iPhone 11 Lower Speaker Replacement

Use this guide to replace the primary...

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INTRODUCTION

Use this guide to replace the primary loudspeaker at the bottom of the iPhone 11. (To replace the earpiece speaker, use this guide instead.) Replacing this speaker can help resolve issues such as loss of sound, poor sound quality, and distorted sound.

TOOLS:

P2 Pentalobe Screwdriver iPhone (1)
iOpener (1)
iFixit Opening Picks (Set of 6) (1)
Suction Handle (1)
Anti-Clamp (1)
Tri-point Y000 Screwdriver (1)
Phillips #000 Screwdriver (1)
Standoff Screwdriver for iPhones (1)
Spudger (1)
Tweezers (1)
Isopropyl Alcohol (1)

PARTS:

iPhone 11 Loudspeaker (1)

Step 1 — Remove the pentalobe screws



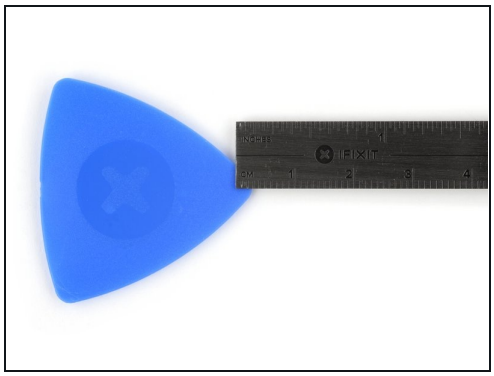
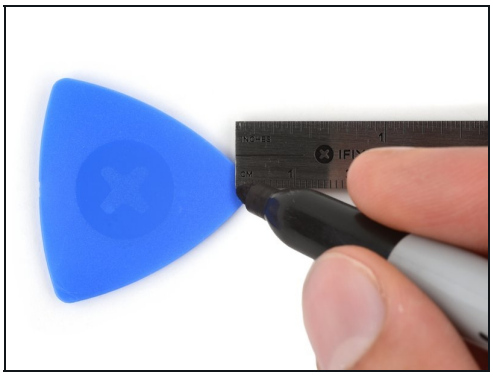
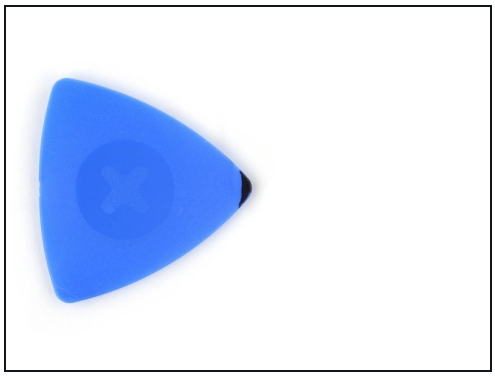


⚠ Before you begin, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.

- Power off your iPhone before beginning disassembly.
- Remove the two 6.7 mm-long pentalobe screws at the bottom edge of the iPhone.

ⓘ Opening the iPhone's display will compromise its waterproof seals. Have replacement seals ready before you proceed past this step, or take care to avoid liquid exposure if you reassemble your iPhone without replacing the seals.

Step 2 — Mark your opening picks

ⓘ If inserted too far, an opening pick can damage your device. Follow this step to mark your pick and prevent damage.

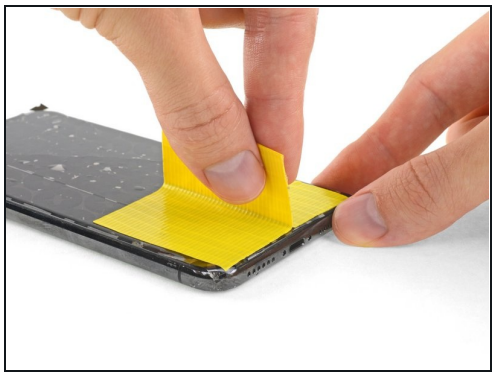
- Measure 3 mm from the tip and mark the opening pick with a permanent marker.

ⓘ You can also mark the other corners of the pick with different measurements.

ⓘ Alternatively, tape a coin to a pick 3 mm from the tip.

Step 3 — Tape over any cracks





ⓘ If your iPhone has a cracked screen, keep further breakage contained and prevent bodily harm during your repair by taping over the glass.

- Lay overlapping strips of clear packing tape over the iPhone's screen until the whole face is covered.

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

- If you can't get the suction cup to stick in the next few steps, fold a strong piece of tape (such as duct tape) into a handle and lift the screen with that instead.

ⓘ If all else fails, you can superglue the suction cup to the screen.

Step 4 — Anti-Clamp instructions







The next three 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 three steps for an alternate method.**

For complete instructions on how to use the Anti-Clamp, check out this guide.

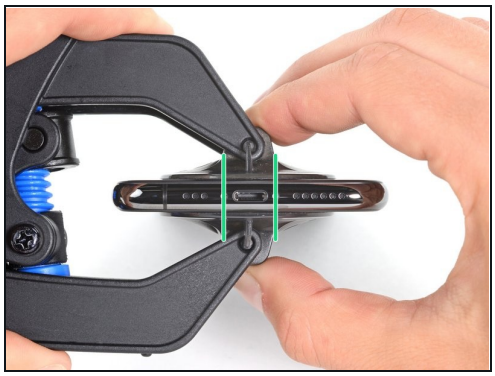
- Pull the blue handle backwards to unlock the Anti-Clamp's arms.
- Slide the arms over either the left or right edge of your iPhone.
- Position the suction cups near the bottom edge of the iPhone—one on the top, and one on the bottom.
- Squeeze the cups together to apply suction to the desired area.

If you find that the surface of your iPhone is too slippery for the Anti-Clamp to hold onto, you can use tape to create a grippier surface.

Step 5







- Pull the blue handle forward to lock the arms.
- Turn the handle clockwise 360 degrees or until the cups start to stretch.
- Make sure the suction cups remain aligned with each other. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.

Step 6







- Heat an iOpener and thread it through the arms of the Anti-Clamp.
  - ⓘ You can also use a hair dryer, heat gun, or hot plate—but extreme heat can damage the display and/or internal battery, so proceed with care.
- Fold the iOpener so it lays on the bottom edge of the iPhone.
- Wait one minute to give the adhesive a chance to release and present an opening gap.
- Insert an opening pick into the gap under the screen and the plastic bezel, **not the screen itself.**
  - ⓘ 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 three steps.**

Step 7 — Heat the lower edge of the phone



ⓘ Heating the lower edge of the iPhone helps soften the adhesive securing the display, making it easier to open.

- Use a hairdryer or heat gun or prepare an iOpener and apply it to the lower edge of the iPhone for about a minute.

Step 8





- If you're using a single suction handle, apply it to the bottom edge of the phone, while avoiding the curved portion of the glass.

Step 9 — Lift the display slightly

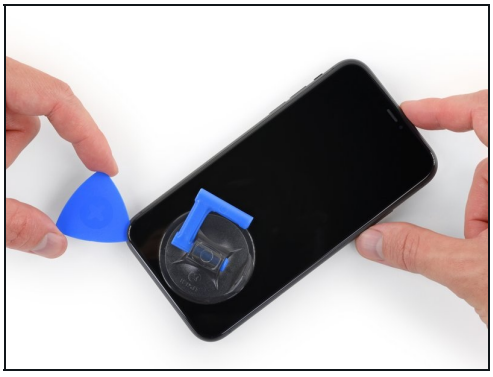




- Pull up on the suction cup with firm, constant pressure to create a slight gap between the front panel and rear case.
- Insert an opening pick into the gap under the screen and the plastic bezel, **not the screen itself.**

ⓘ The watertight adhesive holding the display in place is very strong; creating this initial gap takes a significant amount of force. **If you're having a hard time opening a gap, apply more heat, and gently rock the screen up and down to weaken the adhesive** until you create enough of a gap to insert your tool.

Step 10 — Separate the screen adhesive


- Slide the opening pick around the lower left corner and up the left edge of the iPhone, slicing through the adhesive holding the display in place.

⚠ Don't insert your pick more than 3 mm, as you may damage internal components.

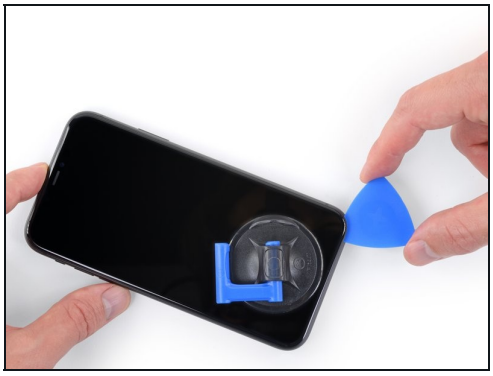
Step 11 — Screen information



⚠ There are delicate cables along the right edge of your iPhone. **Don't insert your pick here**, as you may damage the cables.

Step 12





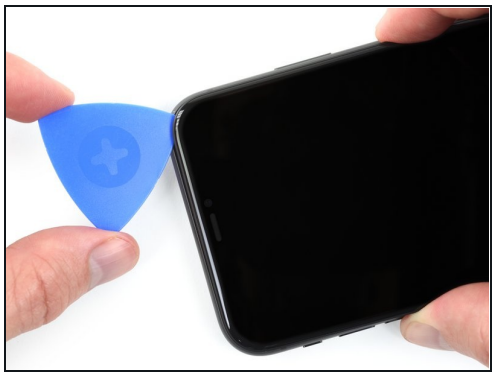


- Re-insert your pick at the bottom edge of the iPhone, and slide it up the right side to continue separating the adhesive.

⚠ Don't insert your pick more than 3 mm, as you may damage the display cables.

Step 13





ⓘ The top edge of the display is secured with both glue and clips.

- Gently pull the right edge of the display ***down*** slightly (in the direction of the Lightning port).
- Insert your pick into the top-right corner of the phone.

Step 14




- Continue pulling the display down (toward the Lightning port) as needed in order to make a gap large enough for the pick.
- Slide the pick to the top left corner and cut any remaining adhesive securing the display.

⚠ Don't insert your pick more than 3 mm, as you may damage the Face ID sensor array.

Step 15 — Remove the suction cup



- Pull the small nub on the suction cup to detach it from the front panel.

Step 16 — Open the iPhone







- Open the iPhone by swinging the display up from the left side, like the back cover of a book.

⚠ Don't try to fully separate the display yet, as several fragile ribbon cables still connect it to the iPhone's logic board.

- Prop the display up against something sturdy.

During reassembly, lay the display in position, align the clips along the top edge, and carefully press the top edge into place before snapping the rest of the display down. If it doesn't click easily into place, check the condition of the clips around the perimeter of the display and make sure they aren't bent.

Step 17 — Display Assembly

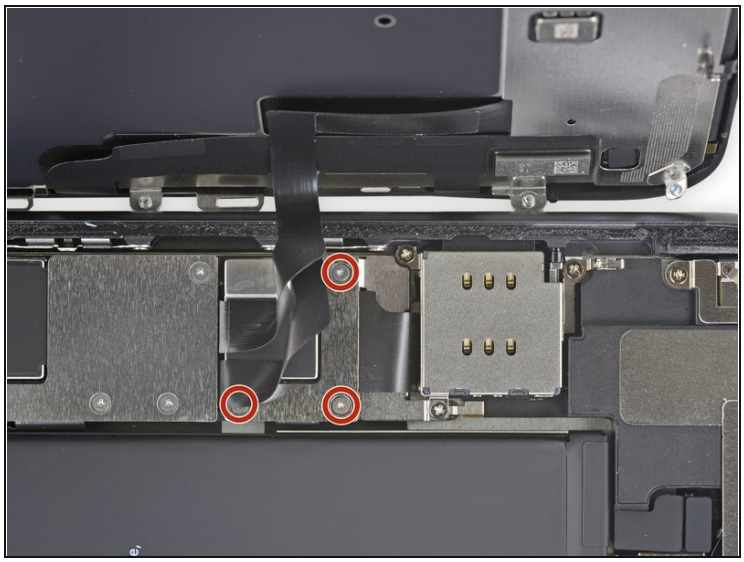


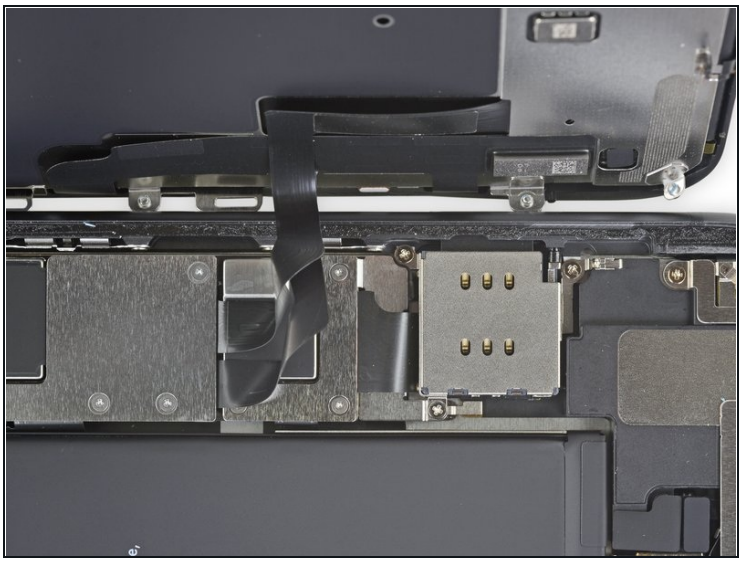


- To access the screws in the following step, tilt the display by slightly lifting its lower edge.

⚠ Be careful not to strain or tear the display cables.

Step 18 — Unscrew the battery connector cover



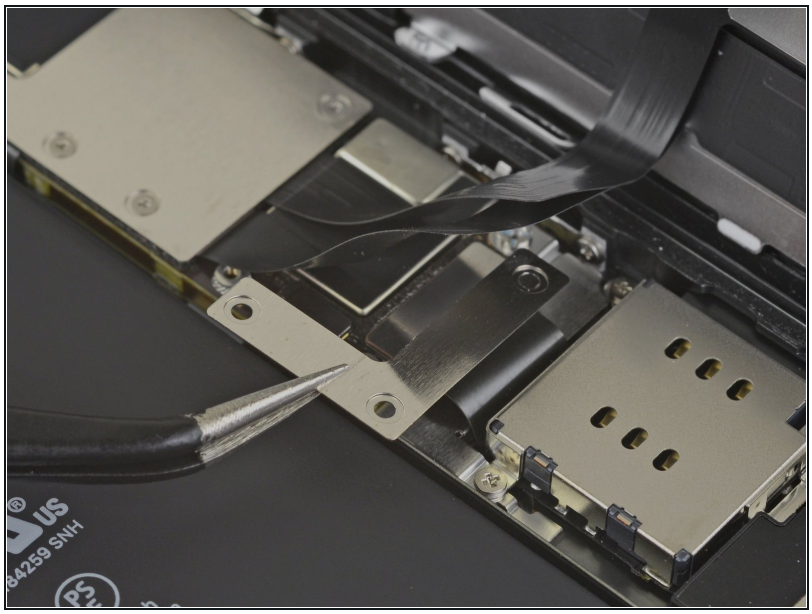


- Use a Y000 driver to remove the three 1.1 mm-long screws securing the battery connector bracket.

Throughout this repair, keep track of each screw and make sure it goes back exactly where it came from.

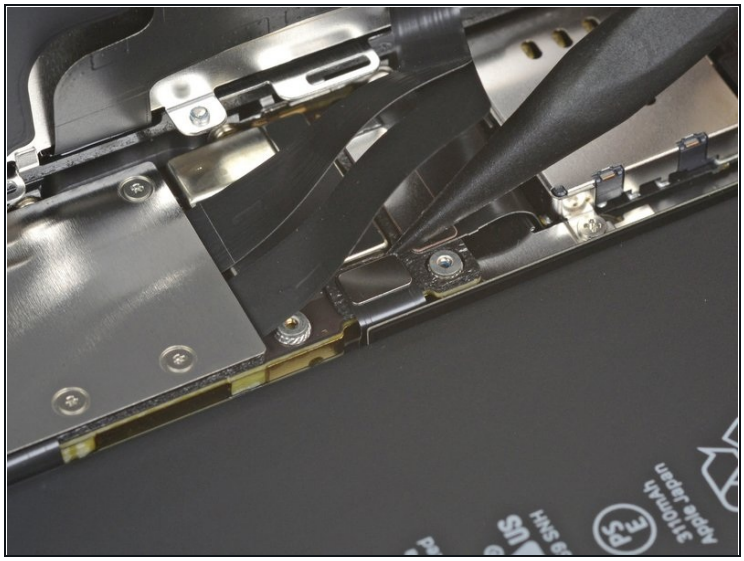
During reassembly, this is a good point to power on your iPhone and test all functions before you seal the display in place. Be sure to power your iPhone back down completely before you continue working.

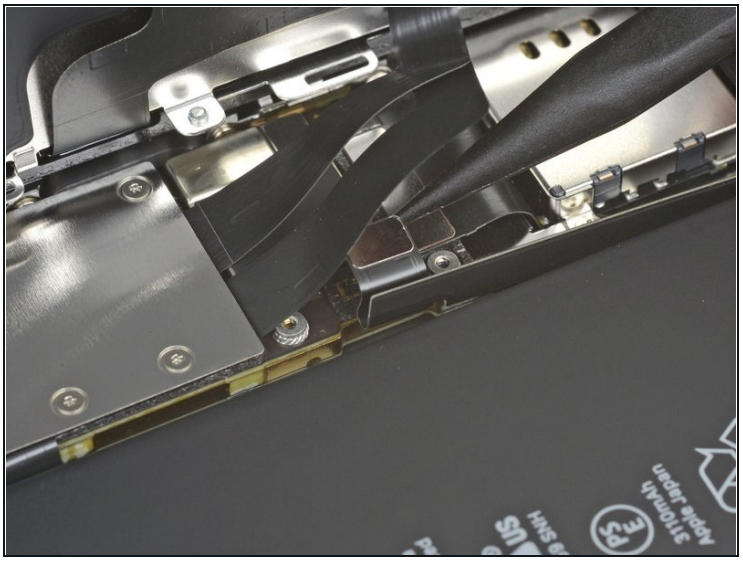
Step 19 — Remove the battery connector cover



- Remove the bracket.

Step 20 — Disconnect the battery



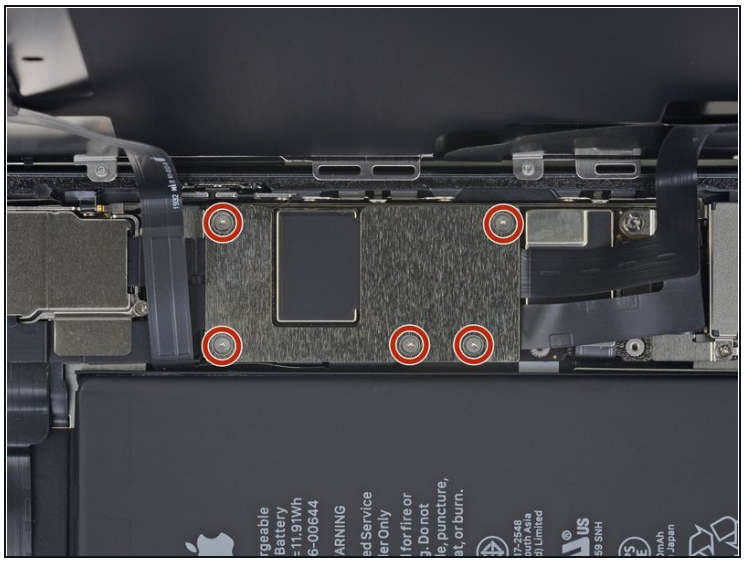


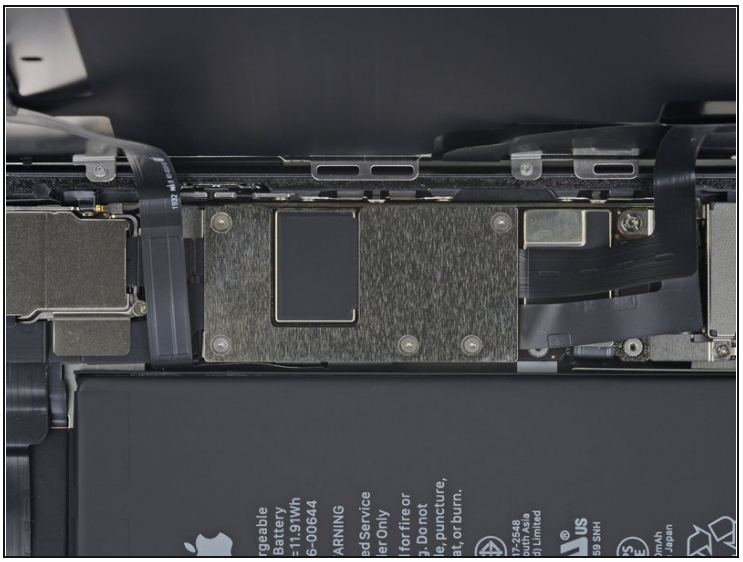
- Use a spudger or a clean fingernail to pry the battery connector up from its socket on the logic board.

  ⓘ Try not to damage the black silicone seal surrounding this and other board connections. These seals provide extra protection against water and dust intrusion.

- Bend the connector slightly away from the logic board to prevent it from accidentally contacting the socket.

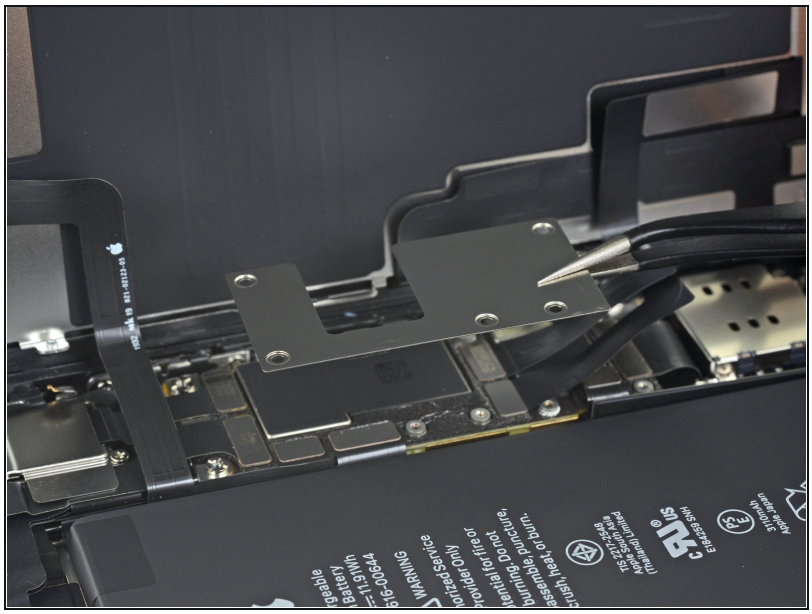
Step 21 — Unscrew the logic board cover screws





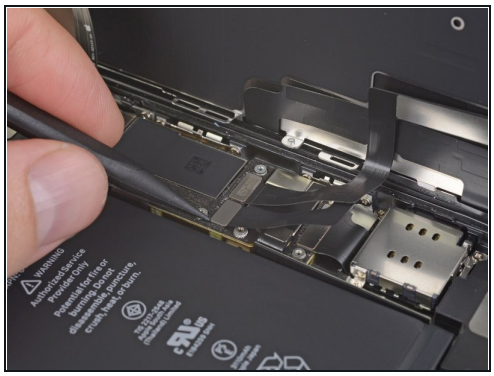
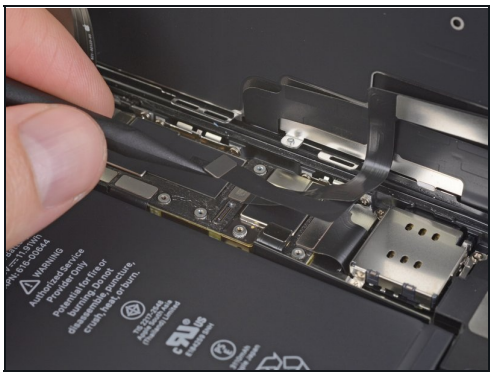
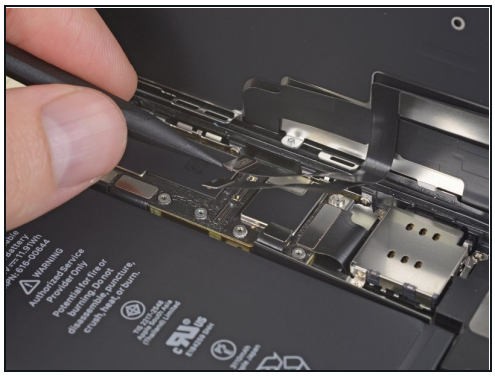
- Use a Y000 driver to remove the five 1.1 mm screws securing the logic board cover bracket.

Step 22 — Remove the logic board cover bracket



- Remove the bracket.

Step 23 — Disconnect the display

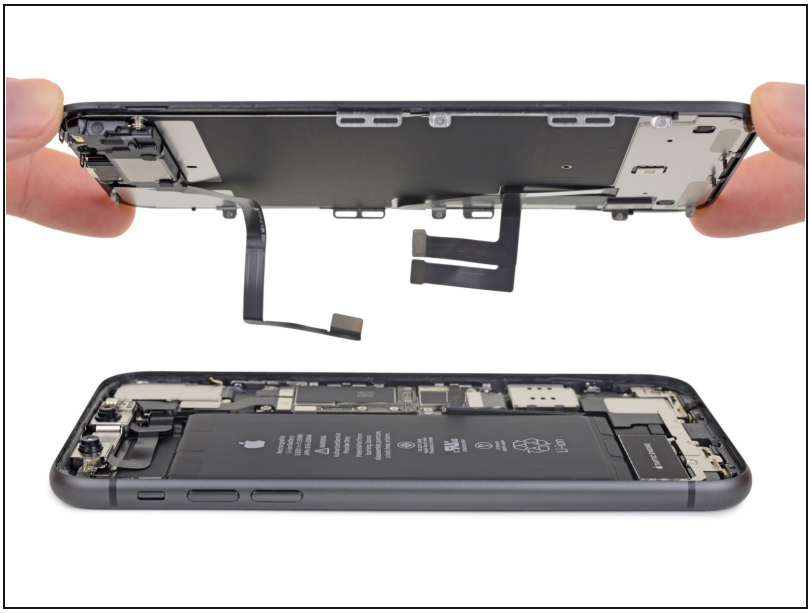
- Use a spudger or a fingernail to disconnect the LCD panel cable connector.
- Disconnect the digitizer connector next to it.

Step 24 — Disconnect the front sensors




- Use the point of a spudger or a fingernail to disconnect the front panel sensor assembly connector.

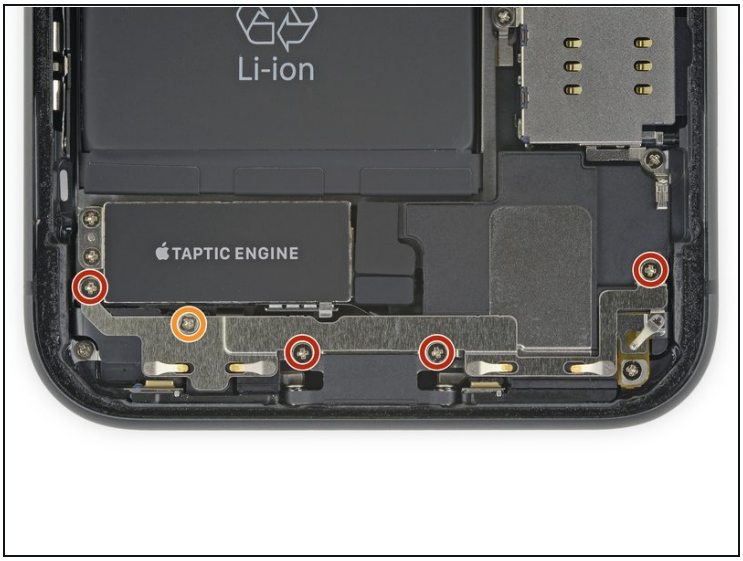
Step 25 — Remove the display assembly

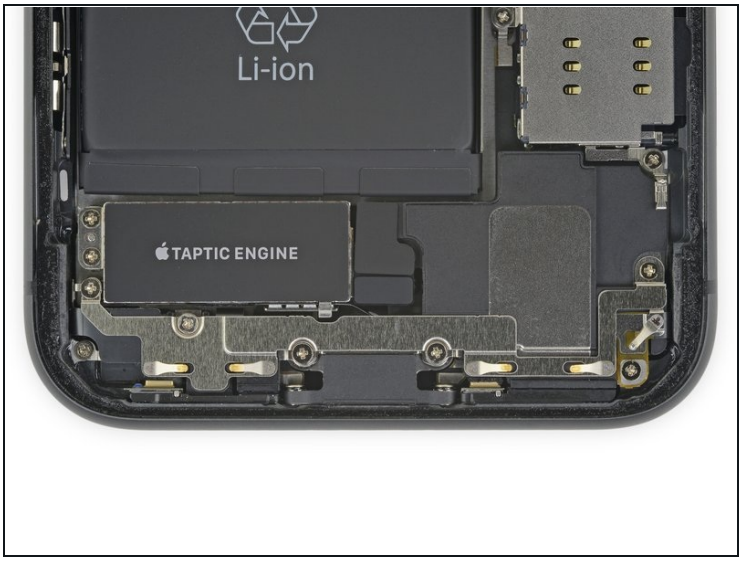


- Remove the display assembly.

- During reassembly, pause here if you wish to replace the waterproof adhesive around the edges of the display.

Step 26 — Remove the lower bracket screws





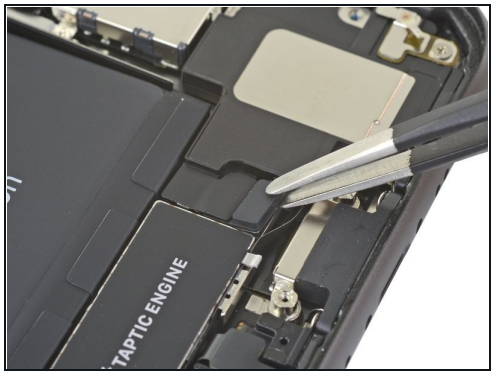
- Using a Phillips driver, remove the five screws securing the bracket below the Taptic engine and speaker:
  - Four 1.6 mm screws
  - One 1.3 mm screw

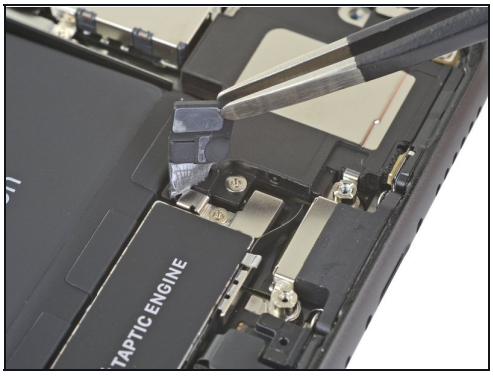
Step 27 — Remove the lower bracket

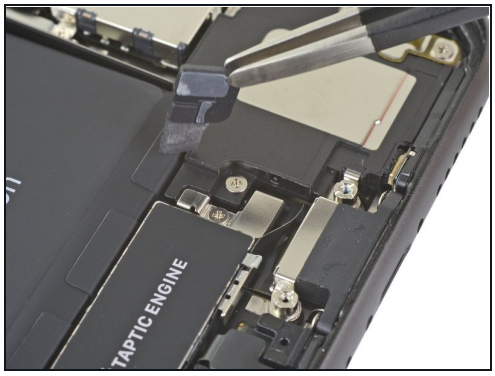


- Remove the lower bracket.

Step 28 — Remove the Taptic Engine connector tape



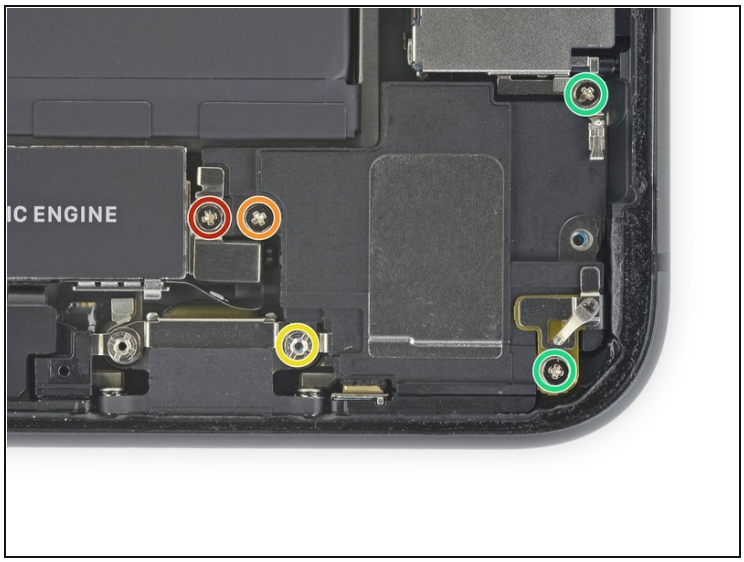


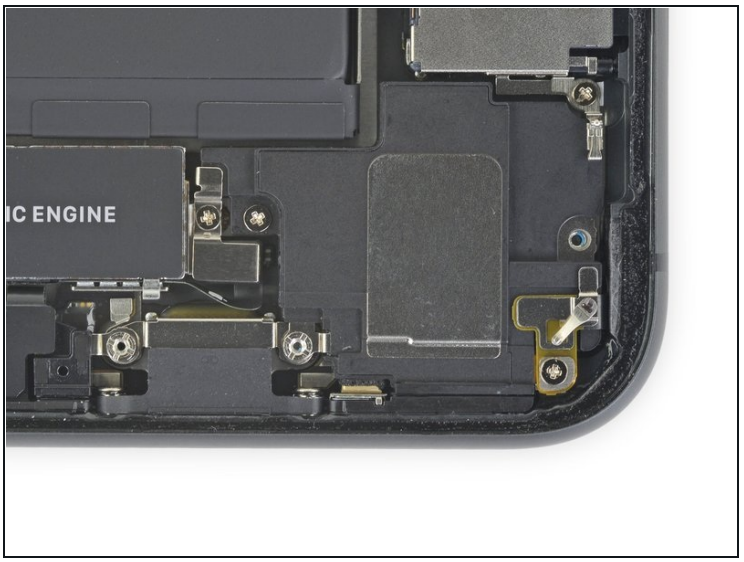


- Use tweezers to lift and remove the black tape and rubber pad covering the Taptic Engine connector.

ⓘ Use a little heat from a hair dryer or iOpener to make the tape easier to peel up and re-adhere later.

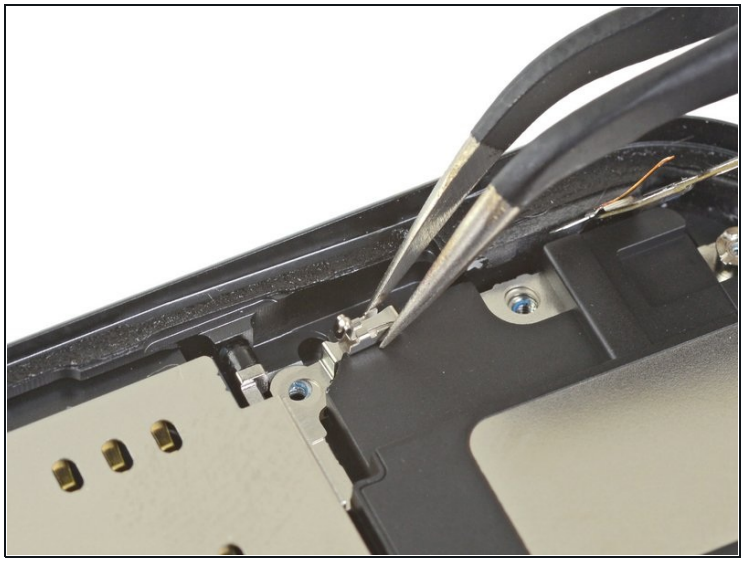
Step 29 — Unscrew the lower speaker

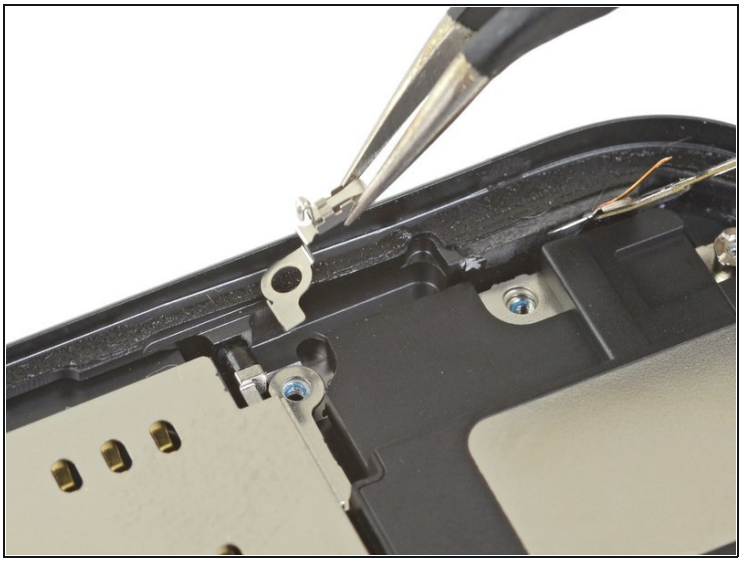




- Remove the five screws securing the speaker and brackets:
  - One 1.9 mm Phillips screw
  - One 2.3 mm Phillips screw
  - One 3.1 mm standoff screw
  - Two 1.6 mm Phillips screws

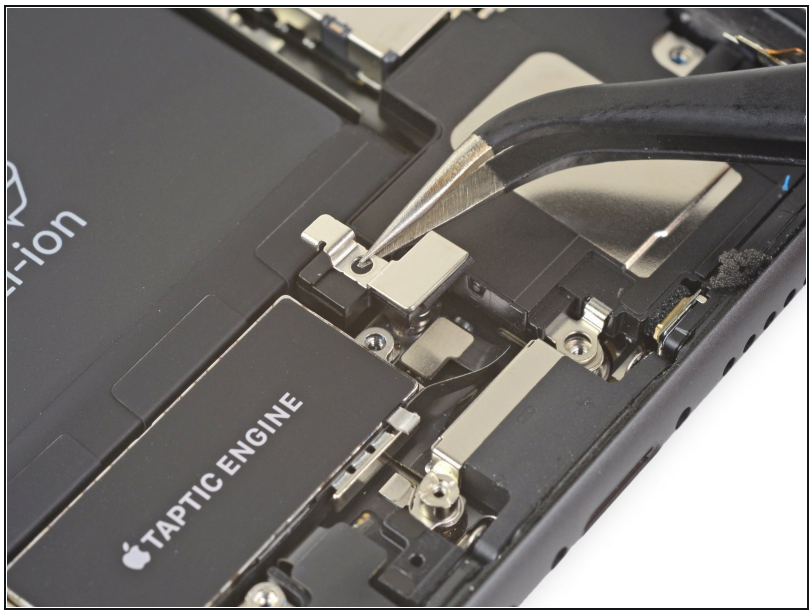
Step 30 — Remove the grounding clip





- Remove the small grounding clip on the top right corner of the speaker.

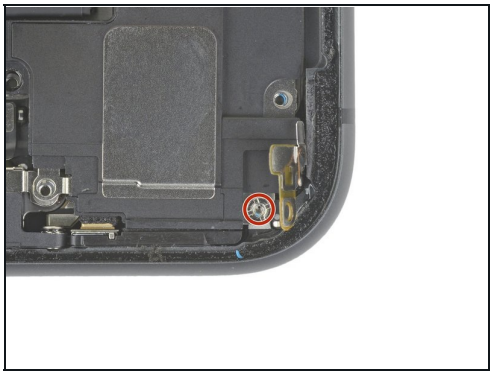
Step 31 — Remove the Taptic Engine connector cover

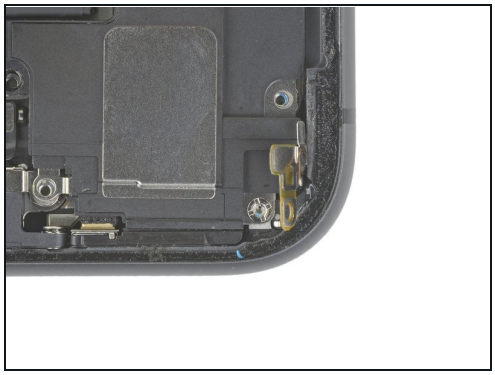


- Remove the Taptic Engine connector cover.

Step 32 — Remove the speaker standoff screw







- Lift and push aside the small board covering the remaining speaker screw in the bottom right corner of the iPhone.
- Remove the 2.4 mm standoff screw underneath.

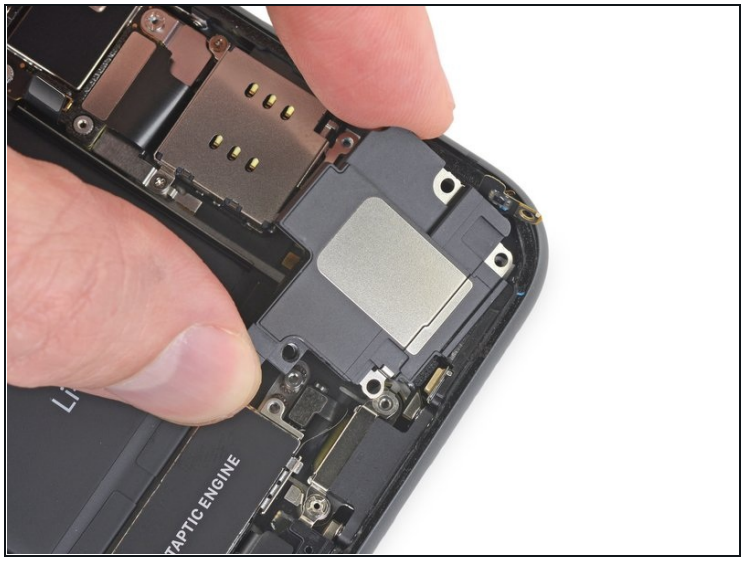
Step 33 — Loosen the speaker

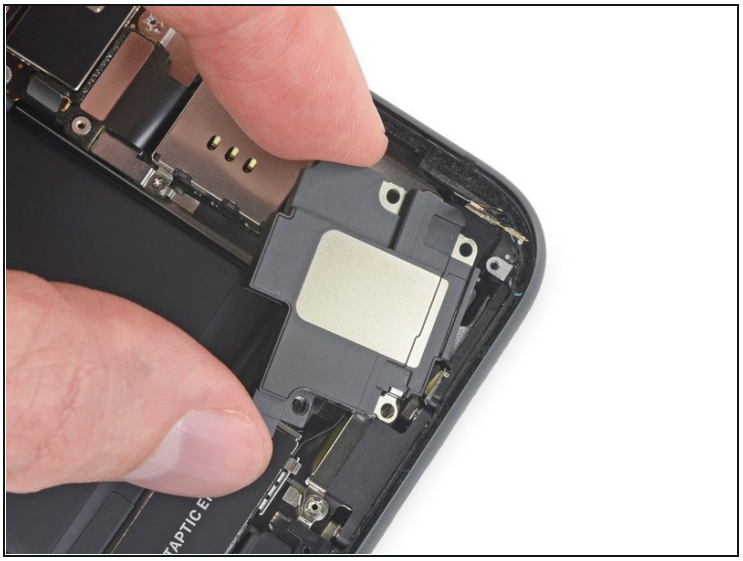




- Insert a spudger under the top edge of the speaker, near the edge of the iPhone's case.
- Gently pry up and lift the top edge of the speaker.

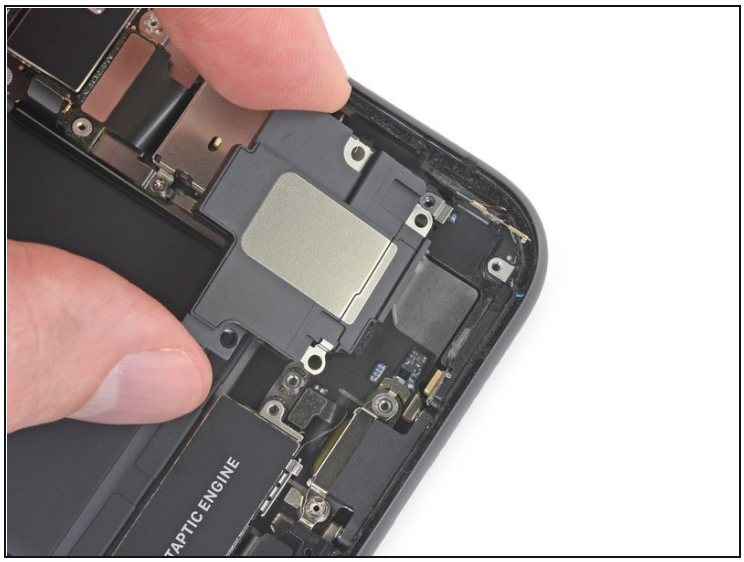
Step 34

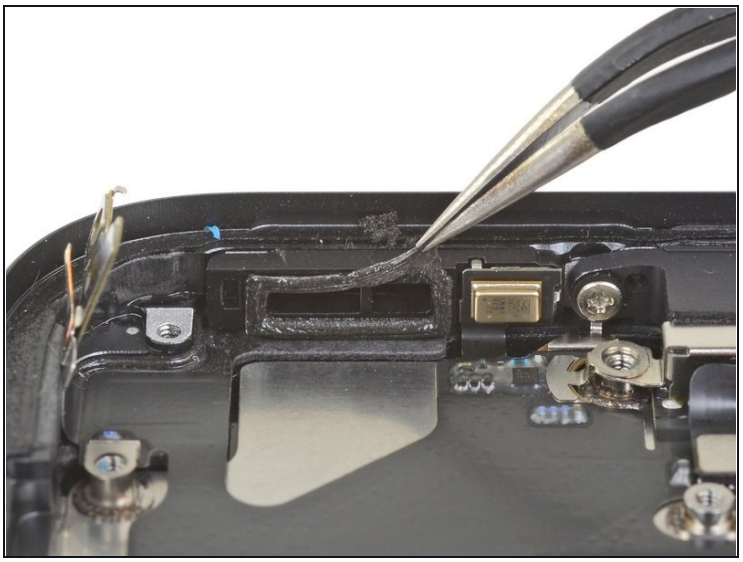




- Hold the speaker by its side edges and rock it side-to-side, separating the adhesive securing it to the bottom edge of the iPhone.
- Pull the speaker away from the bottom edge of the iPhone until the adhesive gasket separates.

Step 35 — Remove the speaker





- Remove the speaker.

Optionally, to help protect against water and dust intrusion, replace the speaker's adhesive gasket during reassembly:

- Peel away any remaining adhesive with tweezers.
- Prep the area underneath by cleaning it with a bit of isopropyl alcohol and a lint-free cloth or coffee filter so that the gasket adheres properly.
- Install a new gasket onto the speaker, and then install the speaker.

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.

Repair didn’t go as planned? Try some basic troubleshooting, or ask our iPhone 11 Answers community for help.