



iPhone 7 Plus Logic Board Replacement

Remove or replace the logic board (a.k.a. motherboard) on your iPhone 7 Plus.

Written By: Jeff Suovanen



INTRODUCTION

Use this guide to remove or replace a faulty logic board in your iPhone 7 Plus.

It's important to note that each iPhone's logic board and Touch ID fingerprint sensor are paired at the factory, so replacing the logic board will disable Touch ID *unless* you also install a replacement home button that has been properly paired to your new logic board.



TOOLS:

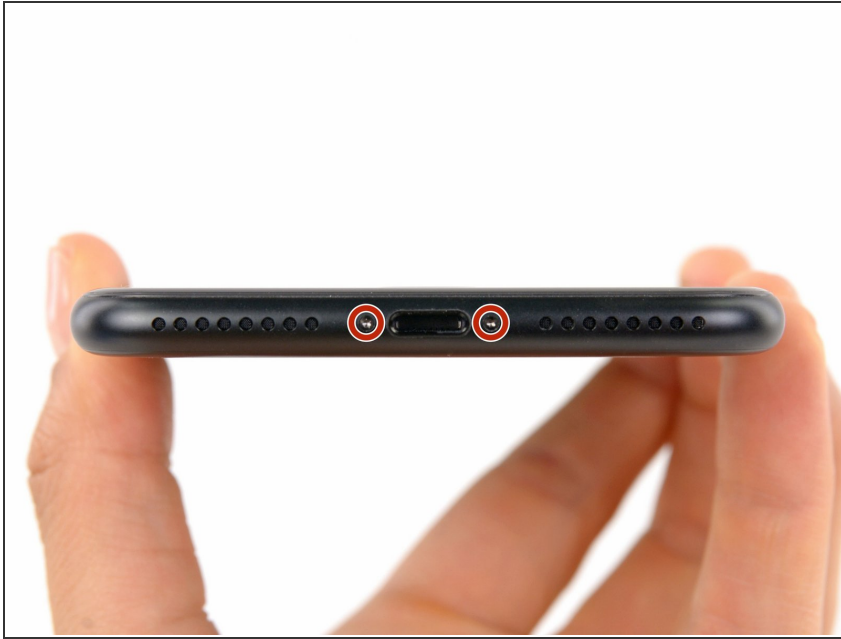
- [SIM Card Eject Tool](#) (1)
- [P2 Pentalobe Screwdriver iPhone](#) (1)
- [iOpener](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Picks set of 6](#) (1)
- [Spudger](#) (1)
- [Tri-point Y000 Screwdriver Bit](#) (1)
- [Tweezers](#) (1)
- [Phillips #000 Screwdriver](#) (1)
- [Standoff Screwdriver for iPhones](#) (1)



PARTS:

- [iPhone 7 Plus A1784 \(AT&T\) Logic Board](#) (1)
- [iPhone 7 Plus A1661 \(Sprint\) Logic Board](#) (1)
- [iPhone 7 Plus Upper Cable Bracket](#) (1)
- [iPhone 7 Plus Screw Set](#) (1)
- [iPhone 7 Plus Display Assembly Adhesive](#) (1)

Step 1 — 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 3.4 mm 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 — Opening Procedure



- ⓘ Heating the lower edge of the iPhone will help soften the adhesive securing the display, making it easier to open.
- Use a hairdryer or [prepare an iOpener](#) and apply it to the lower edge of the iPhone for about a minute in order to soften up the adhesive underneath.

Step 3



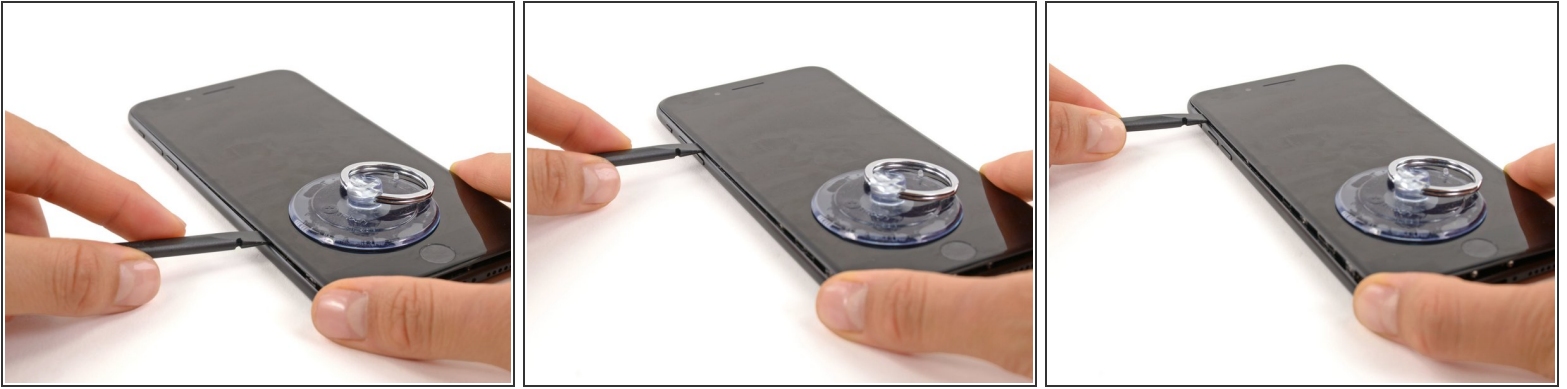
- Apply a suction cup to the lower half of the front panel, just above the home button.
 - ⓘ Be sure the suction cup does not overlap with the home button, as this will prevent a seal from forming between the suction cup and front glass.
 - ⓘ If your display is badly cracked, [covering it with a layer of clear packing tape](#) may allow the suction cup to adhere. Alternatively, very strong tape may be used instead of the suction cup. If all else fails, you can superglue the suction cup to the broken screen.

Step 4



- Pull up on the suction cup with firm, constant pressure to create a slight gap between the front panel and rear case.
- Insert the flat end of a spudger into the gap.
 - ⓘ 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, rock the screen up and down to weaken the adhesive until you can fit a spudger inside.
- While pulling up on the suction cup, twist the spudger to widen the opening between the screen and rear case.

Step 5



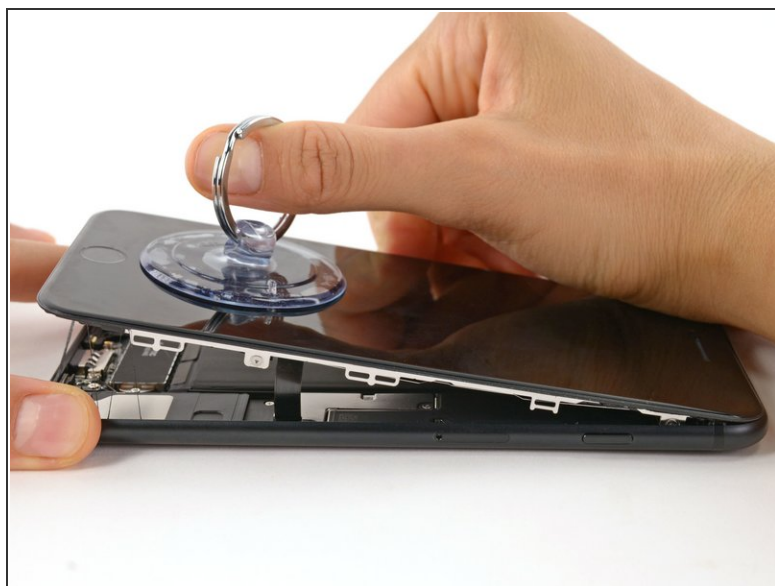
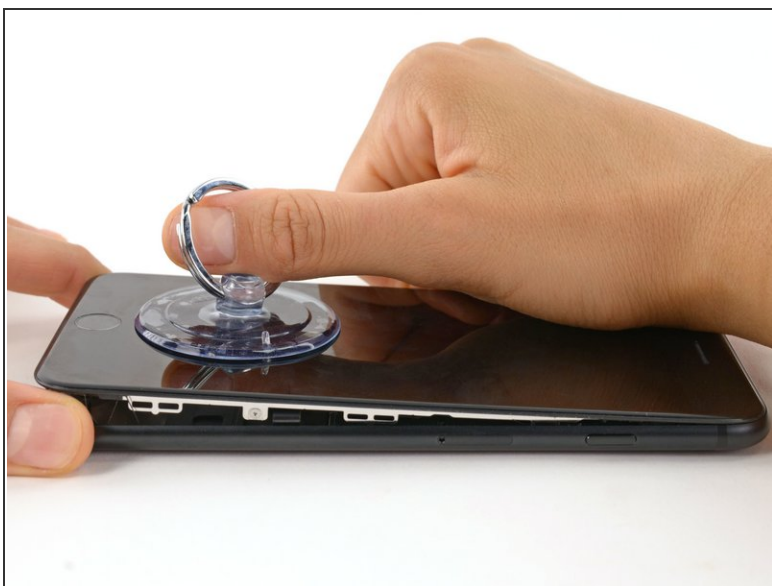
- Insert the flat end of the spudger between the front panel and the rear case at the lower left edge of the iPhone.
 - Slide the spudger up the left edge of the phone starting at the lower edge and moving towards the volume control buttons and silent switch, breaking up the adhesive holding the display in place.
- ⚠ Do not try to pry the top edge of the display away from the rear case, as it is held in place by plastic clips that may break.

Step 6




- Remove the spudger from the left side of the phone and insert the flat end into the bottom right corner.
- Slide the spudger up the right edge of the phone to the top corner, breaking up the adhesive holding the display in place.

Step 7



- Pull up on the suction cup to lift up the display and open the iPhone.

 **Do not raise the display more than 10°** as there are delicate ribbon cables along the right edge of the device connecting the display to the logic board.

Step 8



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

Step 9



- Slide an opening pick underneath the display along the top edge of the phone to loosen the last of the adhesive.

Step 10



- Pull the display assembly slightly away from the top edge of the phone to disengage the clips holding it to the rear case.
- 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.

Step 11 — Battery Disconnection



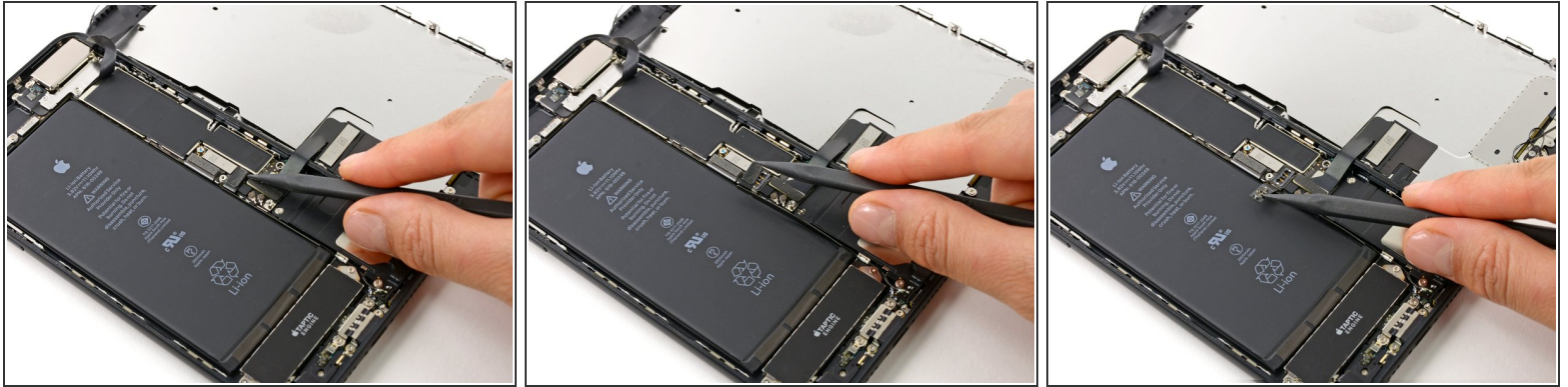
- Remove the following four tri-point Y000 screws securing the lower display cable bracket to the logic board:
 - Three 1.2 mm screws
 - One 2.6 mm screw

Step 12



- Remove the lower display cable bracket.


Step 13





- Use the point of a spudger to lift the battery connector out of its socket on the logic board.
- ⓘ Bend the connector cable up slightly to prevent it from making contact with the socket and providing power to the phone.

Step 14 — Display Assembly



 Make sure the battery is disconnected before you disconnect or reconnect the cables in this step.

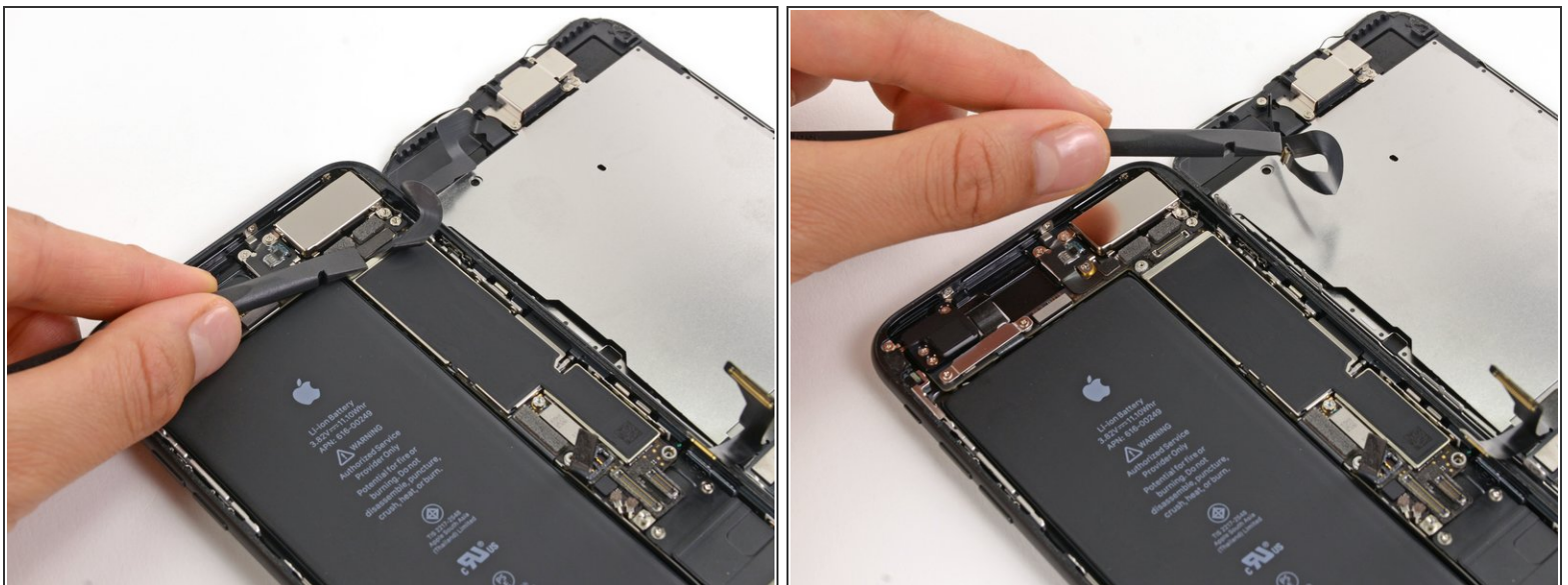
- Use the flat end of a spudger or a fingernail to disconnect the two lower display connectors by prying them straight up from their sockets on the logic board.
-  To re-attach press connectors, press down on one end until it clicks into place, then repeat on the other end. Do not press down on the middle. If the connector is even slightly misaligned, the connector can bend, causing permanent damage.
-  If you have a blank screen, white lines on the display, or partial or complete lack of touch response after reassembling your phone, try disconnecting and carefully reconnecting both of these cables and make sure they are fully seated.

Step 15



- Remove the three tri-point Y000 screws securing the bracket over the front panel sensor assembly connector:
 - One 1.3 mm screw
 - Two 1.0 mm screws
- Remove the bracket.

Step 16



- Disconnect the front panel sensor assembly connector from its socket on the logic board.
- ✦ This press connector should also be reconnected one end at a time to minimize the risk of bending.

This document was generated on 2020-04-18 02:26:46 PM (MST).

Step 17



- Remove the display assembly.
- ★ During reassembly, pause here if you wish to [replace the adhesive around the edges of the display](#).

Step 18 — Left Wi-Fi Antenna



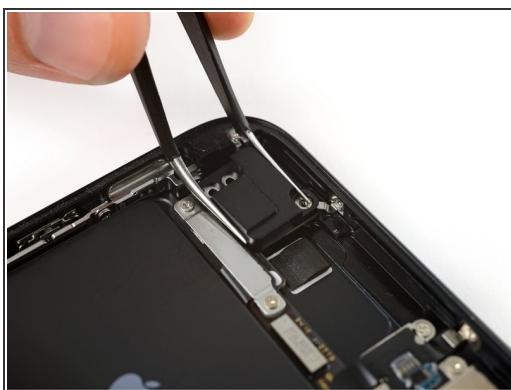
- Remove three Phillips screws securing the antenna component:
 - Two 1.3 mm screws
 - One 1.2 mm screw

Step 19



- Remove the 1.3 mm Phillips screw securing the antenna component to the top edge of the rear case.

Step 20



- ⓘ The screw boss at the top of the antenna component is tucked into a small recess in the top edge of the iPhone.
- Tilt the antenna component up towards the top of the phone.
- Slide the screw boss down and out of its recess.

Step 21



- Remove the top left antenna component.

Step 22 — SIM Card



- Insert a SIM card eject tool or a paperclip into the small hole in the SIM card tray.
- Press firmly to eject the tray.

Step 23



- Remove the SIM card tray from the iPhone.
 - ❗ The SIM card will fall out of the tray easily.
- ✦ When reinserting the SIM card, ensure that it is in the proper orientation relative to the tray.
- ✦ A thin rubber gasket around the SIM tray provides water and dust protection. If this gasket is damaged or missing, replace the gasket to protect your iPhone's internal components.

Step 24 — Logic Board



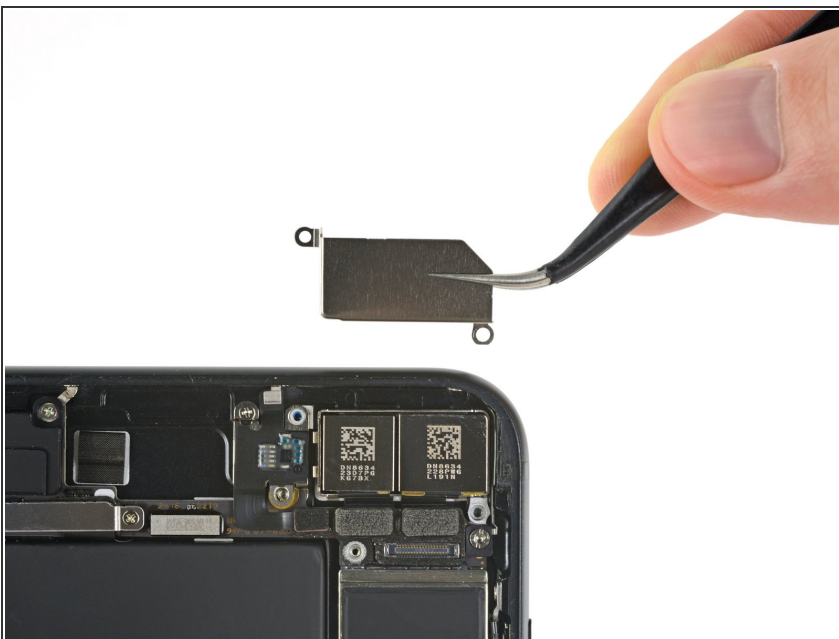
- Use an iFixit opening tool or a fingernail to disconnect the dual camera cable connectors by prying them straight up from their sockets.

Step 25



- Remove the two screws securing the rear-facing camera bracket:
 - One 1.6 mm Phillips screw
 - One 2.2 mm standoff screw
- ⓘ Standoff screws are best removed using an [iPhone Standoff Screwdriver Bit](#) and [driver handle](#).
- ⚠ 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 26



- Remove the bracket covering the rear-facing camera.

Step 27



- Remove the two 1.3 mm Phillips screws securing the upper cable bracket.

Step 28



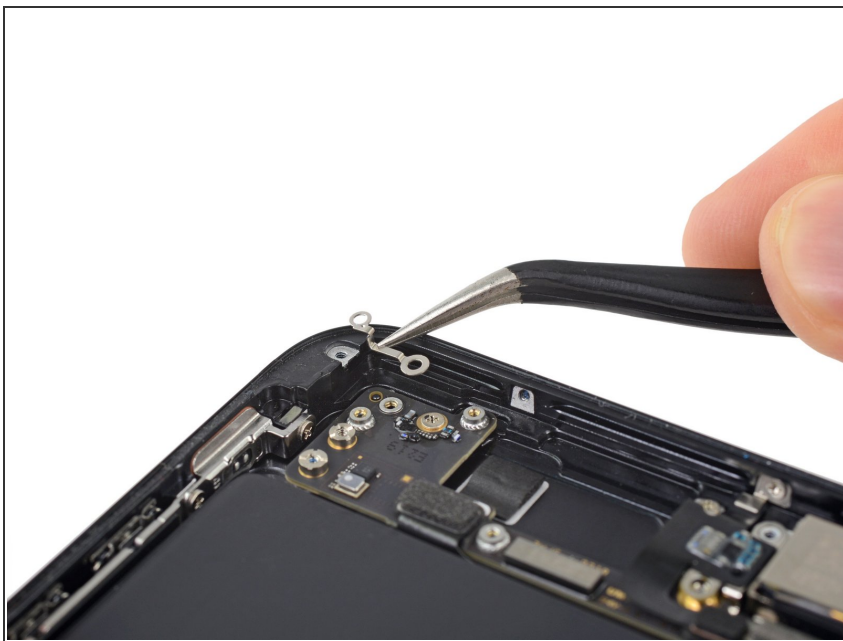
- Remove the upper cable bracket.

Step 29



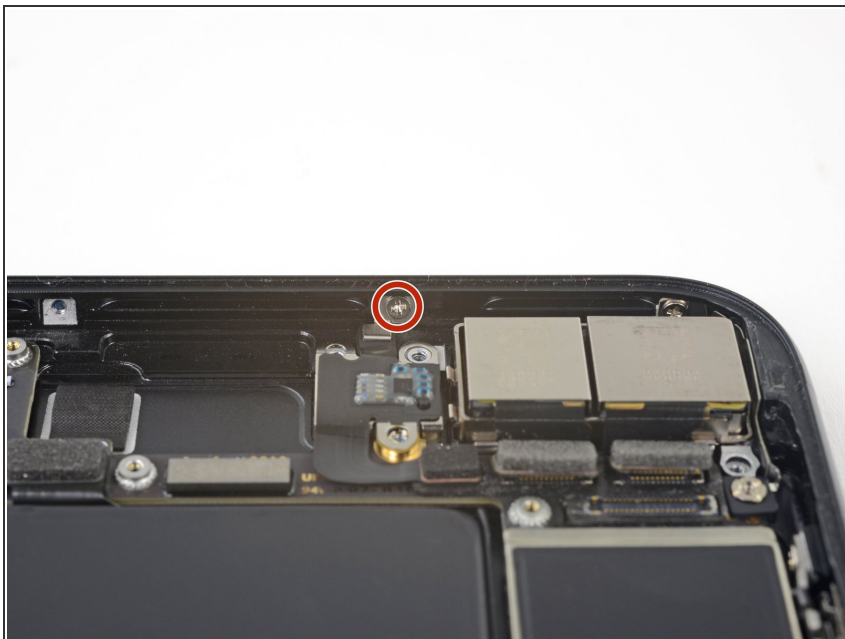
- Remove the two 1.3 mm Phillips screws securing the grounding clip at the top left edge of the logic board.

Step 30



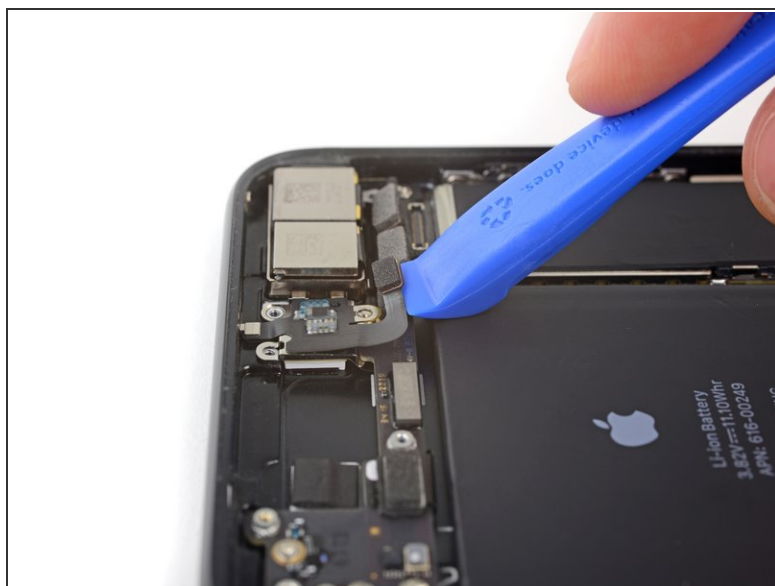
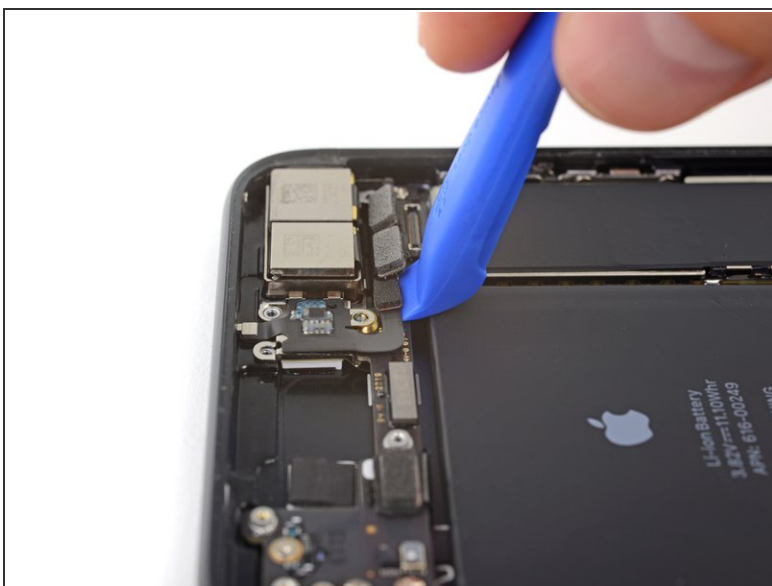
- Remove the grounding clip.

Step 31



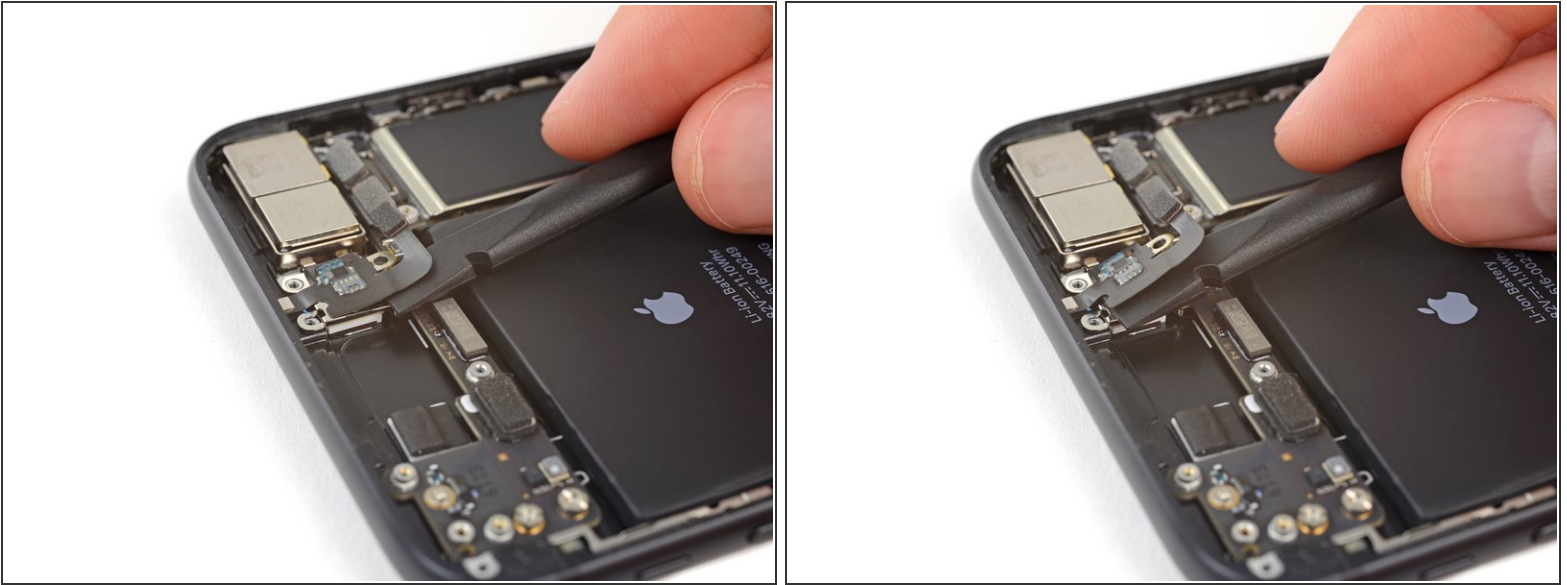
- Remove the 1.3 mm Phillips screw securing the antenna flex cable to the top edge of the iPhone's rear case.

Step 32



- Use a fingernail or the sharp end of an iFixit opening tool to pry up and disconnect the antenna flex cable connector from the logic board.

Step 33



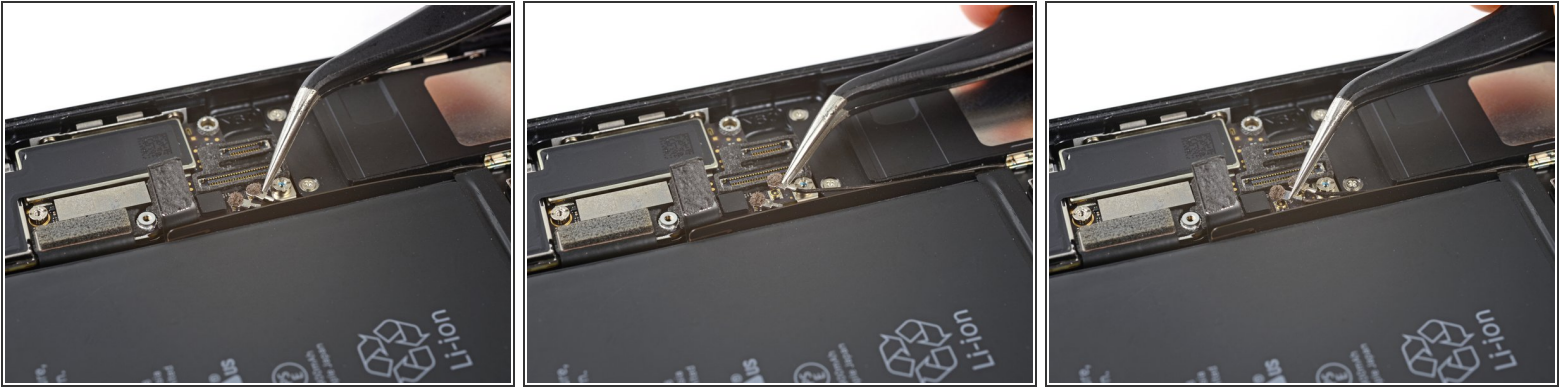
- Slide the flat edge of a spudger underneath the antenna flex cable to separate the adhesive holding it in place.

Step 34



- ❗ The screw boss at the top of the antenna flex cable is tucked into a small recess in the top edge of the iPhone.
- Tilt the antenna flex cable up toward the top of the iPhone.
- Slide the screw boss down and out of its recess.
- Remove the antenna flex cable.

Step 35



- Use a thin pry tool or tweezers to carefully pry up and disconnect the two coaxial cable connectors from the logic board.
- ☑ During reassembly, these can be tricky to reconnect. One at a time, hold each connector in place over its socket and press down with the flat of your spudger. The connector should snap into place.

Step 36



- Disconnect the two remaining ribbon cables from the logic board:
 - Disconnect the upper cable connector by prying from the top
 - Disconnect the Lightning port connector by prying along the outer edge

Step 37



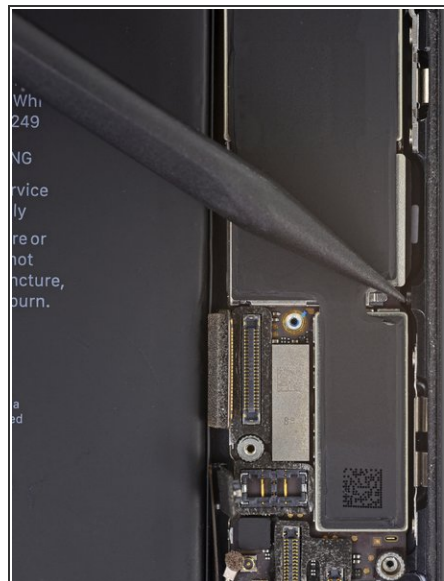
- Remove the seven screws securing the logic board:

- One 1.3 mm Phillips screw
- Two 2.1 mm standoff screws
- Two 2.0 mm standoff screws
- Two 2.2 mm standoff screws

ⓘ Standoff screws are best removed using an [iPhone Standoff Screwdriver Bit](#) and [driver handle](#).

⚠ 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 38



- Use the point of a spudger to push the SIM card ejector out of the logic board's way.

This document was generated on 2020-04-18 02:26:46 PM (MST).

Step 39



- Use the point of a spudger to carefully de-route the two coaxial cables from the small metal clip holding them to the logic board.

Step 40



- Lift the logic board from the bottom edges and slide it toward the bottom of the iPhone to remove it.
- ⚠ Be careful not to snag the logic board on any cables.
- 📌 During reassembly, note the position of the black grounding clip at the top right edge of the logic board, near the rear cameras. The logic board should slide *underneath* the clip.

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

