering the left antenna cable's tape.
- Peel the tape up from the rear case.

Step 46



- Insert a spudger under the left antenna cable, the connector farthest from the edge of the iPad. Lift upward to disconnect the antenna cable connector.

Step 47



- There are six pieces of tape wrapped around the left antenna cable, securing it to the rear case.
- Use tweezers to gently peel up each piece of tape, freeing the antenna cable as you go.

Step 48



ⓘ There is a bracket crimped onto the antenna cable that is adhered to the speaker enclosure. The adhesive must be severed in order to extract the antenna.

- Carefully insert an opening pick between the speaker enclosure and the antenna cable bracket.
- Slide the pick to the right to cut the adhesive.
- Push the bracket away from the speaker to clear it of the tape under it.

Step 49



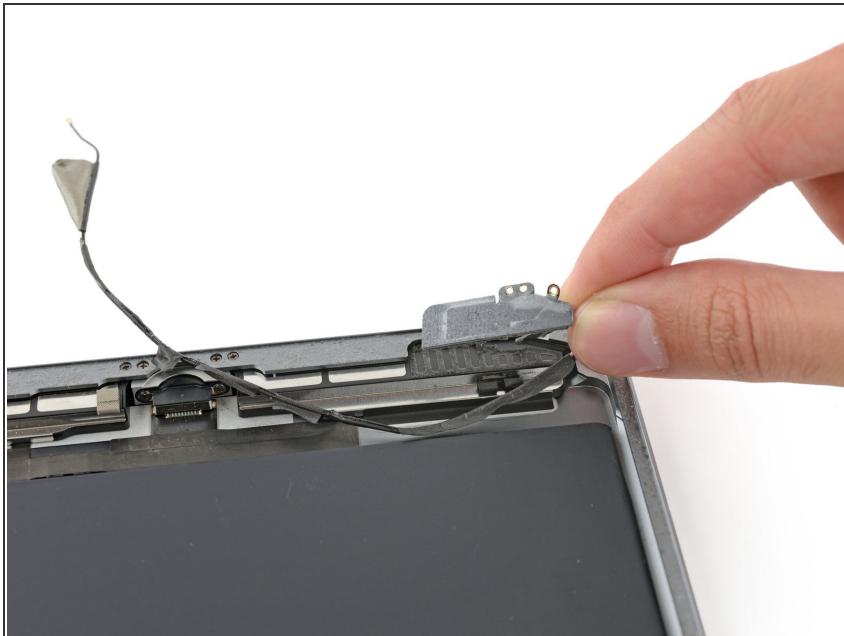
- Remove the following Phillips #000 screws:
 - Two 1.4 mm screws
 - One 2.3 mm screw

Step 50



- Insert the flat end of a spudger between the antenna and the speaker assembly.
- Slide the spudger toward the home button recess to cut the foam adhesive securing the antenna.

Step 51



- Remove the left antenna from the iPad.

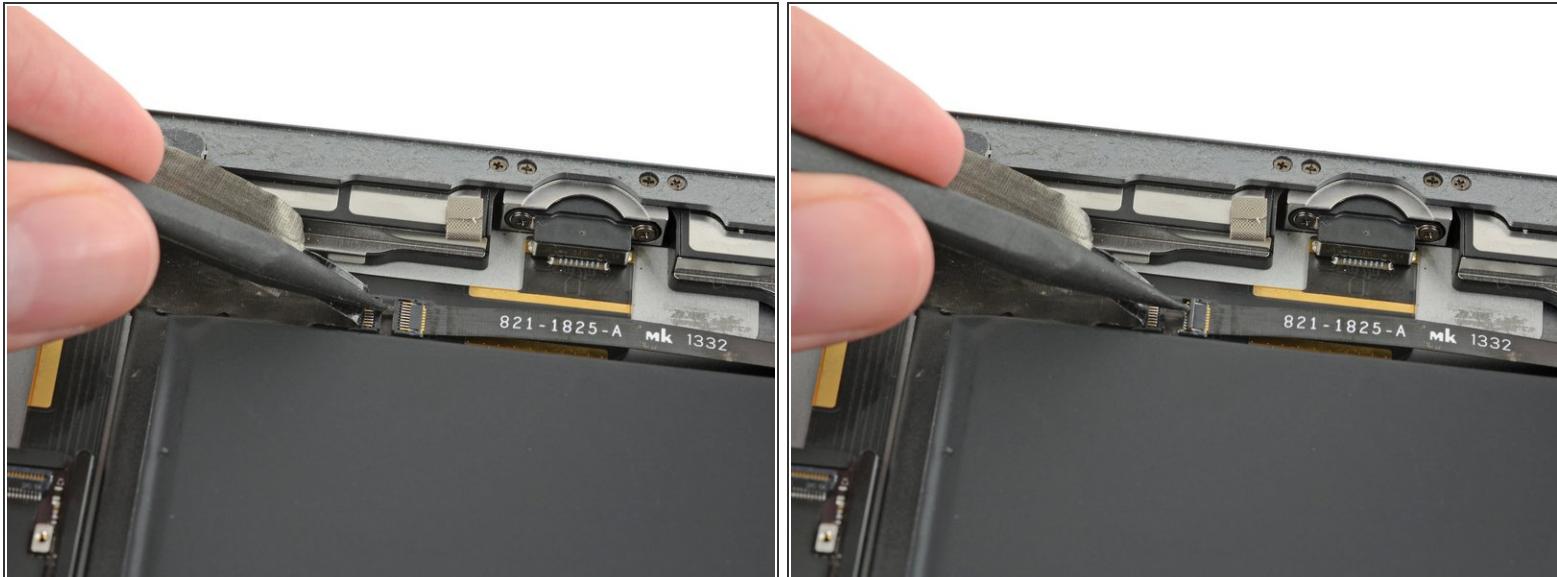
Step 52 — Left Speaker



- Peel the tape toward the home button to uncover the speaker cable connector.

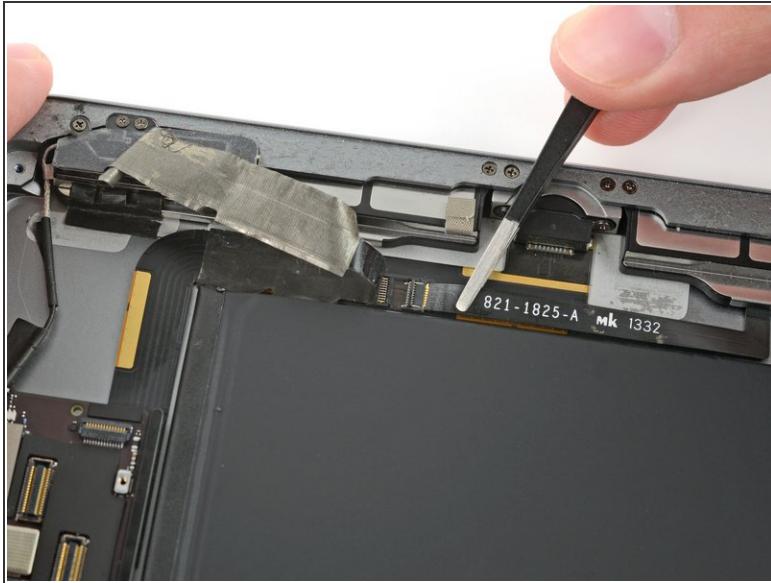
 Be sure to only peel the tape—**not** the speaker ribbon cable.

Step 53



- Use the pointed end of a spudger to flip up the retaining flap on the left speaker cable connector.

Step 54



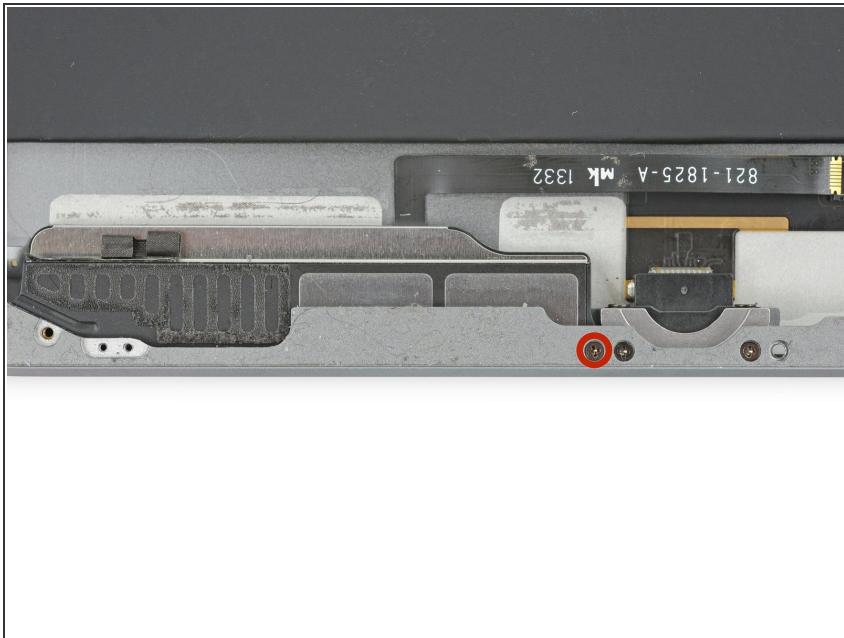
- Slide the speaker cable straight out of its ZIF connector.

Step 55



- Remove the tape holding the speaker to the rear case.

Step 56



- Remove the 2.2 mm Phillips #000 screw securing the speaker to the rear case.

Step 57



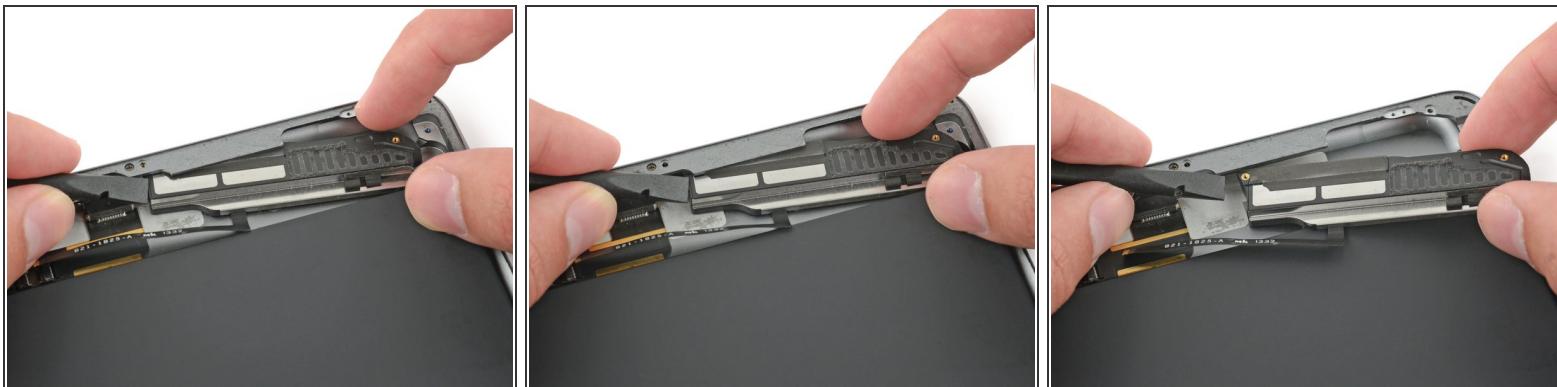
- Fold the speaker cable up slightly.

Step 58



- Insert a fingernail in the groove in the speaker housing near the corner of the rear case.
- Pull the speaker down away from the corner of the case.

Step 59



- Use a spudger to help pull the speaker out from under the edge of the rear case.
- Remove the left speaker from the iPad.

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