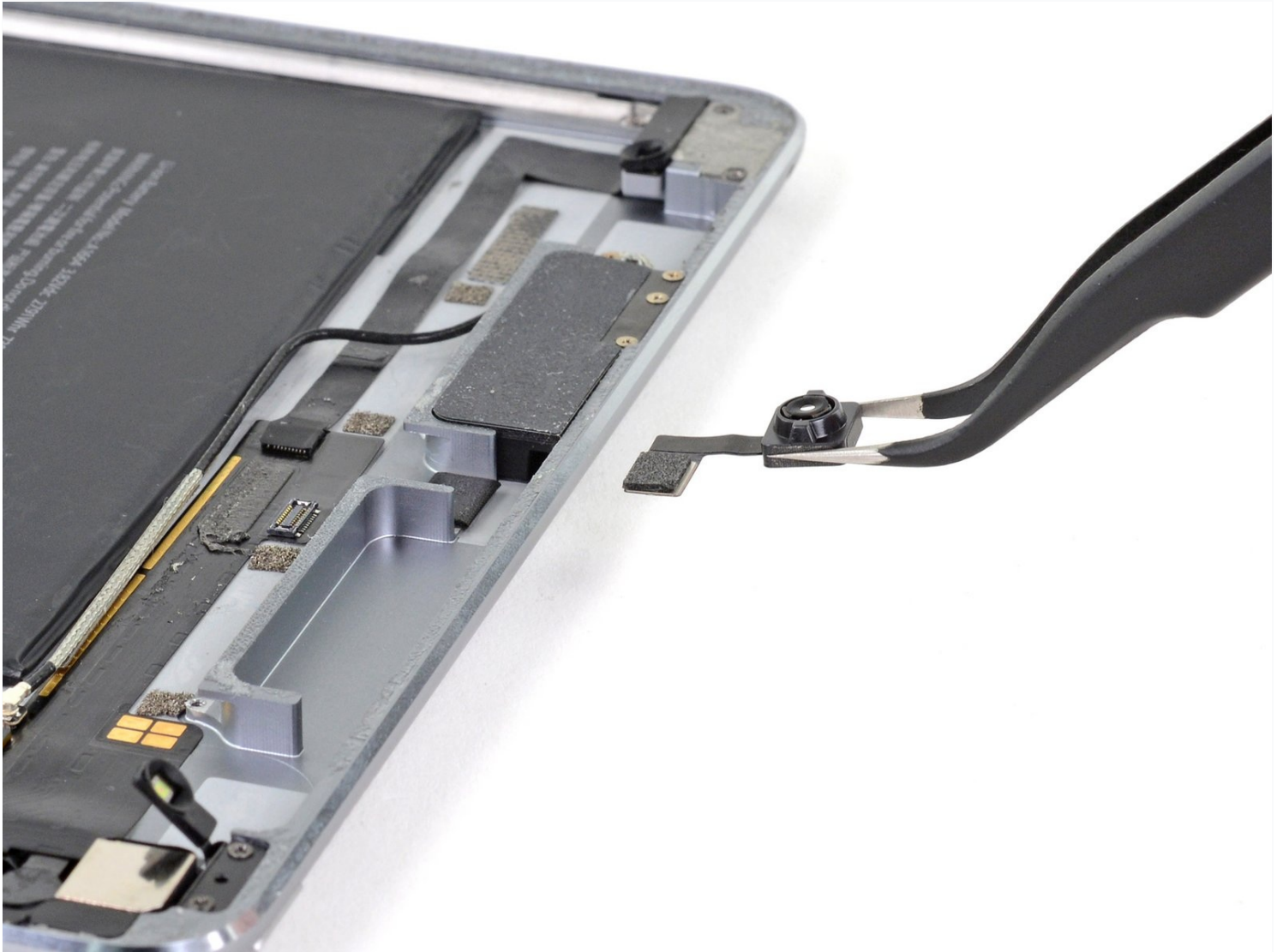




iPad Pro 9.7" Front Camera Replacement

Follow this guide to remove or replace the...

Written By: Kyle Smith



INTRODUCTION

Follow this guide to remove or replace the front camera on an iPad Pro 9.7". You may need to do this if the front camera isn't working.

For your safety, discharge the battery below 25% before disassembling your device. This reduces the risk of a dangerous thermal event if the battery is accidentally damaged during the repair. If your battery is swollen, [take appropriate precautions](#).

Some photos in this guide are from a different model and may contain slight visual discrepancies, but they won't affect the guide procedure.



TOOLS:

[Anti-Clamp](#) (1)
[iOpener](#) (1)
[Suction Handle](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Slip Joint Pliers](#) (1)
[Phillips #00 Screwdriver](#) (1)
[Battery Blocker](#) (1)
[Tweezers](#) (1)
[Spudger](#) (1)
[iFixit Opening Tool](#) (1)
[Isopropyl Alcohol \(90% or Greater\)](#) (1)
[Deck of Cards](#) (1)



PARTS:

[iPad Pro 9.7" Front Camera](#) (1)
[Tesa 61395 Tape](#) (1)

Step 1 — iPad Pro 9.7" Opening Procedure



- 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 2



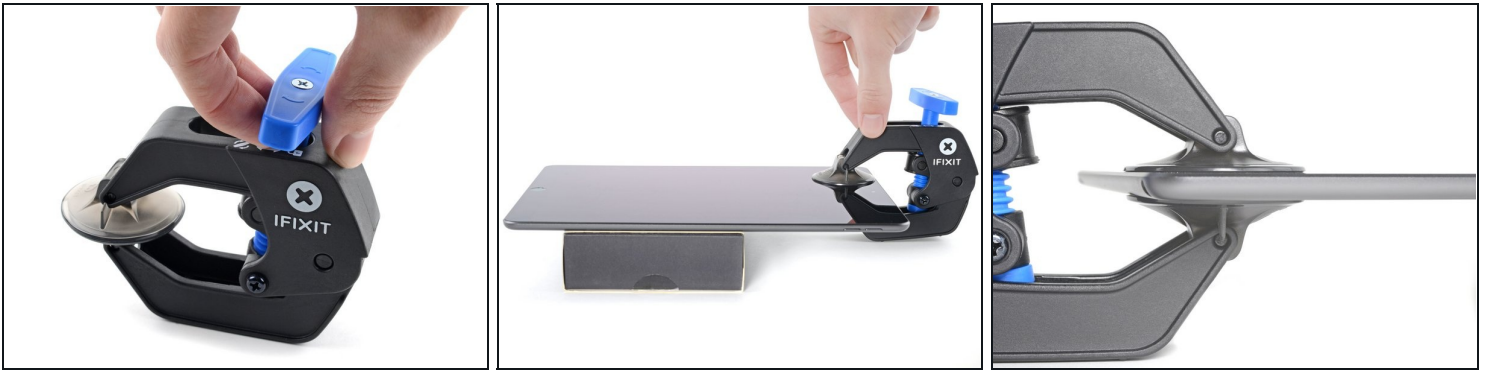
- ① The following steps involve using an iOpener to soften the adhesive holding the front panel assembly in place. When using the iOpener, be sure to heat it in the microwave for no more than 30 seconds.
- Handling it by the tabs on either end, place a heated iOpener over the top edge of the iPad.
- Let the iOpener sit on the iPad for two minutes to soften the adhesive securing the front panel to the rest of the iPad.

Step 3



- ⓘ While the iPad looks uniform from the outside, there are delicate components under certain portions of 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:
 - Home Button
 - Front Facing Camera
 - Main Camera

Step 4 — Anti-Clamp instructions



- ① 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.**
- ① For complete instructions on how to use the Anti-Clamp, [check out this guide](#).
- Elevate the iPad enough for the Anti-Clamp's arms to rest above and below the screen.
- Pull the blue handle towards the hinge to disengage opening mode.
- Position the suction cups near the top edge of the iPad—one on the front, and one on the back.
- Push down on the cups to apply suction to the desired area.
- ① If you find that the surface of your device is too slippery for the Anti-Clamp to hold onto, you can use packing tape to create a grippier surface.

Step 5



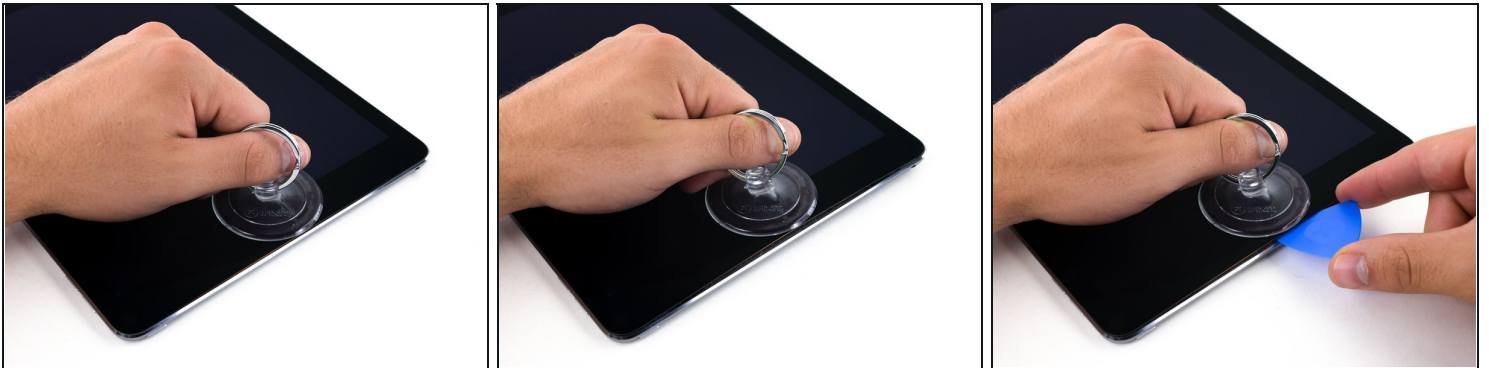
- Push the blue handle away from the hinge to engage opening mode.
- Turn the handle clockwise until you see the cups start to stretch.
 - ⓘ Make sure the suction cups remain aligned to each other. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.
- Wait one minute to give the adhesive a chance to release and present an opening gap.
- Insert an opening pick under the screen when the Anti-Clamp creates a large enough gap.
 - ⓘ If the Anti-Clamp doesn't create a sufficient gap, apply more heat to the area and rotate the handle clockwise half a turn.
- ⚠ **Don't crank more than a half a 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



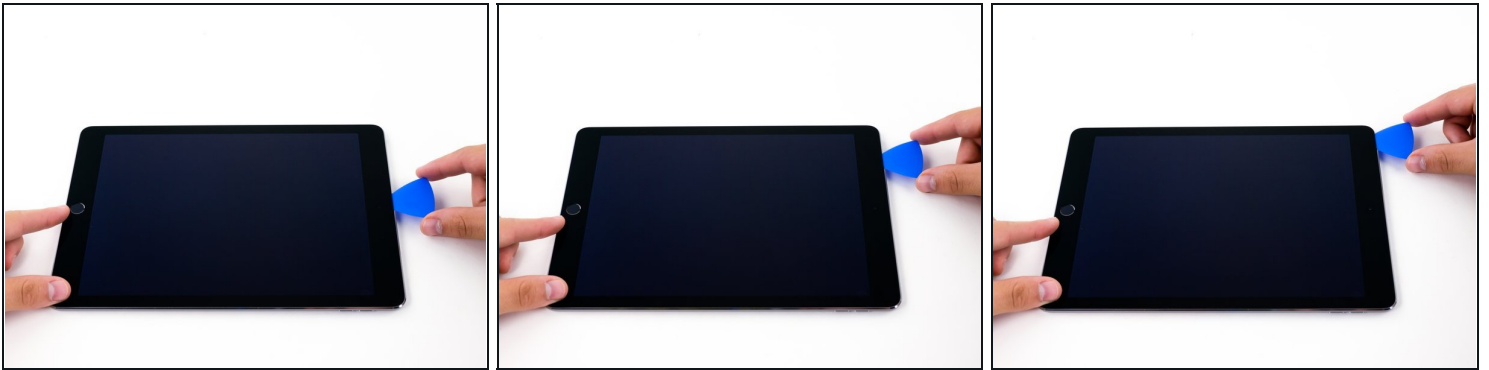
- Place a suction cup over the iPad's front-facing camera and press down to create a seal.
 - ① To get the most leverage, place the suction cup as close to the edge as possible without going past the edge of the display.

Step 7



- Firmly pull up on the suction cup to create a small gap between the front panel and the rear case.
 - ⚠ Do not pull too hard or you may shatter the glass.
- Once you've opened a sufficient gap, insert an opening pick into the gap to prevent the adhesive from resealing.

Step 8

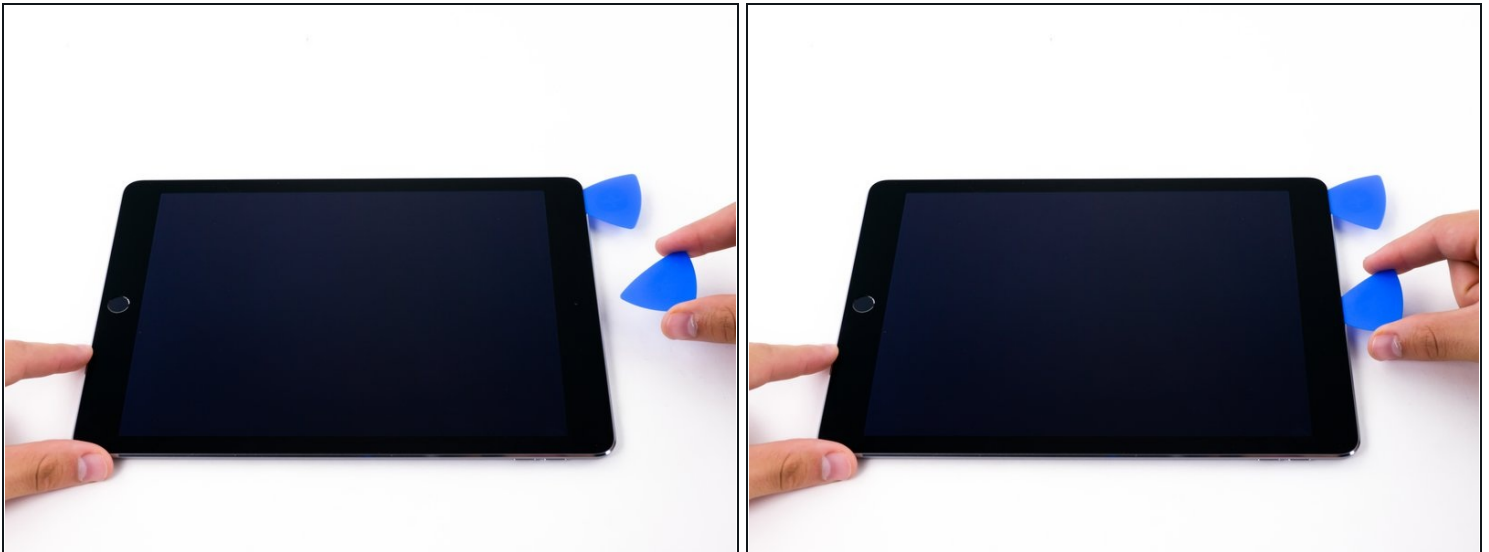


- Slide the pick along the edge of the display, towards the headphone jack.
- If there is still a considerable amount of resistance when sliding the opening pick, repeat the iOpener heating procedure and apply additional heat.

⚠ Don't insert the pick past the bezel into the display area, or you will damage it.

- ① A good rule of thumb is to never insert the opening pick more than a quarter inch into the iPad.

Step 9



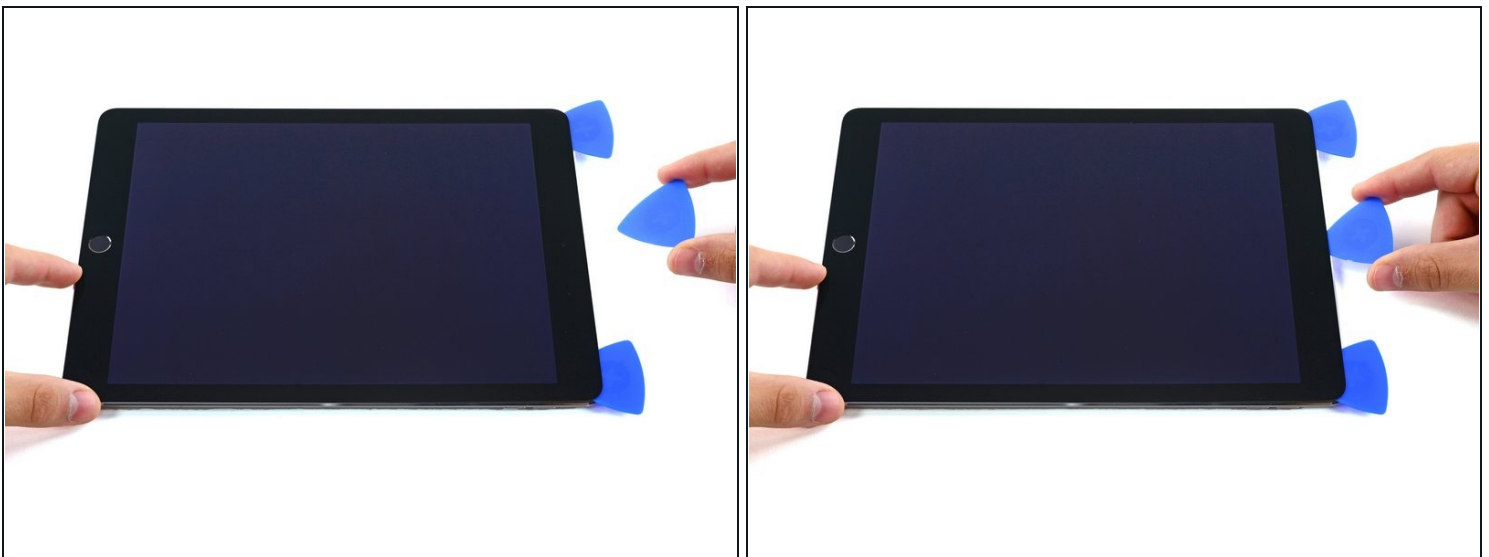
- Insert a second opening pick by the front-facing camera.

Step 10



- Slide the second pick along the top edge of the iPad, towards the Sleep/Wake Button.

Step 11



- Insert a third pick by the front-facing camera.

Step 12



- Bring the right opening pick down and around the top right corner of the iPad.

Step 13



- Bring the left opening pick around the top left corner of the tablet.

Step 14



- Reheat the iOpener and lay it over the right edge of the display to loosen the adhesive underneath.

Step 15



- Slide the right opening pick roughly halfway down the display.

Step 16



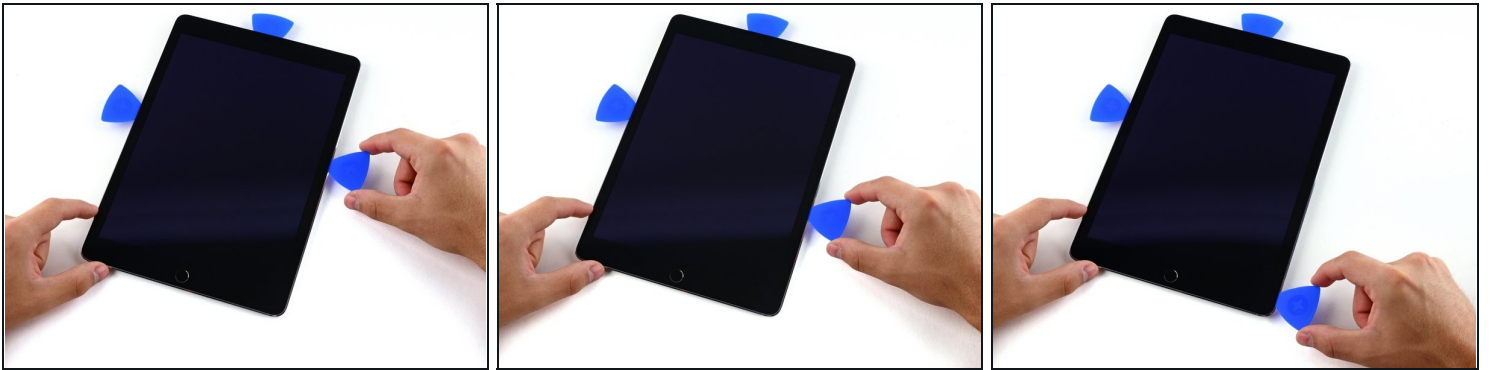
- Reheat the iOpener and apply heat to the left side of the iPad.

Step 17



- Slide the left-hand opening pick about halfway down the edge of the display.

Step 18



- Slide the opposite opening pick down to the bottom right corner of the iPad.
- ⓘ If necessary, reheat the adhesive on the right edge to loosen the display assembly.

Step 19



- Slide the left-hand opening pick down the edge of the display until you reach the corner.

Step 20



- Use the iOpener to apply heat to the bottom edge of the iPad.

Step 21



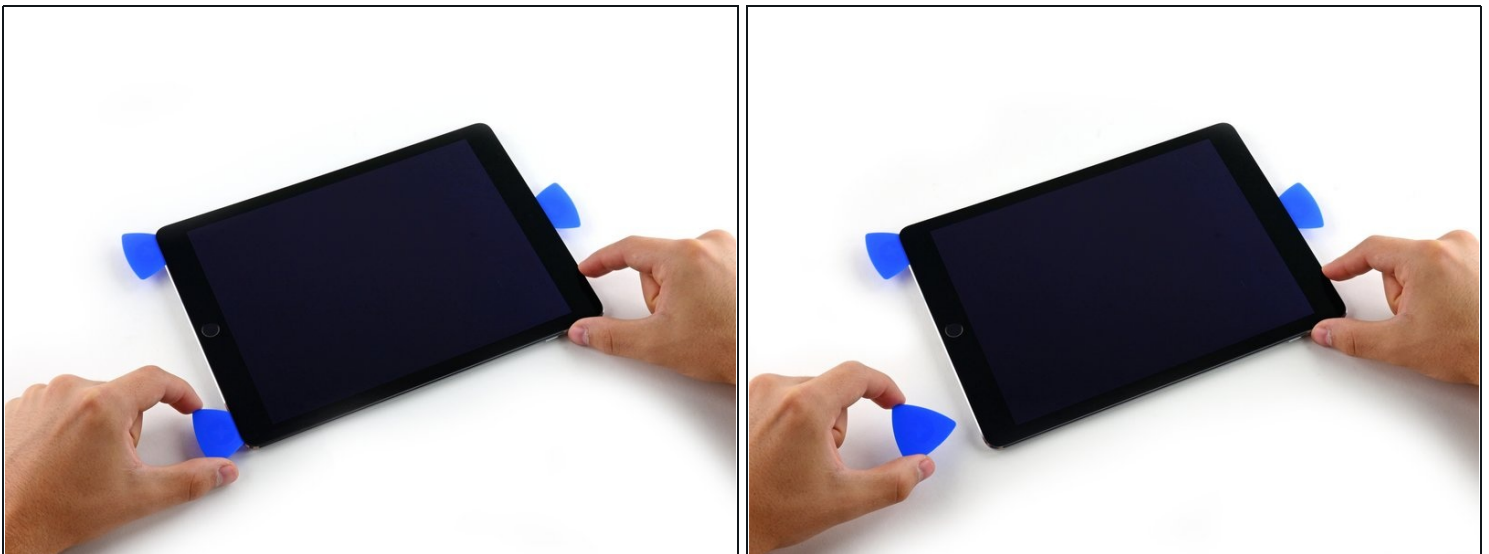
- Bring the right-hand opening pick around the bottom corner of the iPad.

Step 22



- Repeat for the left-hand pick.
- ① Reheat and reapply the iOpener as needed.

Step 23



- Remove the right-hand opening pick at the bottom of the iPad.

Step 24



- Slide the left-hand opening pick along the bottom edge of the display, then remove it from the bottom right corner of the iPad.

⚠ Be very careful to not insert the pick more than a quarter inch into the display to avoid damaging the Home Button and display cables underneath.

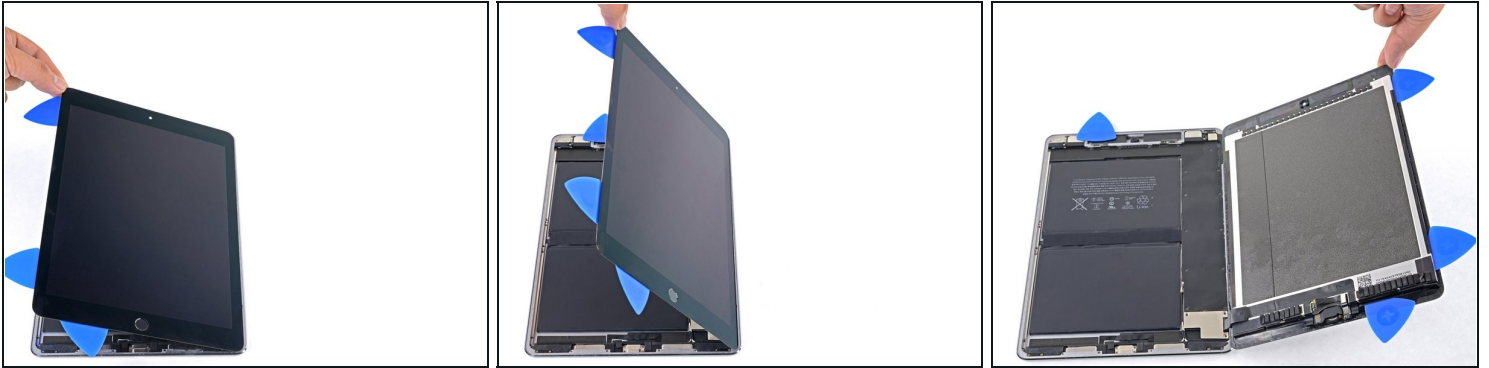
Step 25 — Slice through the remaining adhesive



- Use picks to ensure most of the adhesive has been cut through on the top, left, and bottom sides.
- Twist the top and bottom picks to separate the display assembly from the rear case.

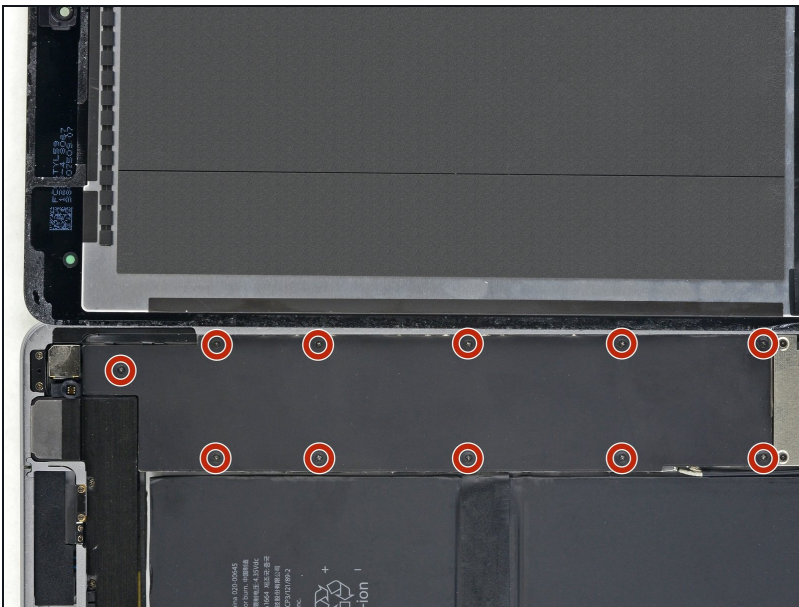
⚠ Do not attempt to remove the display—it is still attached to the rear case.

Step 26



- Swing the display assembly towards the right of the case, using the right edge as a hinge.
 - As you move the display assembly, make sure that the display ribbon cable is not being stressed.
- Continue swinging the display assembly until it lays flat next to the rear case.

Step 27 — Disconnect the battery



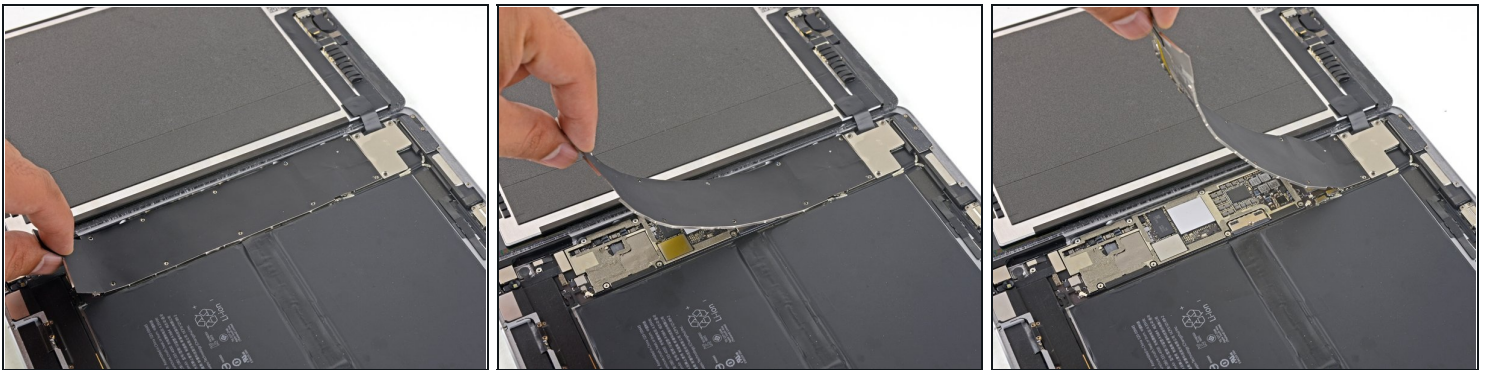
- Use a Phillips screwdriver to remove the eleven 1.3 mm screws securing the EMI shield.

Step 28



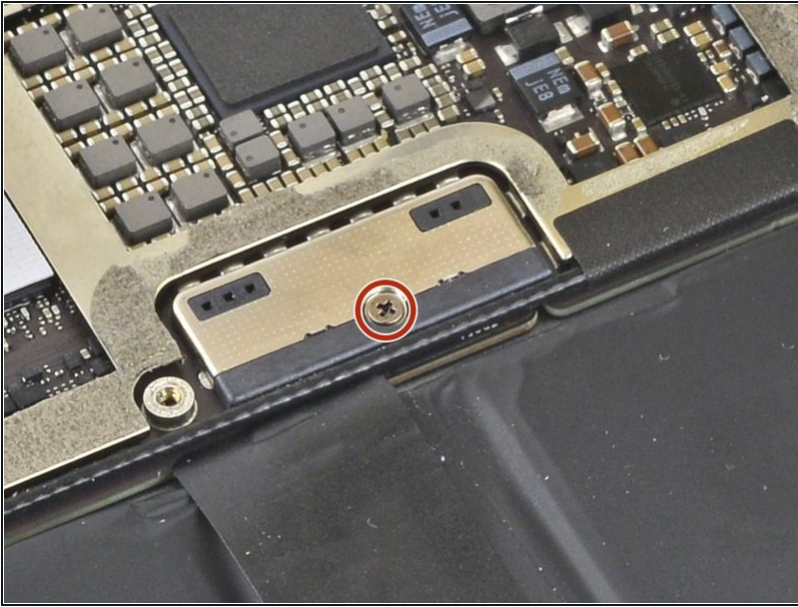
- Apply a [heated iOpener](#) to the EMI shield on the logic board for one minute.

Step 29



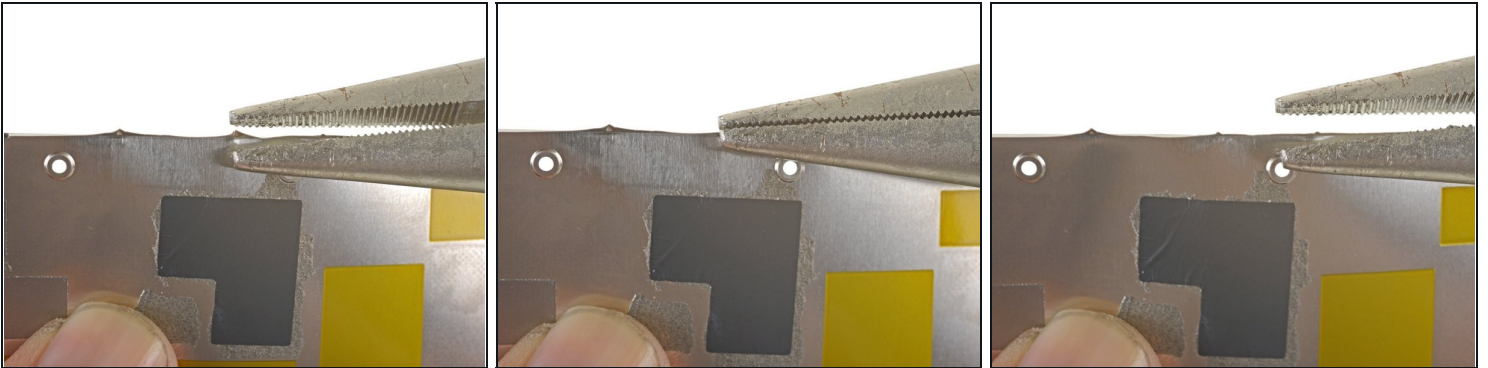
- Lift the logic board EMI shield, starting at the edge nearest the top of the iPad.
- Slowly peel the EMI shield up from the logic board.
 - ⓘ This takes a bit of force due to the many tiny clips securing the shield, and the shield may deform slightly. That's okay—try to keep the deformation to a minimum, and it will lay flat when reinstalled and screwed down.
- Remove the logic board EMI shield.

Step 30



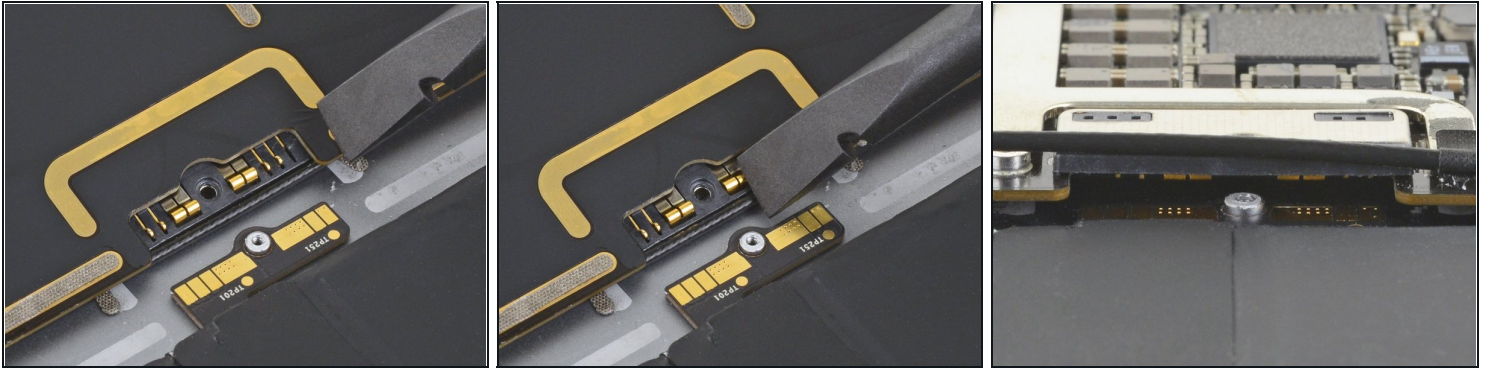
- Use a Phillips driver to remove the 1.7 mm-long screw securing the battery connector.

Step 31



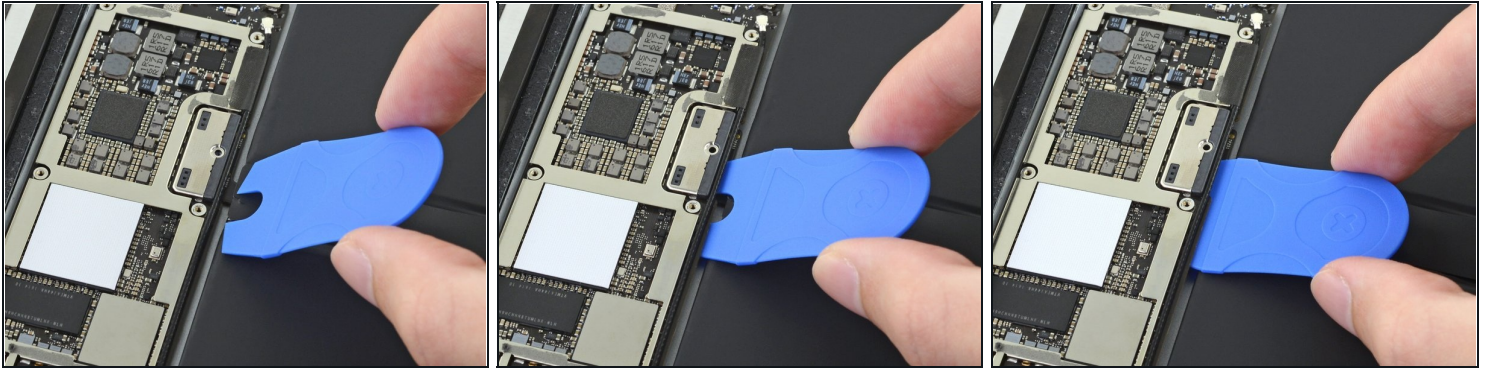
- ☑ If the EMI shield has any sharp protrusions after removal, you should flatten them before reinstalling the shield.
- Squeeze the sharp protrusion with a pair of pliers to flatten it.
- Repeat the process for all sharp protrusions along the edges of the EMI shield.

Step 32 — Battery connector information



- ① 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.
- ① 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.

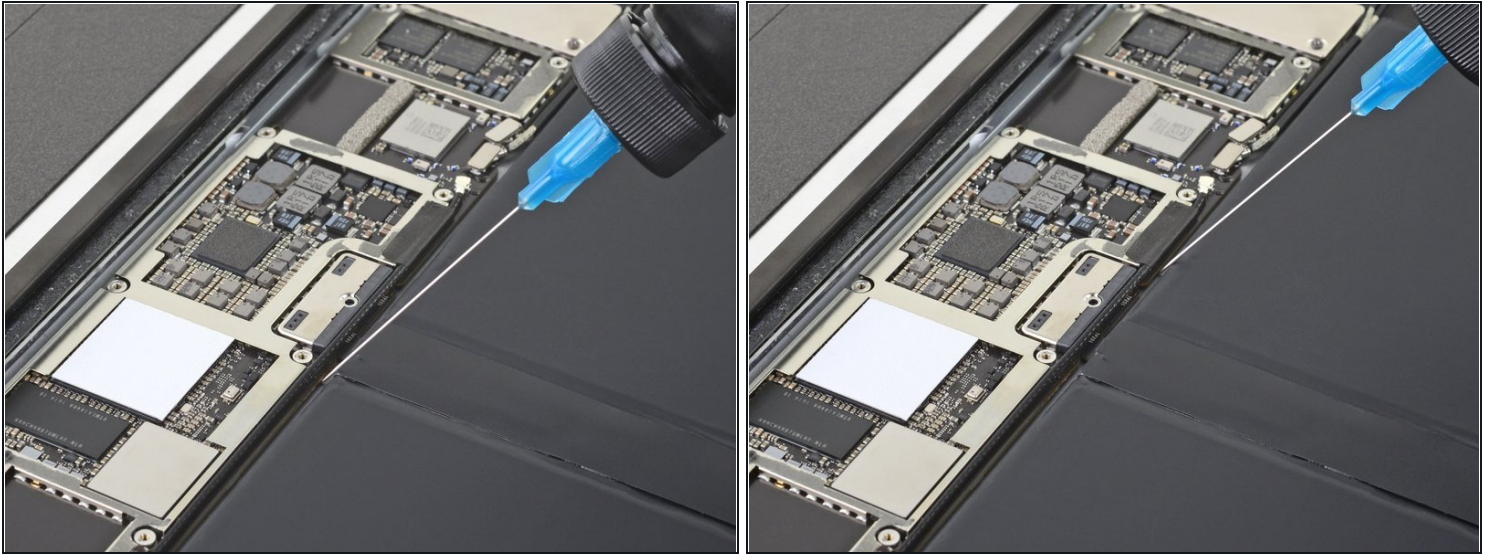
Step 33 — Disconnect the battery



⚠ Be careful when you isolate the battery using a battery blocker. The battery contacts are easily bent or broken, resulting in irreversible damage.

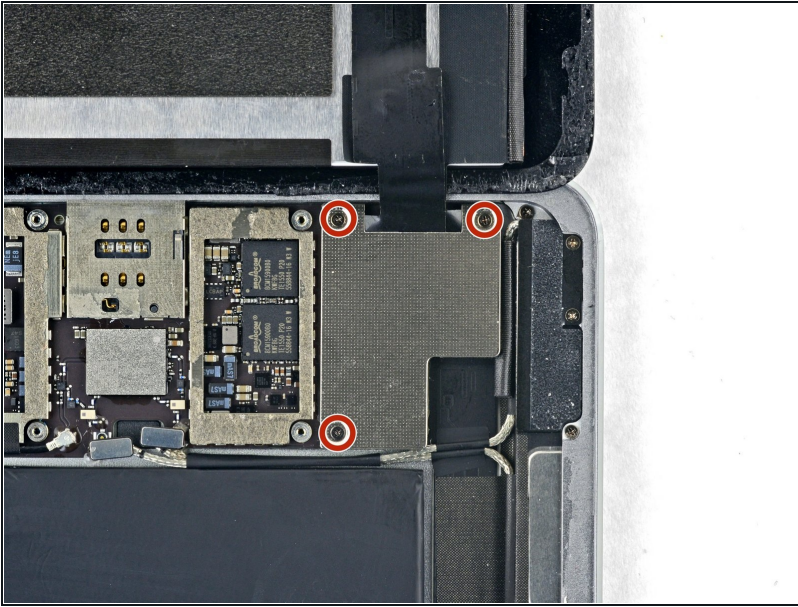
- ① Ensure that the iFixit logo on the battery blocker is facing up.
- Slide the battery blocker underneath the left side of the logic board's battery connector at a 35 degree angle.
 - ① The battery blocker's right prong should slide between the left side of the logic board's battery connector and the battery's contact pads. The left prong should slide under the logic board.
 - ① Don't push the battery blocker underneath the connector or logic board with excessive force. If you're having trouble fitting the battery blocker underneath the logic board, refer to the next step for information on loosening the logic board. You can also try [using a playing card](#) to disconnect the battery instead.
 - ① The battery blocker or playing card should slide under the logic board without encountering any blockages. After insertion, they should rest at a 15 degree angle.
- Leave the battery blocker in place as you work.

Step 34 — Logic board adhesive information



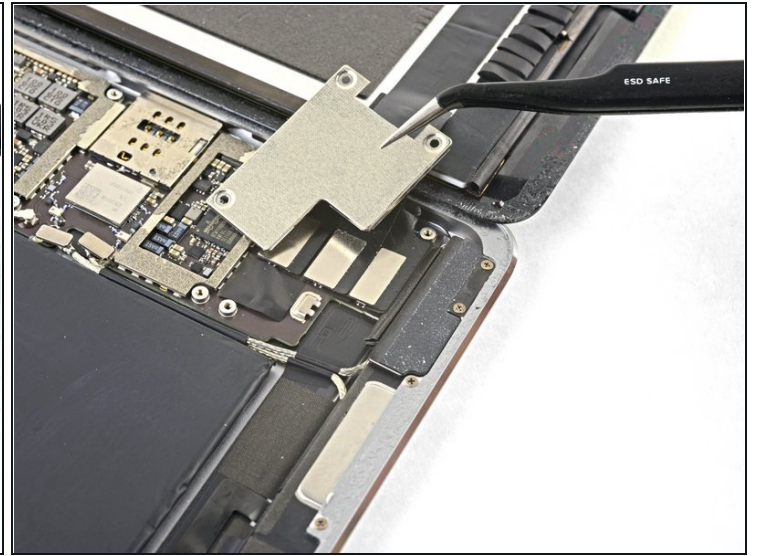
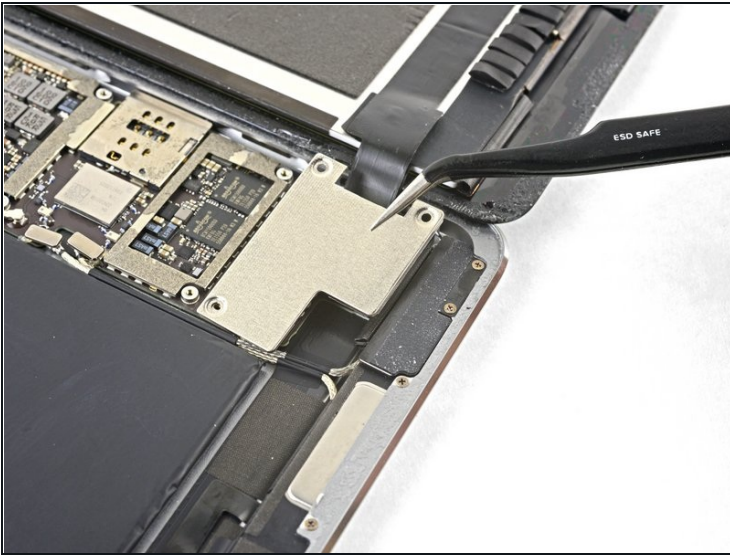
- ⓘ If the battery blocker doesn't easily slide under the logic board, follow these steps to partially loosen the logic board from the frame:
- Apply a few drops of high-concentration (90% or higher) isopropyl alcohol under the logic board to the left and right of the battery connection.
 - Wait one minute for the isopropyl alcohol to weaken the adhesive under the logic board.
 - Try to insert the battery blocker. If the logic board doesn't easily lift up, apply a few more drops of isopropyl alcohol.
- ⓘ This doesn't apply when using the playing card method to disconnect the battery because the playing card is only inserted between the battery connector and the battery contact pads.

Step 35 — Remove the display bracket screws



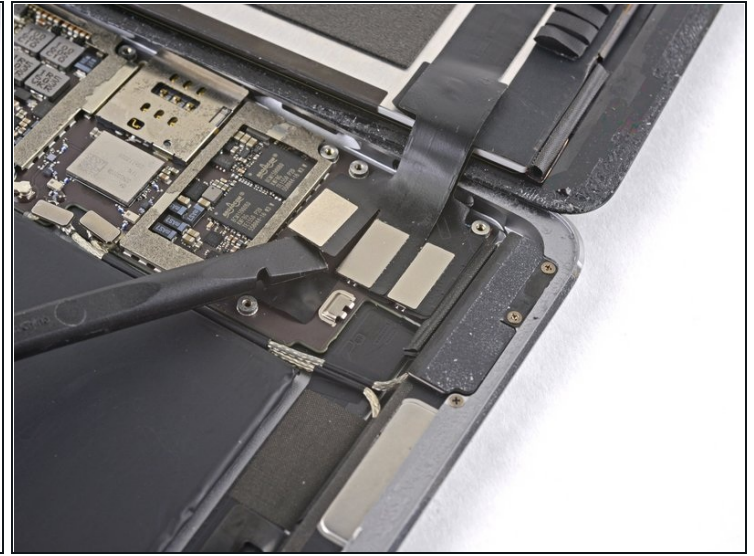
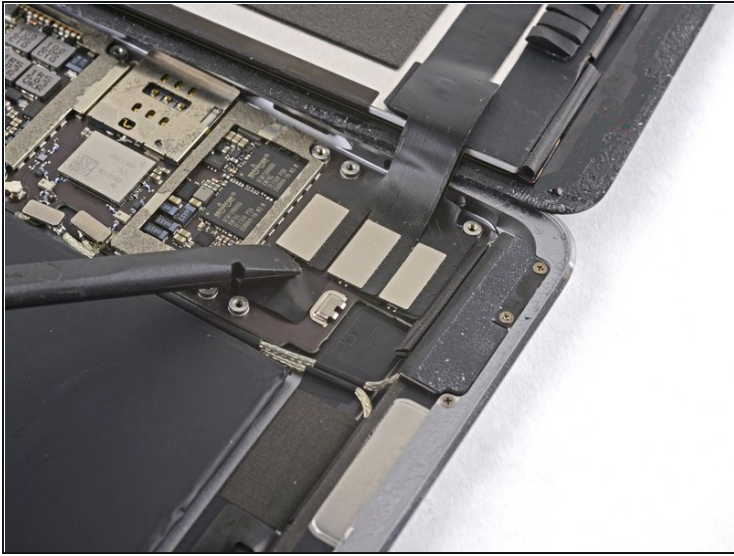
- Use a Phillips screwdriver to remove the three 1.3 mm Phillips screws securing the display cable bracket.

Step 36 — Remove the bracket



- Remove the display cable bracket.

Step 37 — Disconnect the display assembly



- Use the flat end of the spudger to disconnect the display assembly connector from the motherboard socket.

Step 38



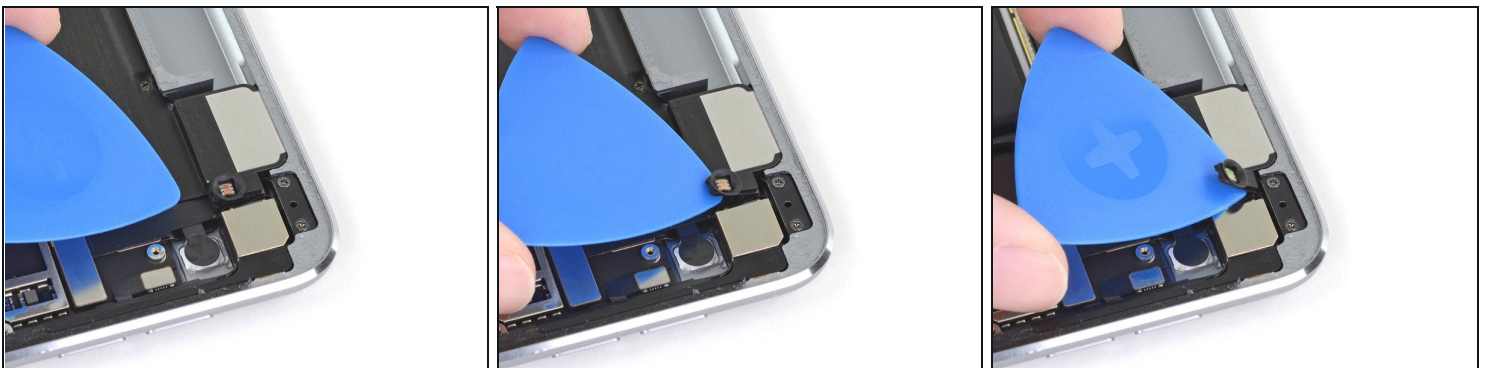
- Repeat the previous step for the two remaining connectors.

Step 39 — Remove the display assembly



- Remove the display assembly from the frame.
- ☑ If you are reusing the original display assembly, [follow this display adhesive application guide](#) to apply replacement display adhesive during reassembly.

Step 40 — Detach the right ambient light sensor



- Slide an opening pick under the right ambient light sensor to loosen its adhesive.
- ☑ There are two pegs on the shelf that position the ambient light sensor—one on the bottom edge and one near the top edge.

Step 41 — Remove the four screws



- Use a Phillips screwdriver to remove the four 1.9 mm-long screws securing the upper speaker to the frame.

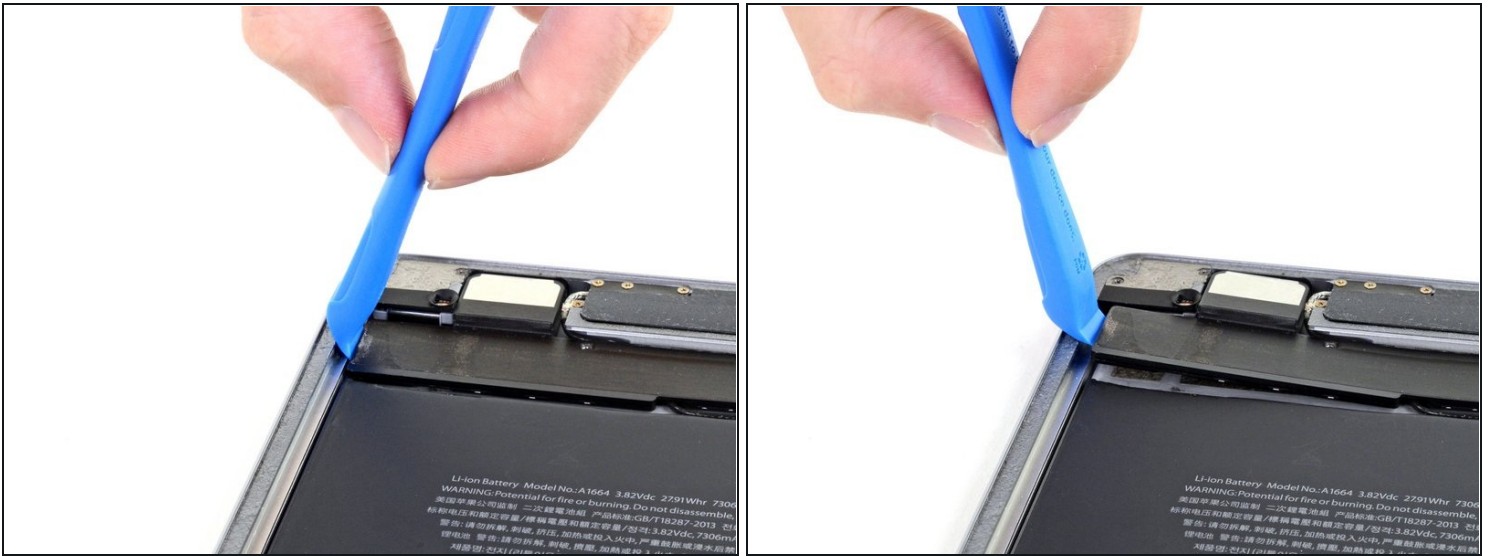
Step 42 — Apply isopropyl alcohol



① Strong adhesive secures the upper speaker to the frame.

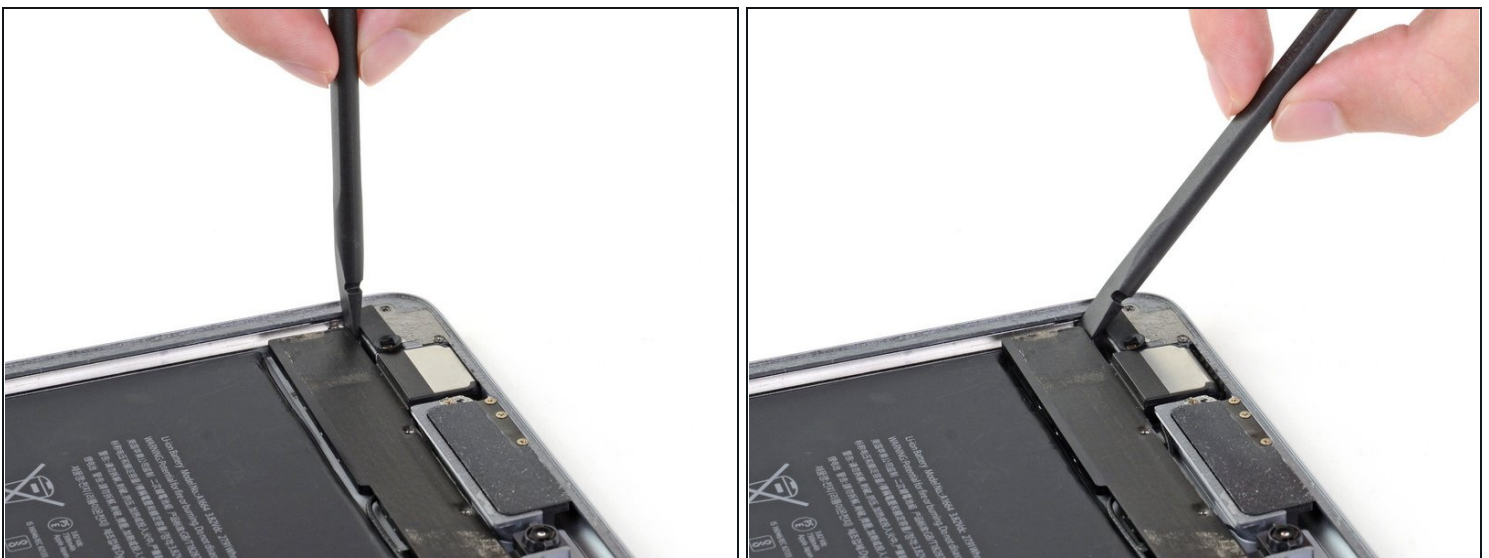
- Apply a few drops of high-concentration (90% or higher) isopropyl alcohol under the upper speaker.
- Wait one minute for the isopropyl alcohol to weaken the adhesive under the upper speaker.

Step 43 — Pry up the upper speaker



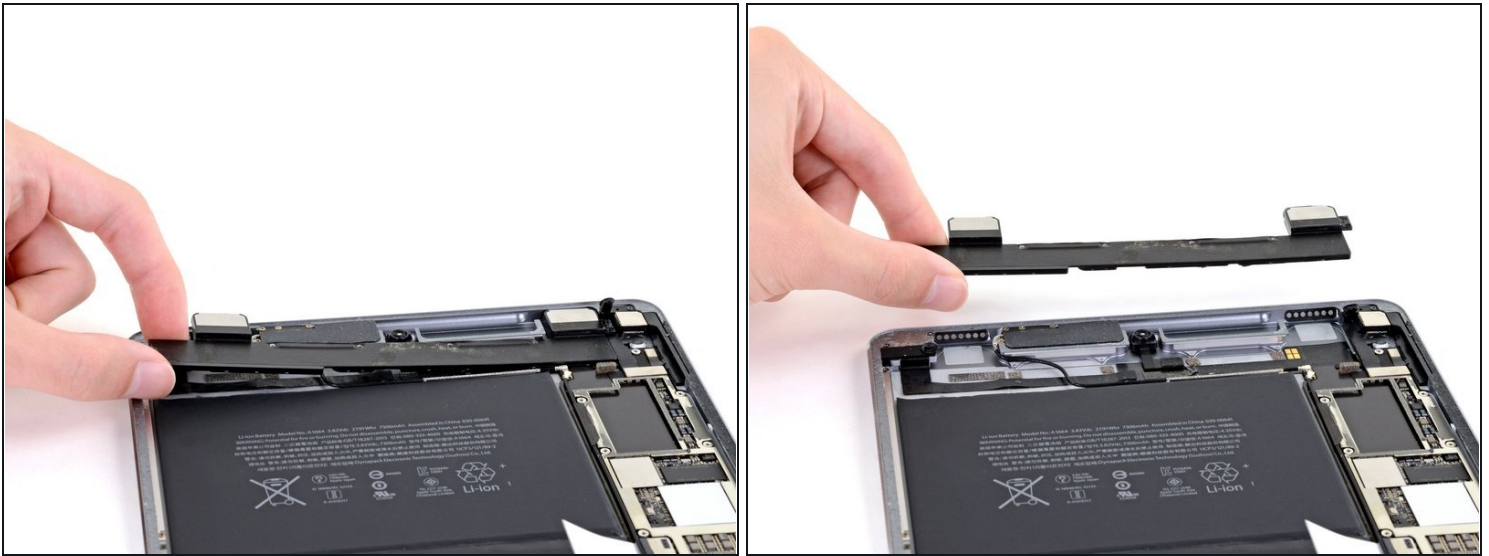
- Use an opening tool to pry up the left edge of the upper speaker.
 - ⚠ Try to avoid bending the upper speaker while prying it up. Some bending will likely happen during this process, but excessive bending may damage the upper speaker.
 - ⓘ If the upper speaker isn't detaching from the frame, apply a few more drops of isopropyl alcohol.

Step 44 — Move the left side of the upper speaker



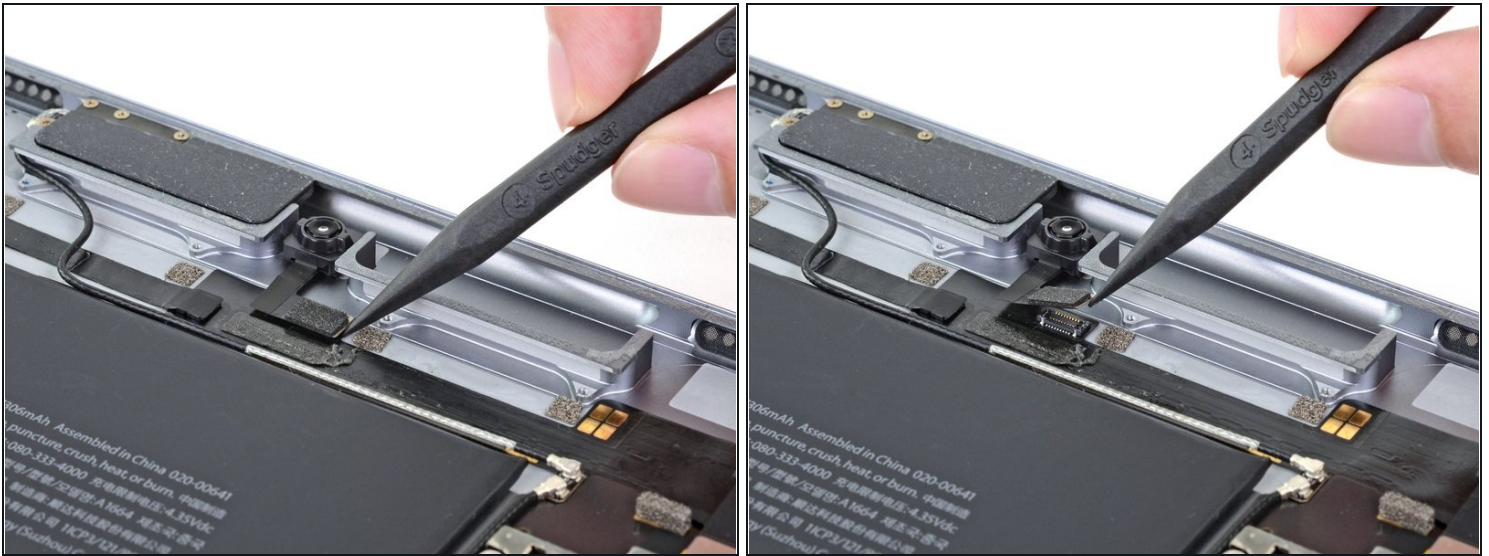
- Use the flat end of a spudger to push the left side of the upper speaker toward the battery just enough for the left speaker to slide out of its recess in the frame.

Step 45 — Remove the upper speaker



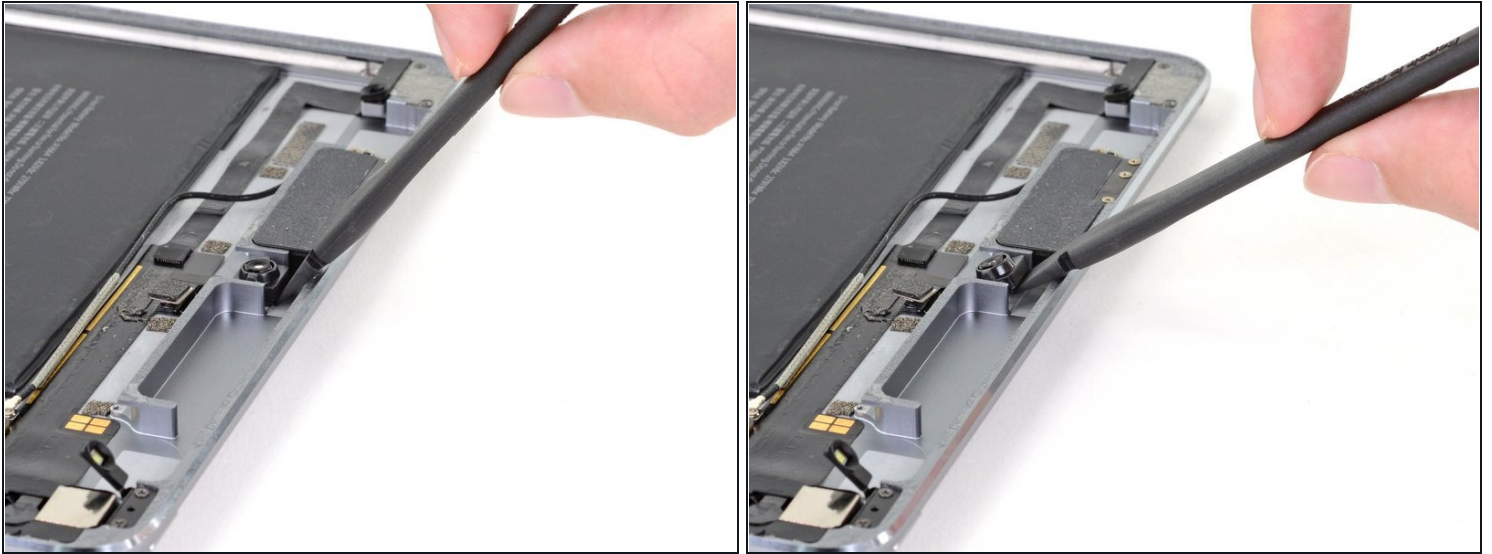
- Lift and remove the upper speaker from the frame.
 - ⚠ There are multiple cables under the upper speaker. Be careful not to damage them while removing it.
 - ⓘ If any cables are still attached to the upper speaker while you lift it up, carefully peel them off of the upper speaker. You can apply more isopropyl alcohol if they don't easily peel away.
 - ⓘ If the [ZIF connector sticker](#) near the front camera comes off while removing the upper speaker, reapply it to the ZIF connector.
 - ⓘ If the [ZIF connector](#) near the front camera disconnects while removing the upper speaker, use the pointed end of a spudger to flip up the locking flap. Then, reinsert the ribbon cable and close the locking flap.
- ★ During reassembly, make sure the [right ambient light sensor](#) is on top of its shelf.
- ★ If there's any alcohol solution remaining in the device, carefully wipe it off or allow it to air dry before reinstalling the upper speaker.

Step 46 — Disconnect the front camera



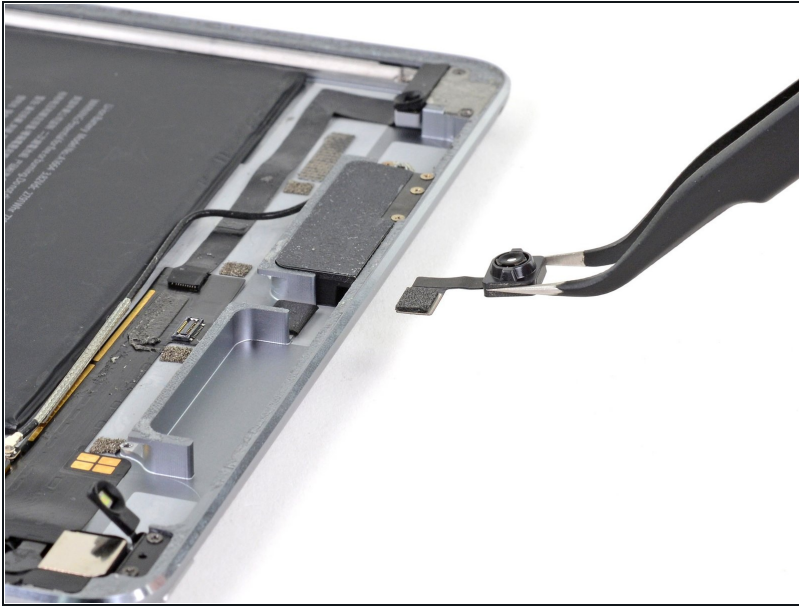
- Use the pointed end of a spudger to disconnect the front camera's [press connector](#) from its socket.
 - ⚠ Be careful to pry only under the edge of the connector, and not under the socket itself. If you pry under the socket, you will separate it from the circuit board.
- ☑ To reconnect, align the connector carefully over its socket and press down with your fingertip—first at one side, then the other—until it clicks into place.
 - ⚠ Do not press down on the middle until the connector is fully seated—if it's misaligned, the connector can bend, causing permanent damage.

Step 47 — Pry up the front camera



- Insert the flat end of a spudger under the top edge of the front camera and pry up to detach it from the frame.
 - ⓘ If it doesn't detach from the frame when you pry up, apply a few drops of high-concentration (90% or higher) isopropyl alcohol to the perimeter of the front camera. Wait thirty seconds for the isopropyl alcohol to weaken the adhesive.
 - ⚠ If you're going to reuse the front camera, don't use an excessive amount of isopropyl alcohol and don't get any on the camera lens. Isopropyl alcohol on the lens may cause permanently foggy photos.

Step 48 — Remove the front camera



- Use a pair of tweezers to remove the front camera.
⚠ If you plan to reuse the front camera, be careful not to scratch the lens.
- ☑ If there's any alcohol solution remaining in the device, carefully wipe it off or allow it to air dry before installing your front camera.
- ☑ During reassembly, [follow this guide](#) if you are using a pre-cut adhesive card to secure the front camera to the frame.

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? Try some [basic troubleshooting](#), or ask our [iPad Pro 9.7" Answers community](#) for help.