iPad 6 Wi-Fi Logic Board Replacement

Use this guide to replace a faulty logic board...

Written By: Arthur Shi

INTRODUCTION

Use this guide to replace a faulty logic board in your iPad 6 Wi-Fi.

Note that the logic board is paired to your iPad's home button, so replacing your logic board will result in losing the iPad's Touch ID functionality.

TOOLS:

Anti-Clamp (1)
iOpener (1)
iFixit Opening Picks (Set of 6) (1)
Suction Handle (1)
Tweezers (1)
Phillips #00 Screwdriver (1)
Spudger (1)
Battery Blocker (1)
iFixit Opening Tool (1)
Phillips #000 Screwdriver (1)

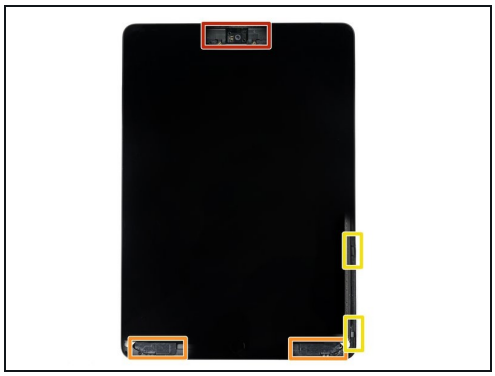
PARTS:

iPad Air, iPad 5, iPad 6 Adhesive Strips (1)

Step 1 — Heat the left edge

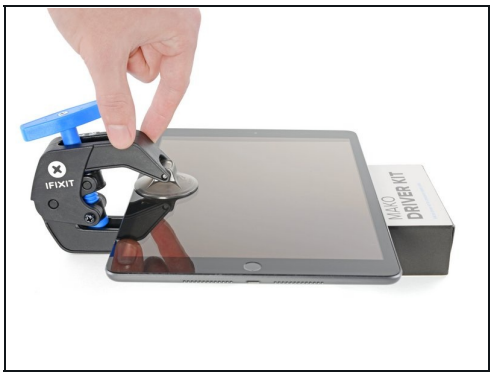
- Heat an iOpener and apply it to the left edge of the device for two minutes.

Step 2 — Screen removal information



- While you're waiting for the adhesive to loosen, note the following areas that are sensitive to prying:
  - Front camera
  - Antennas
  - Display cables

Step 3 — Anti-Clamp instructions



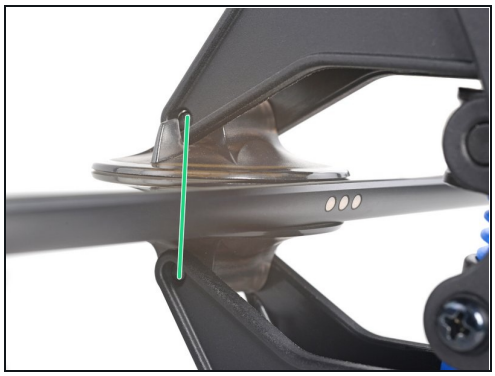
ⓘ The next three steps demonstrate the Anti-Clamp, a tool we designed to make the opening procedure easier. **If you aren't using the Anti-Clamp, skip down three steps for an alternate method.**

ⓘ 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.
- Place an object under your iPad so it rests level between the suction cups.
- Position the suction cups near the middle of the left edge—one on the top, and one on the bottom.
- Hold the bottom of the Anti-Clamp steady and firmly press down on the top cup to apply suction.

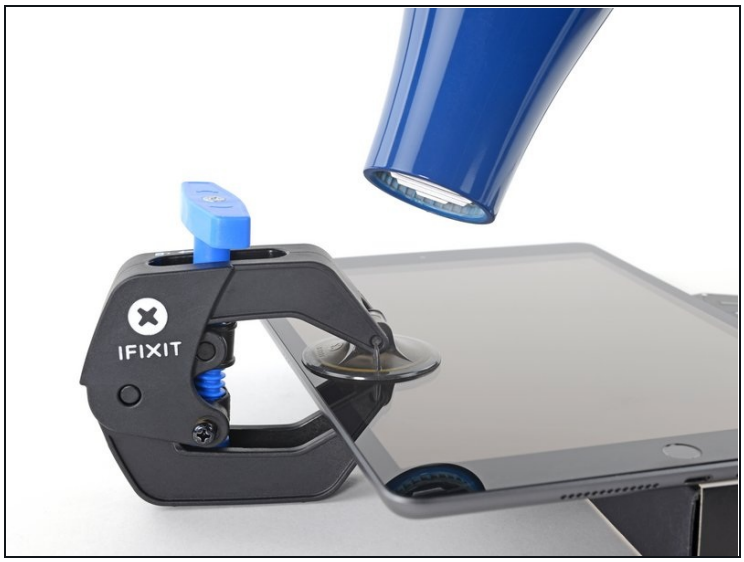
ⓘ If you find that the surface of your iPad is too slippery for the Anti-Clamp to hold onto, use tape to create a grippier surface.

Step 4



- 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 5



- Wait one minute to give the adhesive a chance to release and present an opening gap.
- If your screen isn't getting hot enough, you can use a hair dryer to heat along the left edge of the iPad.

  ⓘ For complete instructions on how to use a hair dryer, check out this guide.
- Insert an opening pick under the digitizer 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 step.**

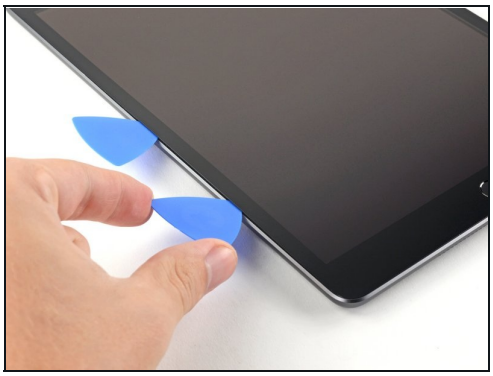
Step 6 — Insert an opening pick



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.

- Once the screen is warm to touch, apply a suction handle to the left edge of the screen and as close to the edge as possible.
- Lift the screen with the suction handle to create a small gap between the digitizer and the frame.
- Insert an opening pick into the gap between the digitizer and the frame.

Step 7 — Separate the left adhesive


- Insert a second opening pick into the gap you just created.
- Slide the pick toward the bottom-left corner of the device to separate the adhesive.
- Leave the pick in the bottom-left corner to prevent the adhesive from re-sealing.

ⓘ Don't worry if you can see the opening pick through the digitizer—just pull the pick out. The LCD screen shouldn't be damaged, but you risk leaving behind hard-to-clean adhesive.

Step 8



- If the opening pick gets stuck in the adhesive, "roll" the pick along the side of the iPad to continue separating the adhesive.

Step 9



- Slide the first opening pick towards the top-left corner of the device to separate the adhesive.
- Leave the pick in the top-left corner to prevent the adhesive from re-sealing.

Step 10 — Heat the top edge

- Heat an iOpener and apply it to the top edge of the device for two minutes.

Step 11 — Separate the top left adhesive

- Rotate the pick around the top-left corner of the device to separate the adhesive.

Step 12 — Separate the top adhesive

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

⚠ Avoid sliding the pick over the front camera, as you may damage the lens. The following steps will show how to prevent this.

Step 13

- Pull the pick out until only the tip is between the digitizer and the frame.
- Slide the pick above the front camera to separate the adhesive.
- Leave the pick near the right side of the front camera before continuing.

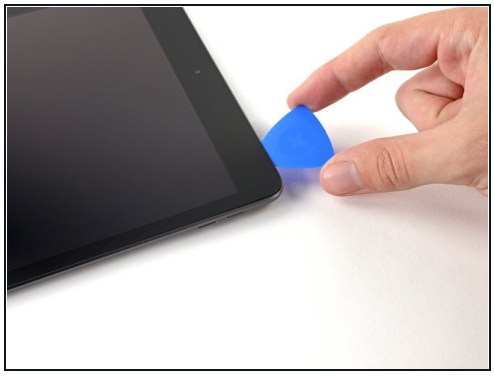
Step 14

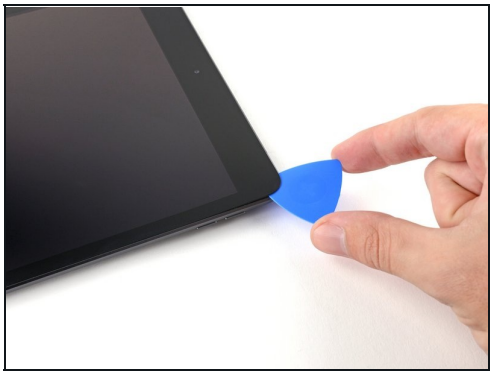
- Re-insert the pick and slide it towards the top-right corner of the device to completely separate the top adhesive.
- Leave the pick in the top-right corner to prevent the adhesive from re-sealing.

Step 15 — Heat the right edge

- Heat an iOpener and apply it to the right edge of the device for two minutes.

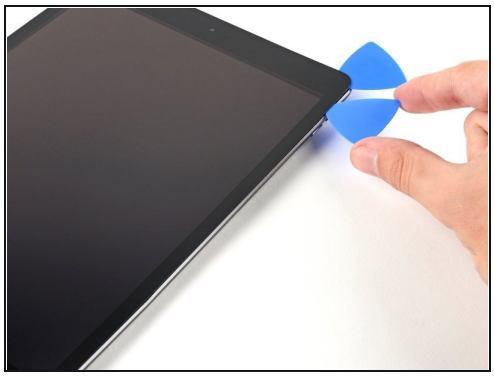
Step 16 — Separate the top right adhesive





- Rotate the pick around the top-right corner of the device to separate the adhesive.

Step 17 — Separate the right adhesive



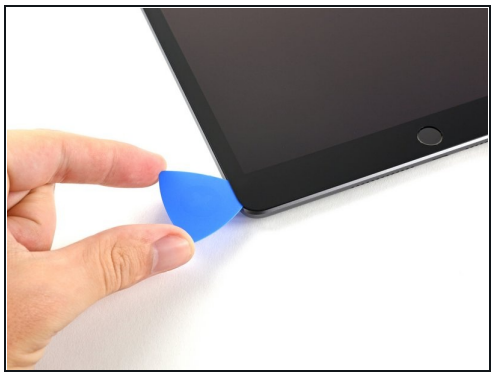
- Insert a new opening pick and slide it to the middle of the iPad's right edge.

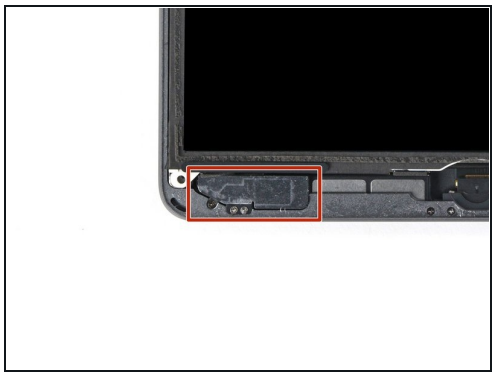
⚠ The display cables are located approximately halfway from the bottom of the iPad. Stop sliding once you reach three inches from the bottom of the iPad.

Step 18 — Heat the bottom edge

- Heat an iOpener and apply it to the bottom edge of the device for two minutes.

Step 19 — Separate the bottom left adhesive





- Slide the bottom-left pick to the bottom-left corner to separate the adhesive.

⚠ Don't fully rotate the pick around the corner, as you may damage the antenna.

- Leave the pick in the bottom-left corner before moving to the next step.

Step 20 — Separate the bottom adhesive



- Insert a new opening pick into the gap you just created on the bottom edge of the iPad.
- Slide the pick over the antenna, stopping just before the home button.

⚠ Only slide the pick towards the home button and not away from it, as you may damage the antenna.

ⓘ If you need to slide the pick over this section again, remove and re-insert it at the bottom-left corner.

- Leave the pick to the left of the home button before continuing.

Step 21

- Insert an opening pick into the gap you just created.
- Slide the pick underneath the home button and towards the bottom-right corner, making sure **only the tip** is between the digitizer and the frame.

⚠ Only insert the pick up to 1 mm to avoid damaging the right antenna.

Step 22

- Re-insert the pick and slide it towards the home button to completely separate the bottom adhesive.

⚠ Only slide the pick towards the home button and not away from it, as you may damage the antenna.

ⓘ If you need to slide the pick over this section again, remove and re-insert it at the bottom-right corner.

- Leave the pick to the right of the home button before continuing.

Step 23 — Heat the right edge

- Heat an iOpener and apply it to the right edge of the device for two minutes.

Step 24

⚠ **Be very careful with this step.** Take your time, ensure the adhesive is hot and soft, and make sure you separated all of the adhesive with a pick. Don't be afraid to stop and reheat.

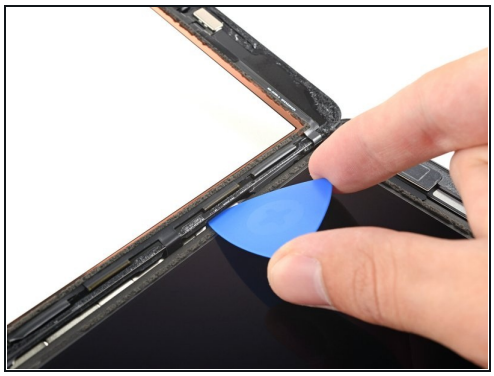
- Twist the two opening picks on the left corners of the iPad to lift the digitizer slightly, separating the the last of the adhesive in the process.

ⓘ If there's a significant amount of resistance, reheat the edges and work along them with an opening pick.

Step 25

- Lift the left edge of the digitizer upwards to further separate the adhesive along the right edge of the iPad.

Step 26 — Separate the right adhesive



- While supporting the digitizer, slide an opening pick between the two display cables to separate the last of the adhesive.

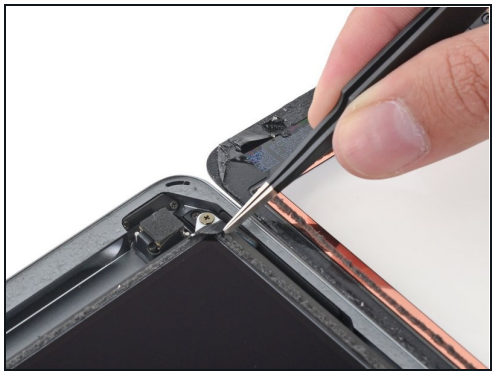
Step 27

- Once all of the adhesive has been separated, open the digitizer like a book and rest it parallel to the iPad.

- During reassembly, clean the remaining adhesive from the frame—and the digitizer if you're re-using it—with isopropyl alcohol. Replace the adhesive with our adhesive strips or pre-cut adhesive cards.

- Be mindful of the display cables when reassembling the device. Make sure they are folded properly underneath the LCD screen to prevent any damage.

Step 28 — LCD



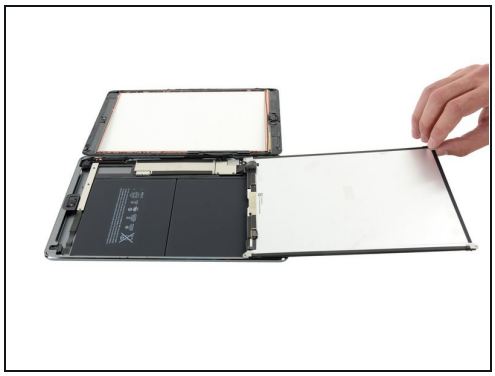
- Remove any tape obscuring the LCD screws.

Step 29

- Remove the four Phillips #00 4.3 mm screws securing the LCD.

Step 30





⚠ 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. There may be glue around the screw holes that needs to be cut with a knife.

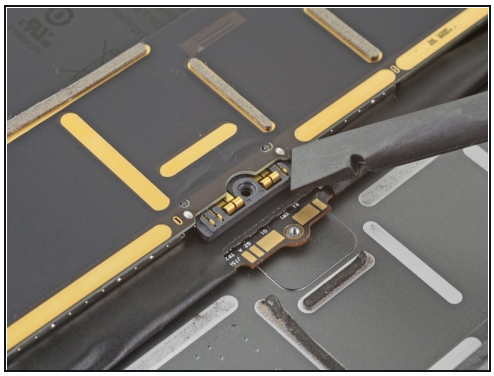
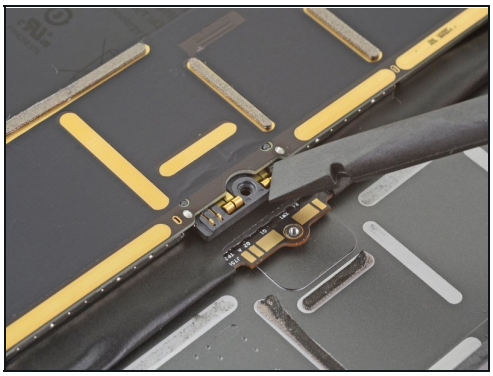
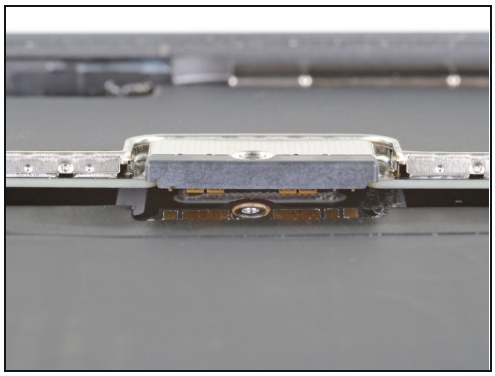
- Flip the iPad LCD like a page in a book, lifting near the camera and turning it over the home button end of the rear case.

⚠ 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.

ⓘ Set the LCD down on a soft, clean, lint-free surface.

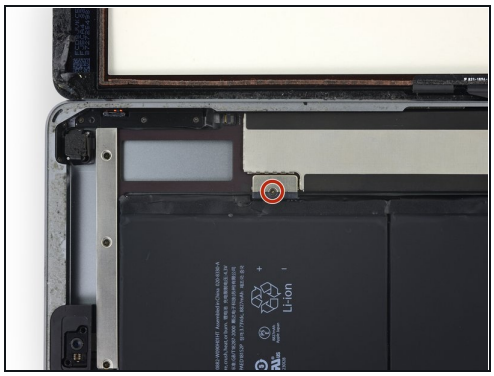
Step 31 — Battery connector information

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.

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 32



- Remove the single 2.3 mm Phillips #000 screw securing the battery connector to the logic board.

ⓘ To reduce the risk of a short, you can use a battery isolation pick to disconnect the battery.

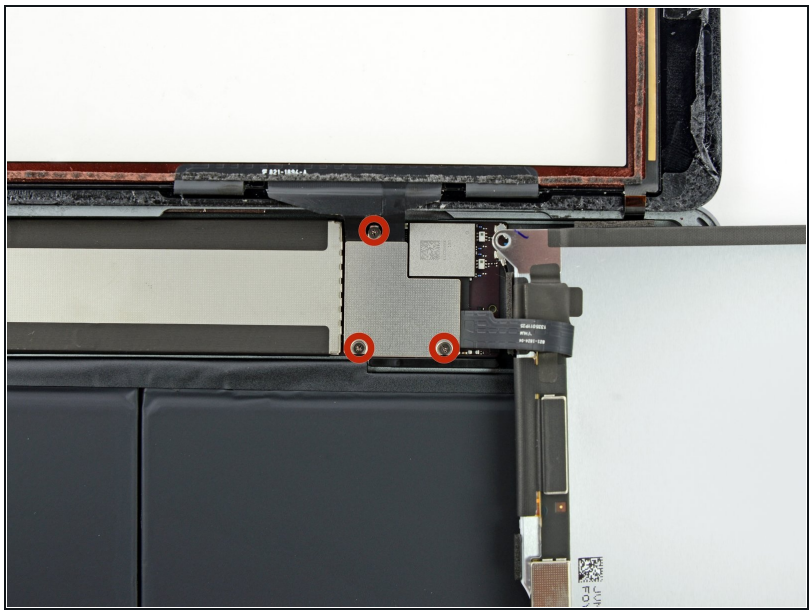
- Slide the battery blocker underneath the logic board's battery connector at a 35 degree angle.

ⓘ 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.

ⓘ The battery blocker or playing card ideally should slide under the logic board without encountering any blockages. After insertion, it should rest at a 15 degree angle.

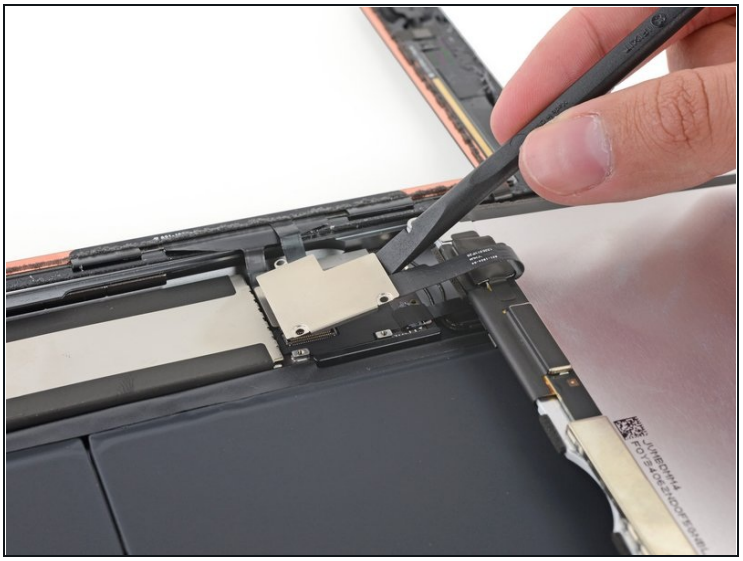
- Leave the battery blocker in place as you work.

Step 33



- Remove the three 1.4 mm Phillips #000 screws from the display cable bracket.

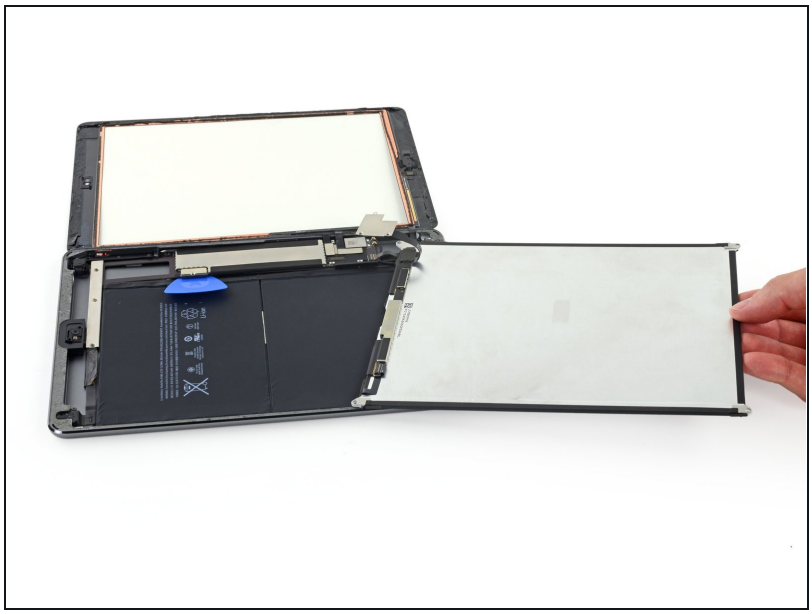
Step 34



- 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 35

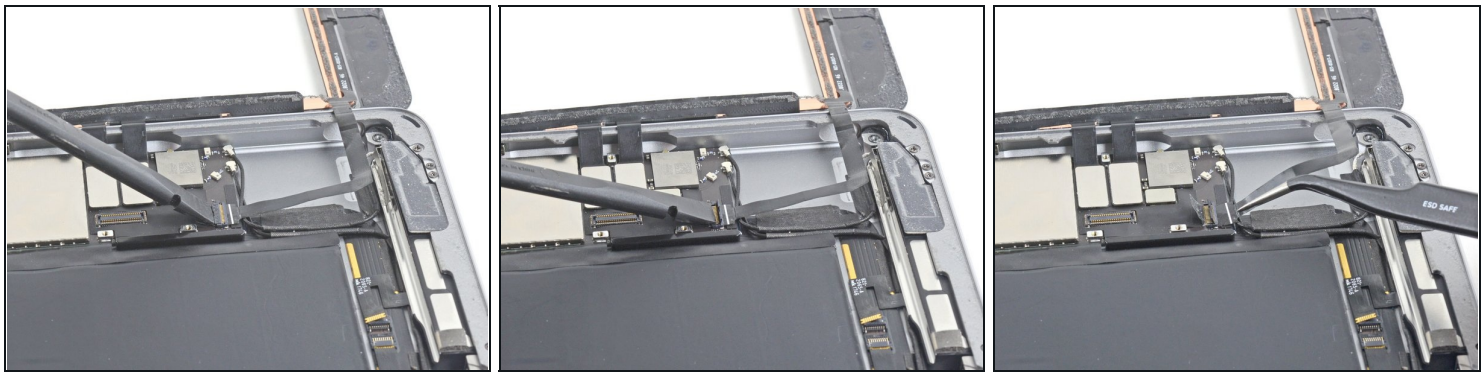


- Remove the LCD.

Step 36 — Front Panel Assembly

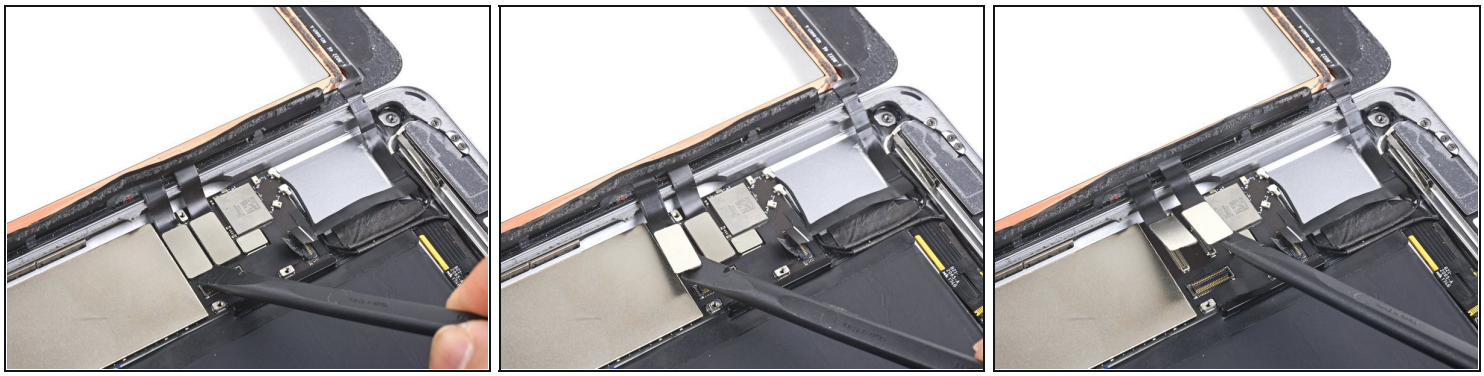
- Remove any tape covering the home button ribbon cable connector.

Step 37



- 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 38

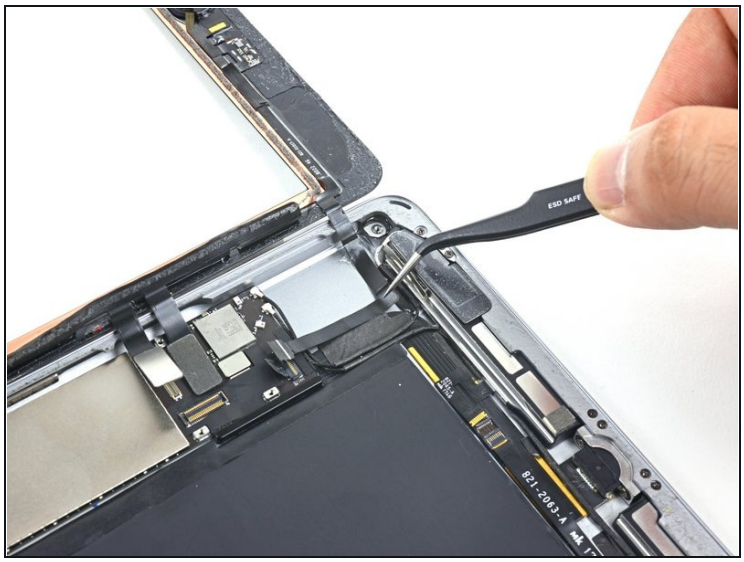


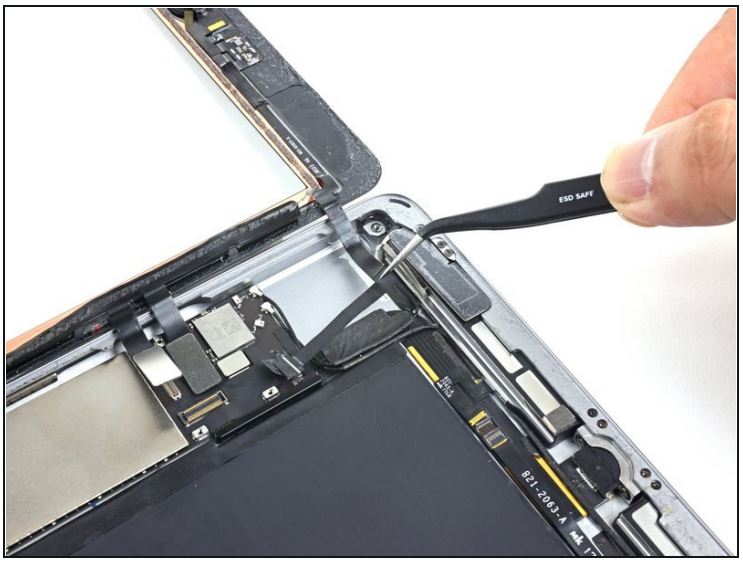
- Use a the flat end of a spudger or a fingernail to carefully pop the two digitizer cable connectors straight up from their sockets.

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

During reassembly, make sure that these connectors are completely seated in their sockets, or you may encounter display issues.

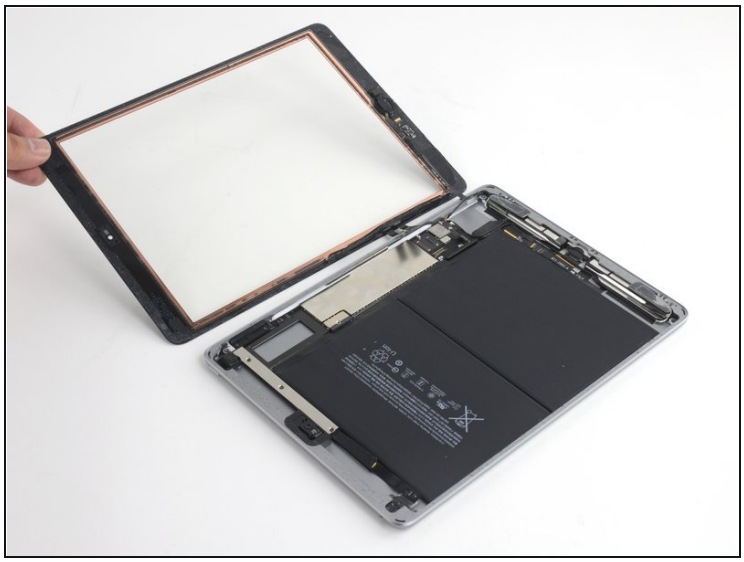
Step 39

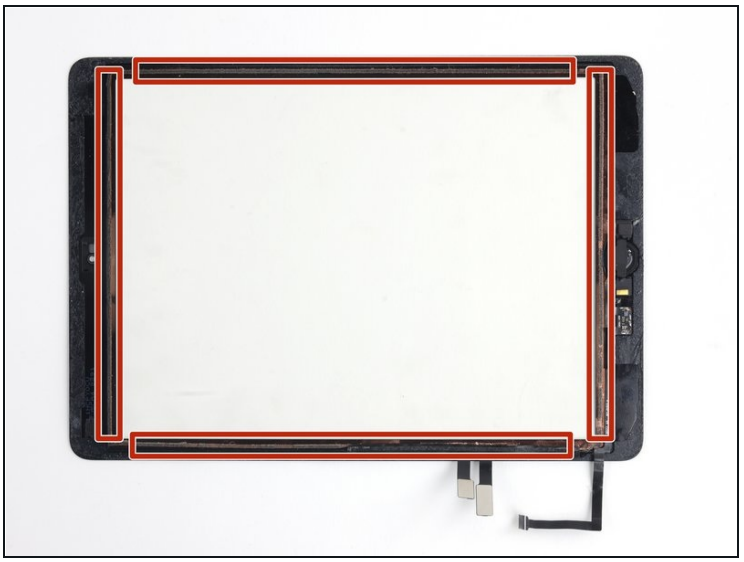




- Carefully peel the home button ribbon cable up off of the adhesive holding it to the rear case.

Step 40





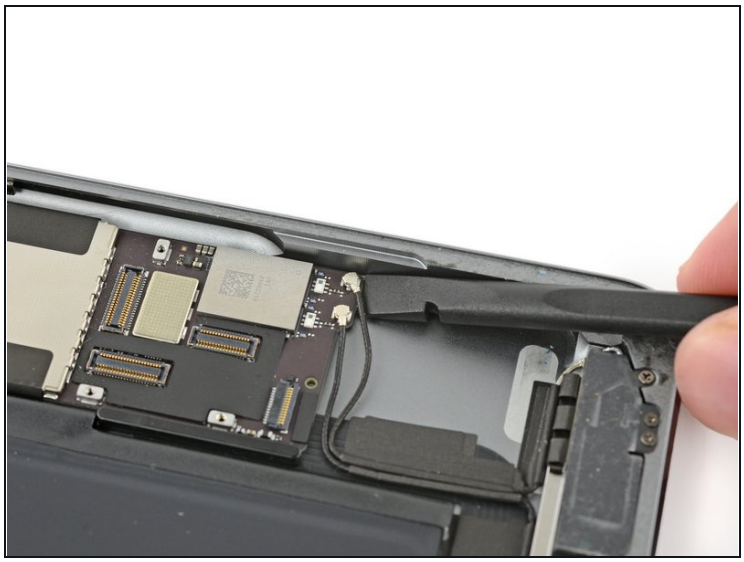
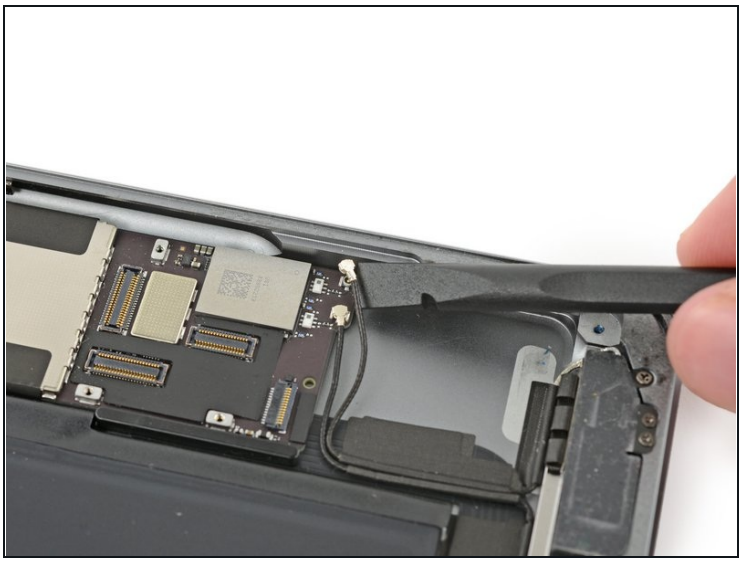
- Remove the front panel assembly.

- 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.

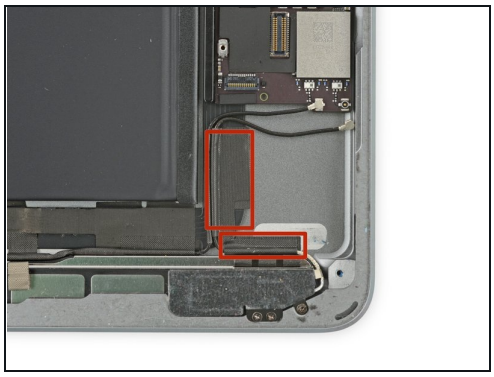
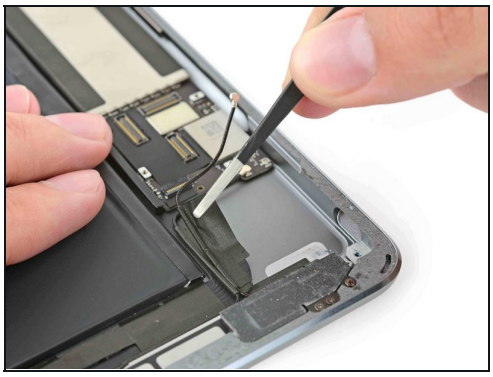
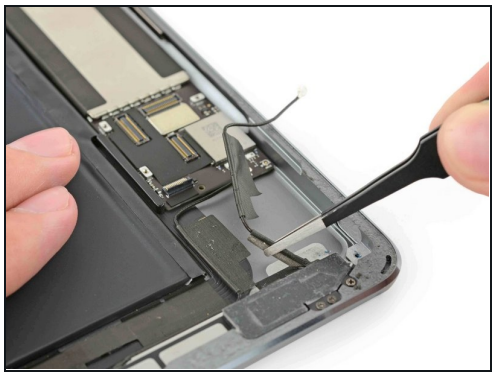
  The insulation is not visible to the naked eye, and is different from the foam dust barrier strips found on many iPads.

Step 41 — Right Antenna

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

Step 42

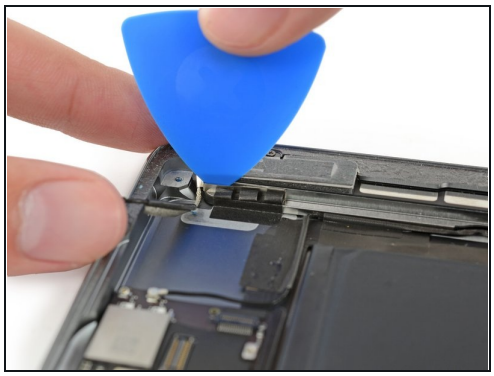




- There are two large pieces of tape wrapped around the right antenna cable, securing it to the rear case.

- Peel the tape up from the rear case.

While peeling the antenna tape up, leave it in place on the antenna cable to aid with reassembly.

Step 43



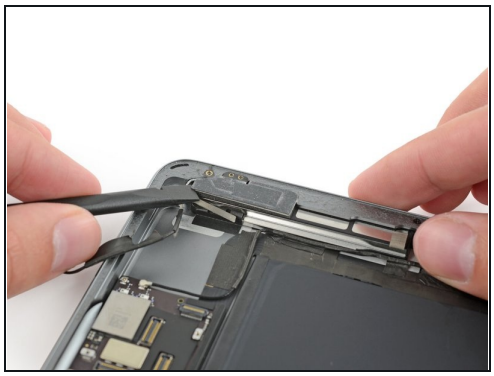
The antenna cable is anchored to the speaker with a small metal bracket. The bracket is permanently crimped to the antenna and adhered to the speaker enclosure.

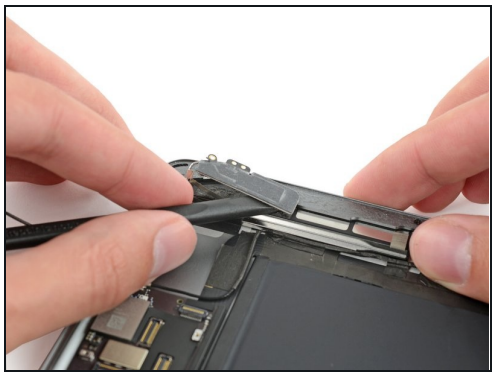
- Carefully insert an opening pick between the speaker enclosure and the antenna cable bracket.
- Slide the pick toward the home button to cut the adhesive.
- Push the bracket away from the speaker until it clears the tape underneath.

Step 44

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

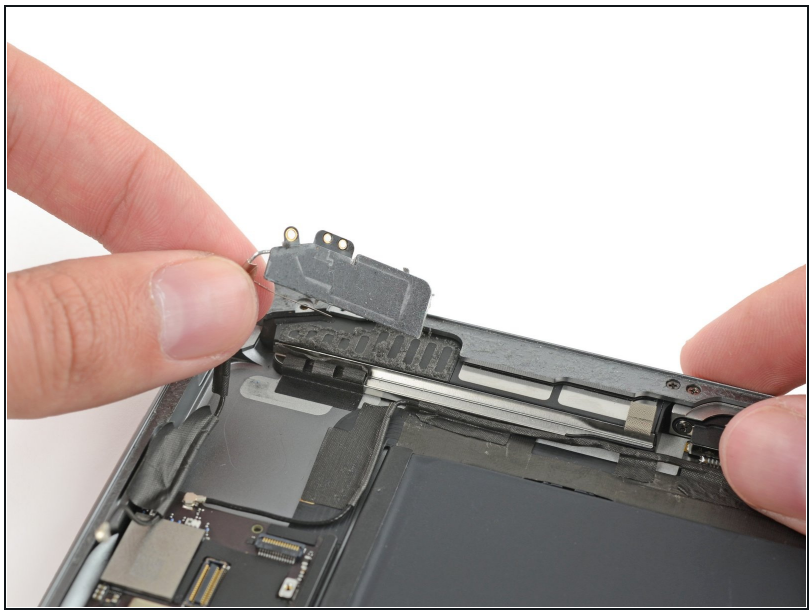
Step 45





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

Step 46

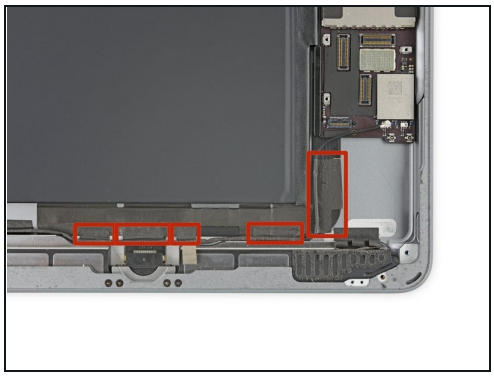
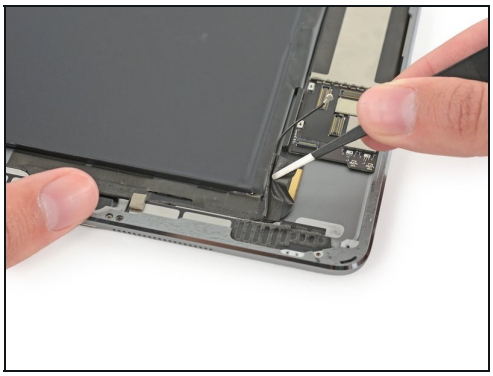
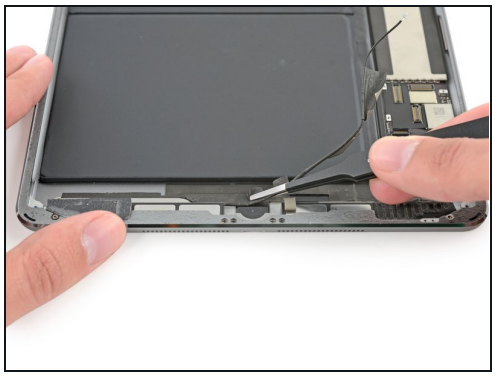


- Remove the right antenna from the iPad.

Step 47 — Right Speaker

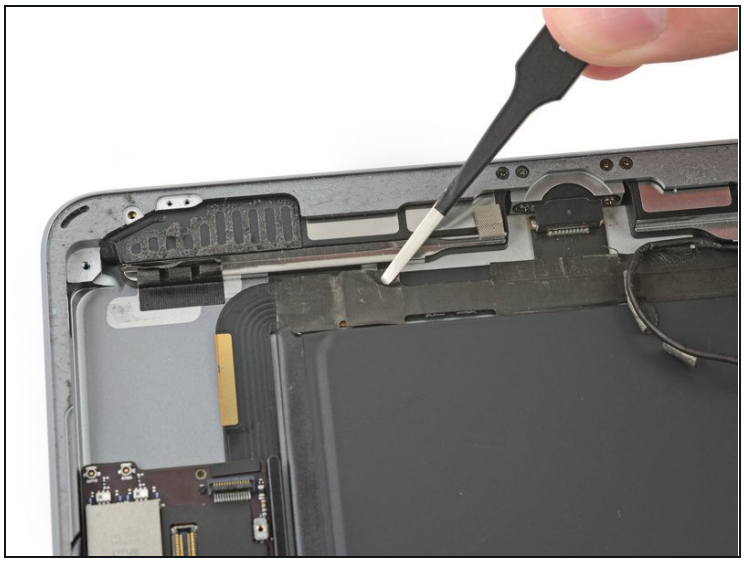

- Insert a spudger under the left antenna cable and lift upward to disconnect the antenna cable connector.

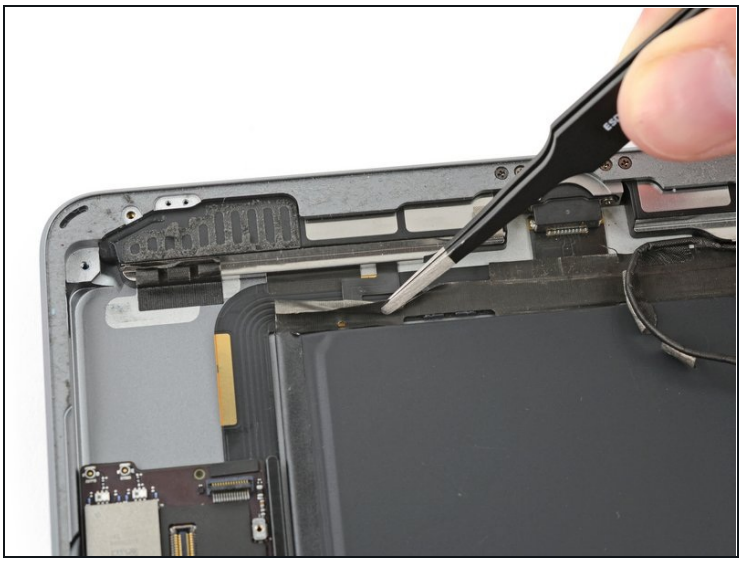
Step 48

- There are five pieces of tape wrapped around the left antenna cable covering the right speaker cable connector.
- Peel the tape up from the rear case.
- Fold the antenna cable out of the way.

Step 49



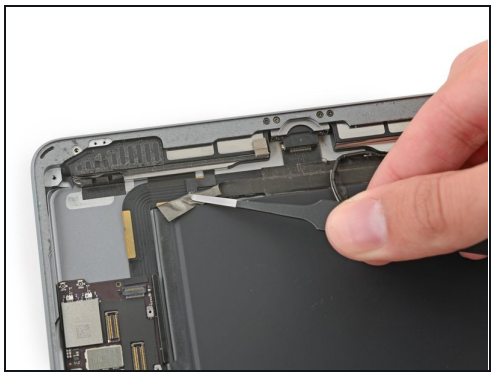


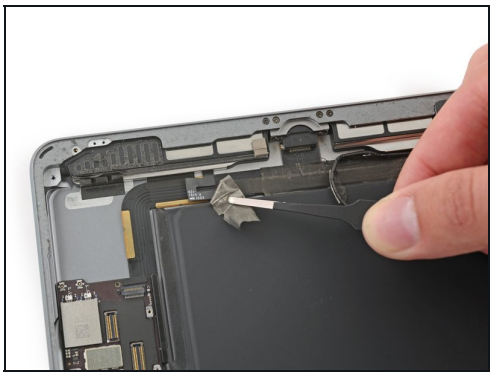
ⓘ A bend in the speaker cable makes it difficult to peel the tape up from the end.

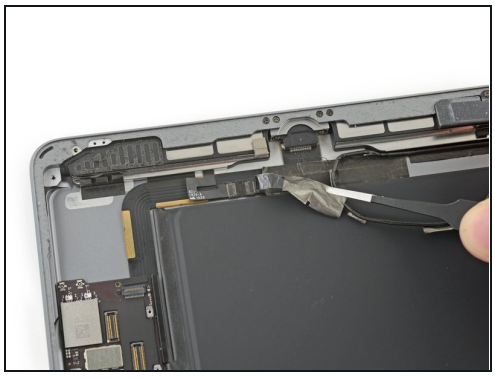
- Instead, grip the tape just under the speaker and peel it down, away from the edge of the case.

ⓘ Be careful with your tweezers—only grab and peel the tape, and not the cable beneath.

Step 50

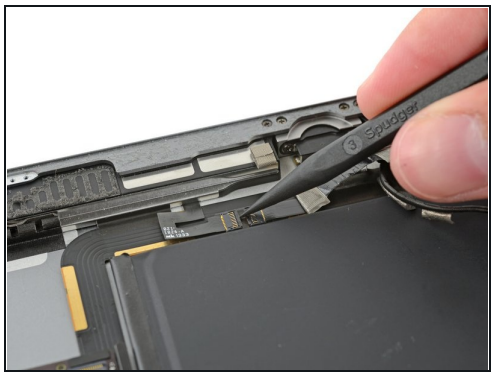
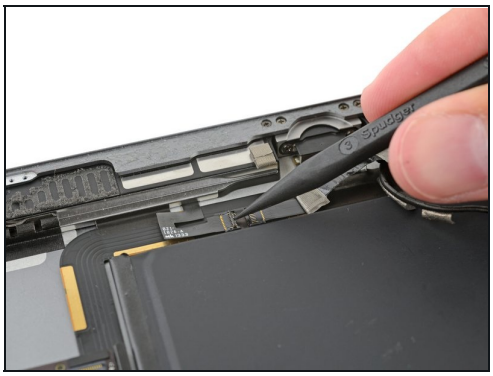
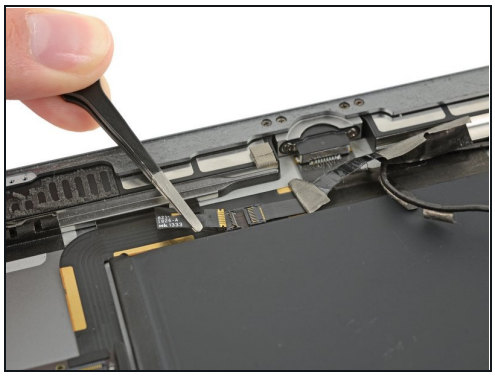






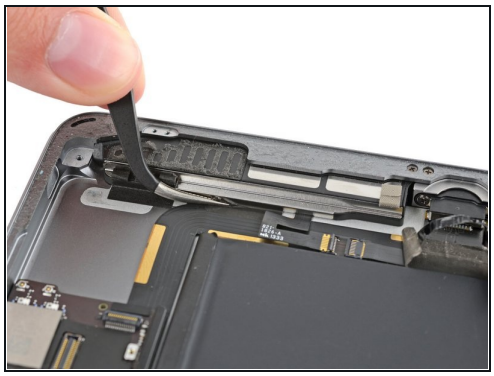
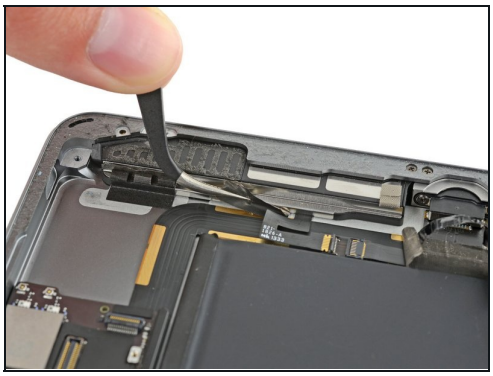
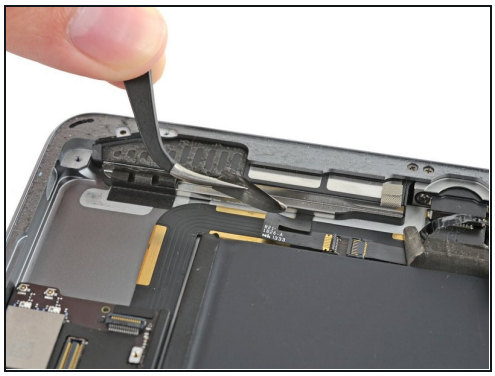
- Peel the tape toward the home button to uncover the speaker cable connector.

Step 51

- Use the pointed end of a spudger to flip up the retaining flap on the right speaker cable connector.
- Slide the speaker cable straight out of its ZIF connector.

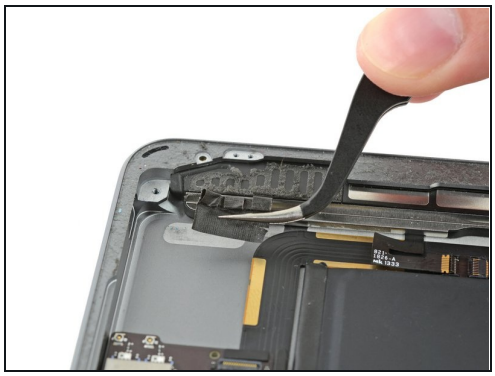
Step 52

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

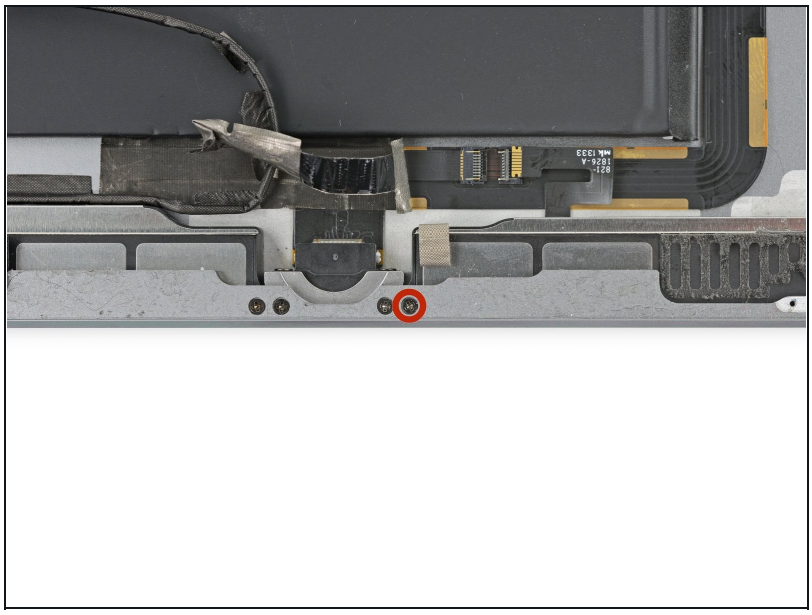
Step 53





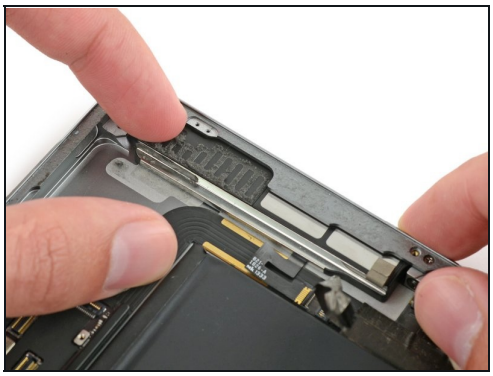
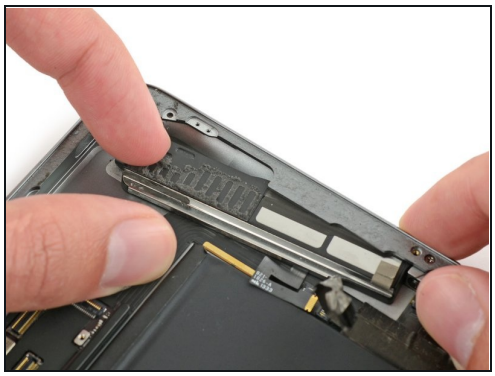
- Carefully peel the LCD buffer tape up off of the rear case.

Step 54



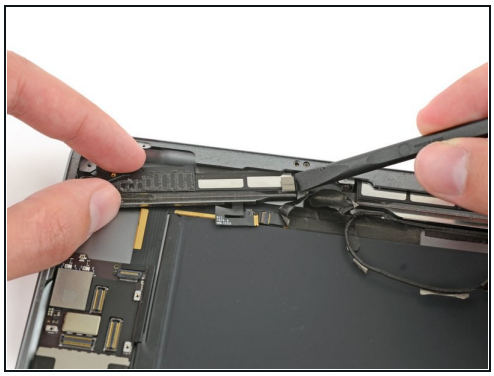
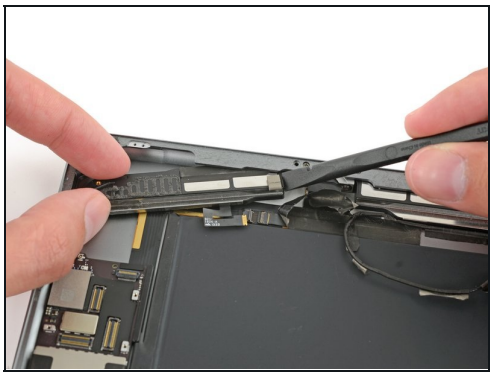
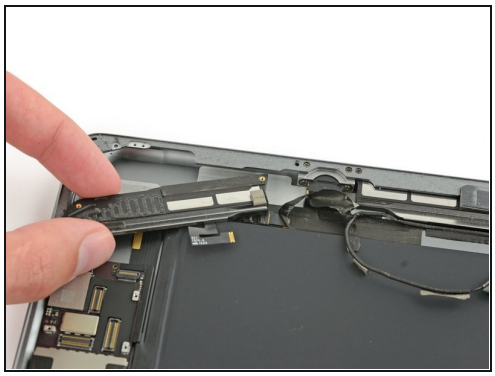
- Remove the 2.2 mm Phillips #000 screw securing the speaker to the rear case.

Step 55

- Insert a fingernail or the flat end of a spudger 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 56

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

Step 57 — Upper Component Cable Bracket

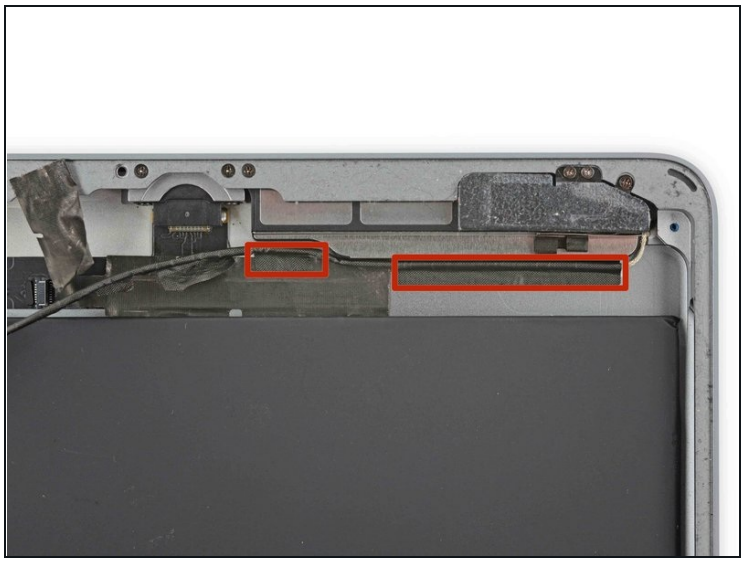
- Remove the three 1.4 mm Phillips #000 screws securing the upper component cable bracket.

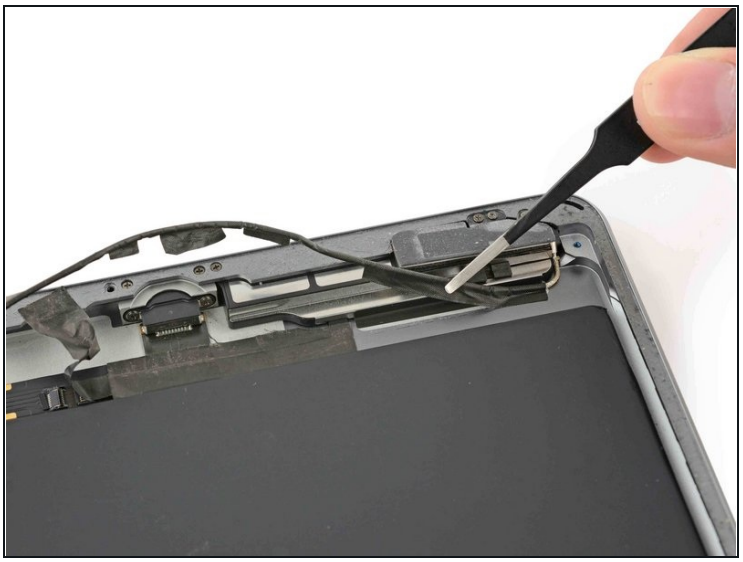
Step 58

- Remove the upper component cable bracket.

⚠ If you have the Wi-Fi/Cellular model, your iPad will look slightly different and will require the removal of two additional screws to access components covered by this bracket.

Step 59 — Logic Board





- There are two remaining pieces of tape securing the left antenna cable to the rear case.
- Peel the tape up from the rear case.

Step 60

- Carefully insert an opening pick between the speaker enclosure and the antenna cable bracket.
- Slide the pick toward the home button to cut the adhesive.
- Push the bracket away from the speaker until it is clear of the tape underneath.

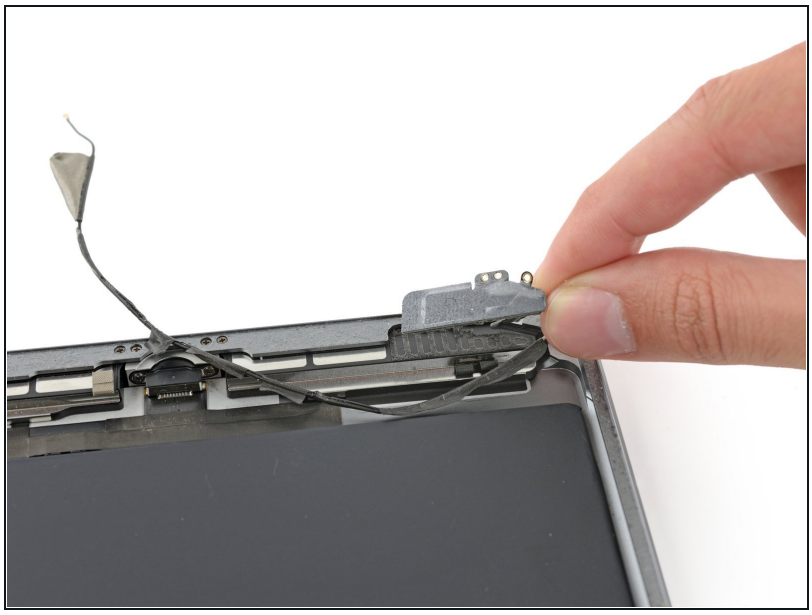
Step 61

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

Step 62

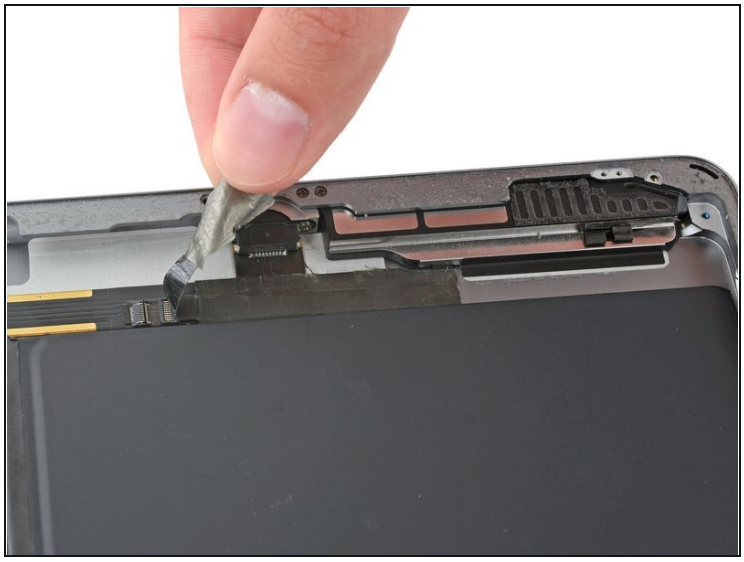
- Insert the flat end of a spudger between the antenna and the speaker assembly.
- Slide the spudger toward the home button to cut the foam adhesive securing the antenna.

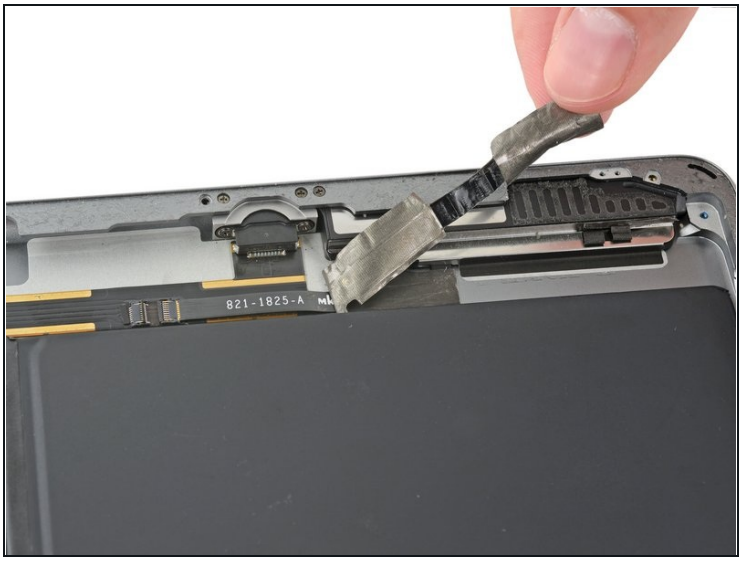
Step 63



- Remove the left antenna from the iPad.

Step 64



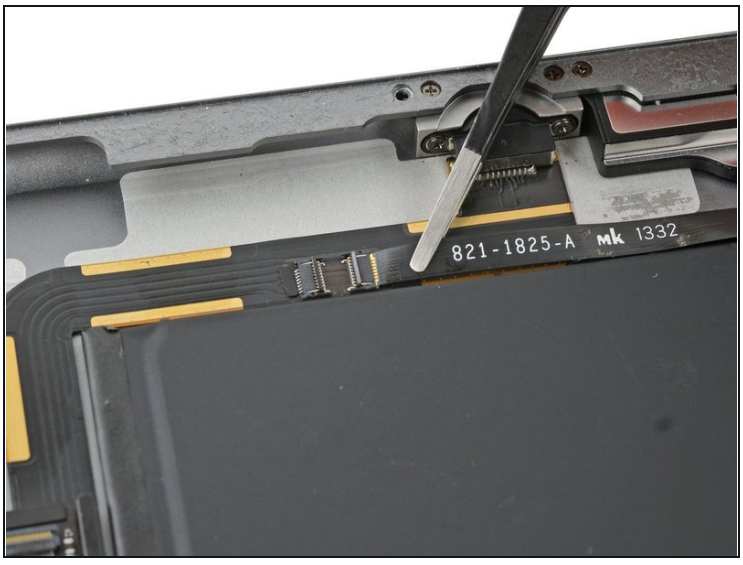


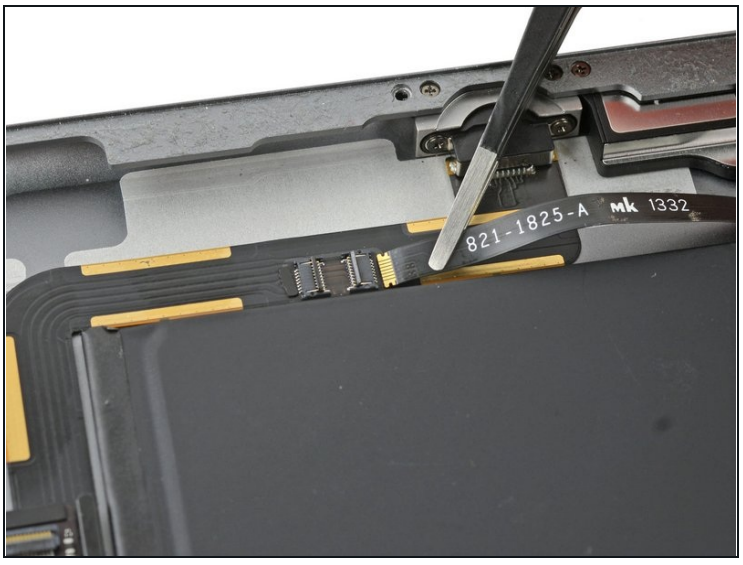
- Remove the tape covering the left speaker cable connector.

Step 65

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

Step 66



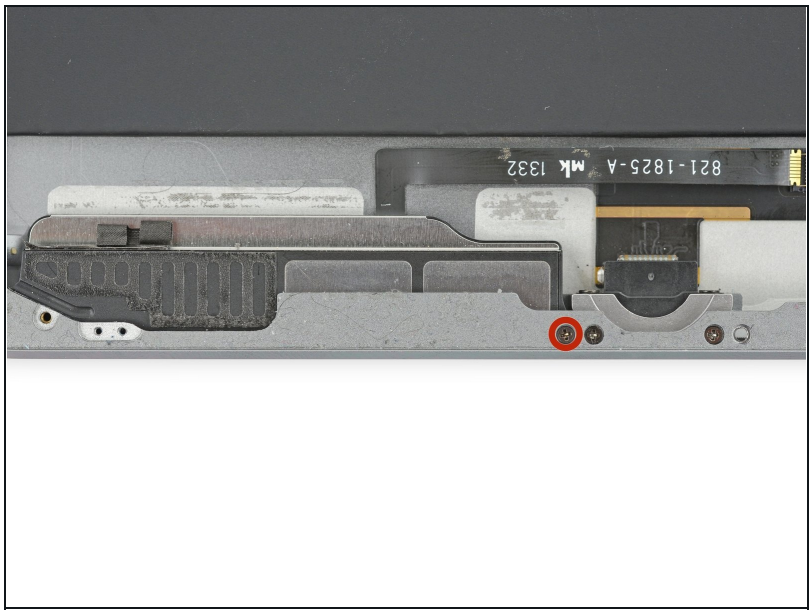


- Slide the speaker cable straight out of its ZIF connector.

Step 67

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

Step 68

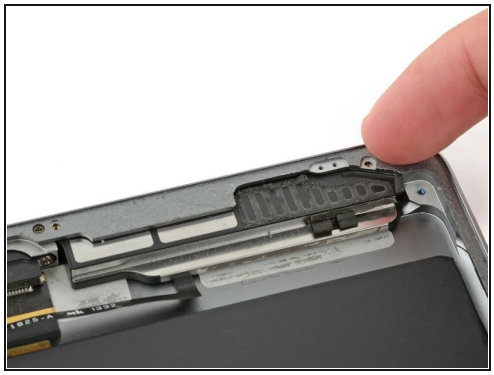
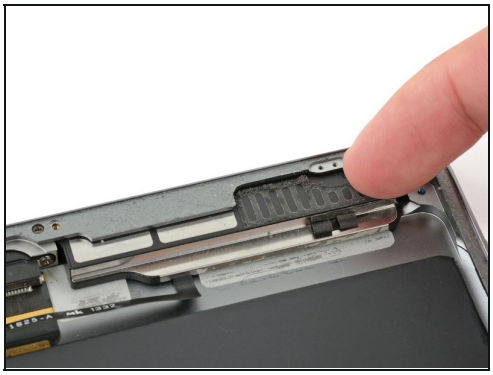


- Remove the 2.2 mm Phillips #000 screw securing the speaker to the rear case.

Step 69

- Gently fold the left speaker ribbon cable up so that it will clear the battery when you slide the speaker enclosure out.

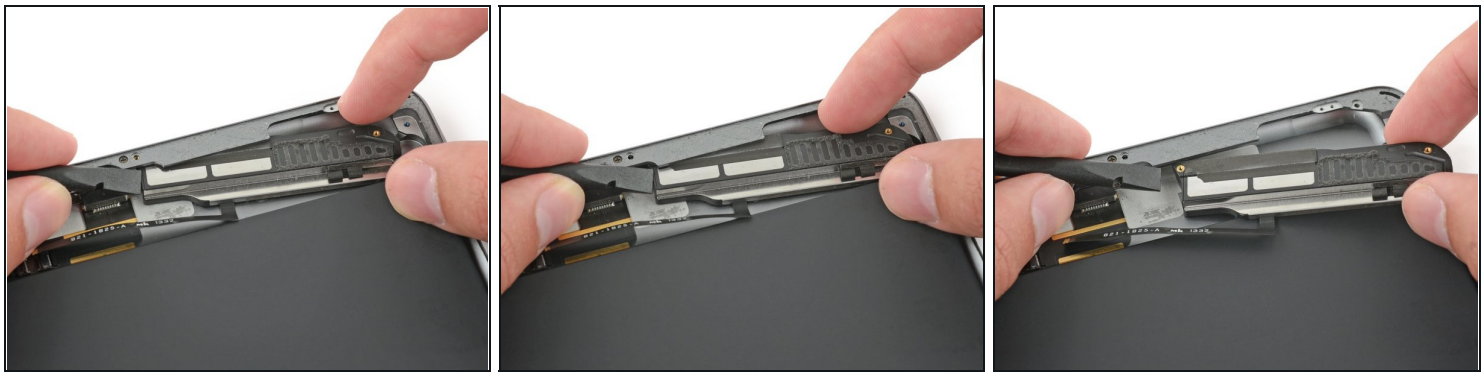
Step 70


- Insert a fingernail or the flat end of a spudger 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 71



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

Step 72

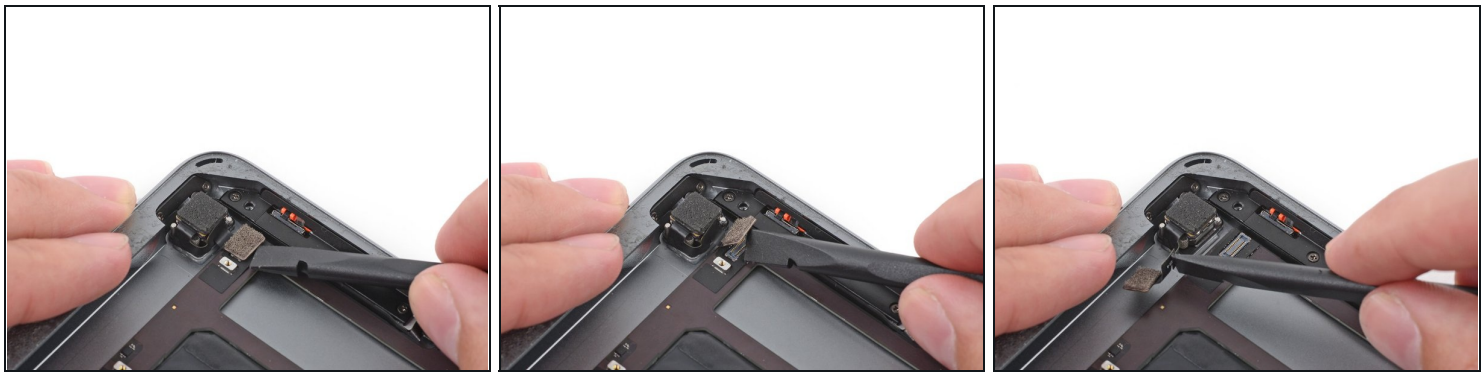
- Use the flat end of a spudger to disconnect the front-facing camera connector from the logic board.

  ⚠ Pry up only on the connector—**not** on the socket itself.

- Fold the front-facing camera cable out of the way.

  There is a bit of conductive adhesive between the gold-colored cable contacts. Be sure to apply pressure to readhere these contacts during reassembly.

Step 73



- Use the flat end of a spudger to disconnect the rear-facing camera connector from the logic board.

⚠ Pry up only on the connector—**not** on the socket itself.

- Fold the rear-facing camera cable out of the way.

Step 74

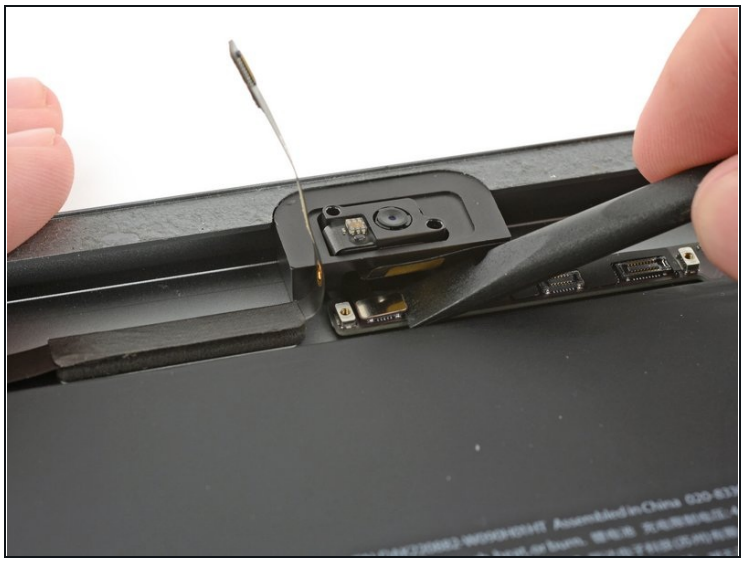
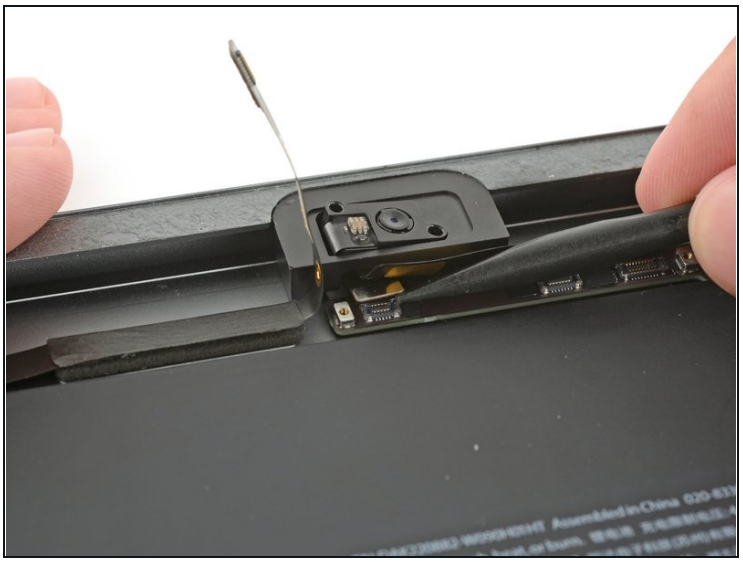
- Use the flat end of a spudger to disconnect the headphone jack connector from the logic board.

⚠ Pry up only on the connector—**not** on the socket itself.

ⓘ Newer iPad units have a loop of tape connecting this connector to its socket on the the logic board. This tape must be cut in order to disconnect the headphone jack.

- Fold the headphone jack cable out of the way.

Step 75

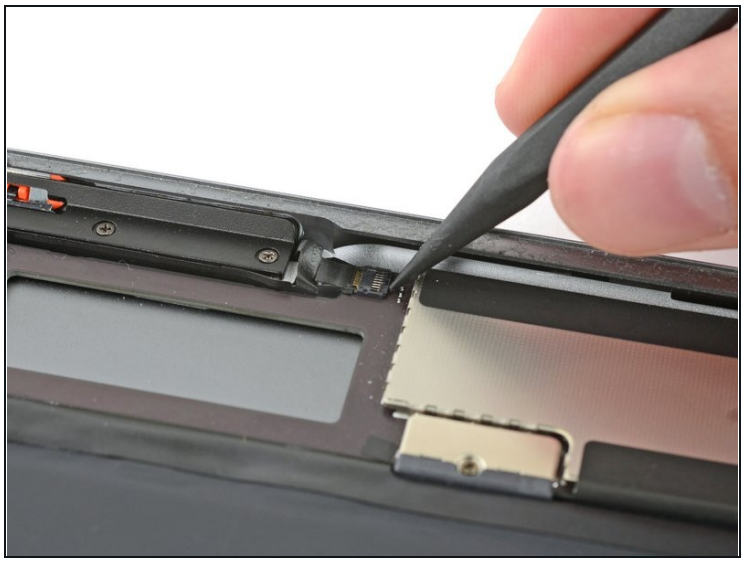
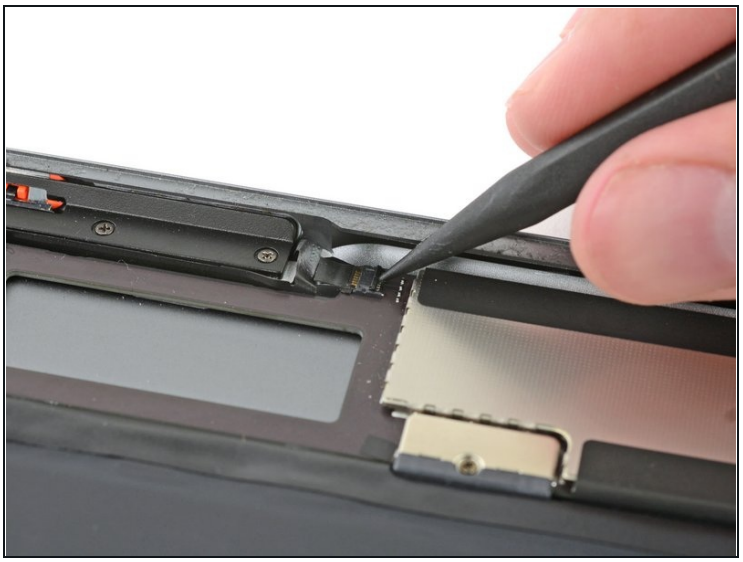
- Use the flat end of a spudger to disconnect the microphone cable connector from the logic board.

⚠ Pry up only on the connector—**not** on the socket itself.

Step 76

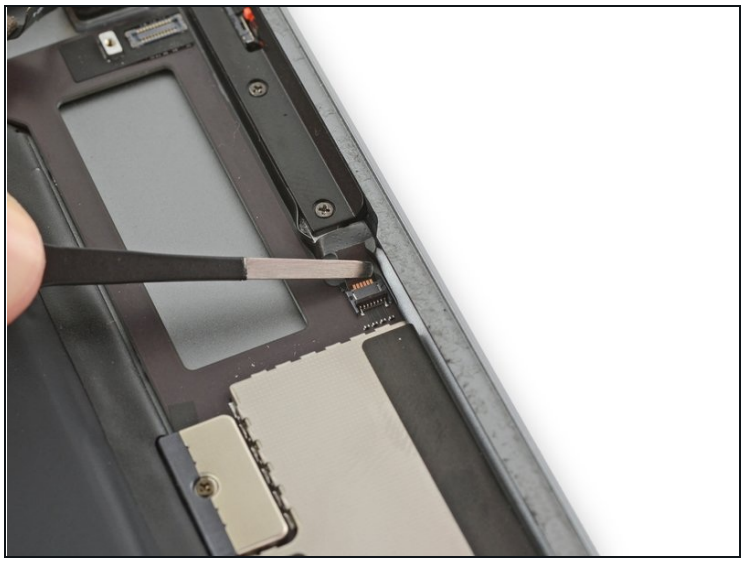
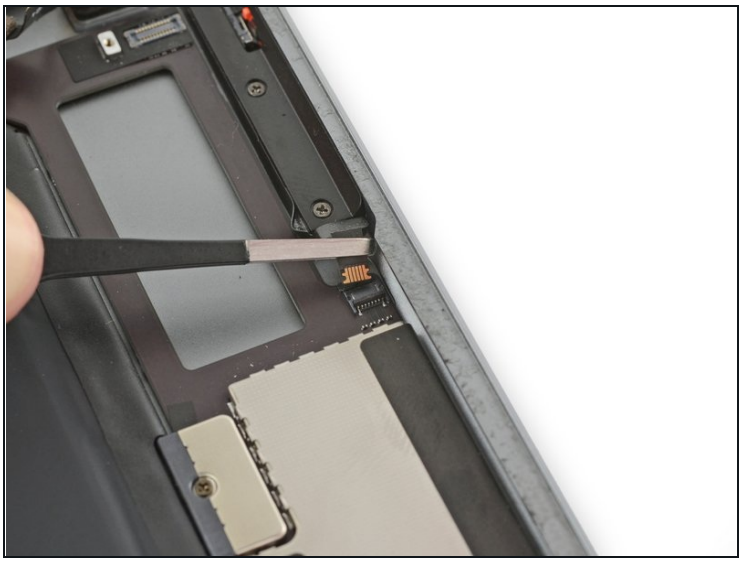

- Remove any tape covering the upper button assembly cable connector.

Step 77

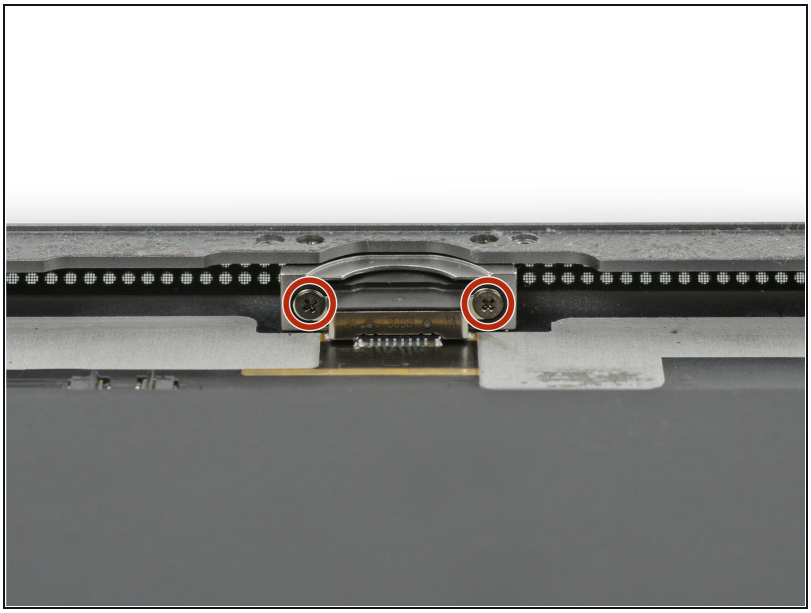
- Use the pointed end of a spudger to flip up the retaining flap on the upper button assembly cable connector.

Step 78

- Slide the upper button assembly cable straight out of its ZIF connector.

Step 79



- Remove the two 3.3 mm Phillips #000 screws securing the Lightning port.

To find these screws, hold the iPad vertically and look down at the Lightning port.

Step 80

In the next steps, you will use an iOpener to apply heat to the rear case of the iPad to soften adhesive holding the logic board in place.

As you reheat and place the iOpener in each of the indicated locations, leave it in place for at least a minute to soften the adhesive through the rear case.

- The adhesive is in the form of six pieces of black foam tape—refer to this step as you work at heating and prying to keep track of where each piece is located.

Step 81

- Place a heated iOpener over the rear-facing camera end of the iPad, and let it sit for at least a minute to soften the adhesive through the rear case.

ⓘ More time won't hurt, but you may need to reheat your iOpener and reapply it if you leave it on the rear case for too long.

Step 82

ⓘ As you complete the next few steps, prying adhesive securing the logic board in place, always start by testing gently to see if the adhesive is softened. If not, reheat the iOpener and reapply it to the back of the rear case.

- Carefully insert an opening pick under the logic board, between the front-facing camera and the battery.

- Slide the pick toward the front-facing camera connector, and stop at the bend in the logic board.

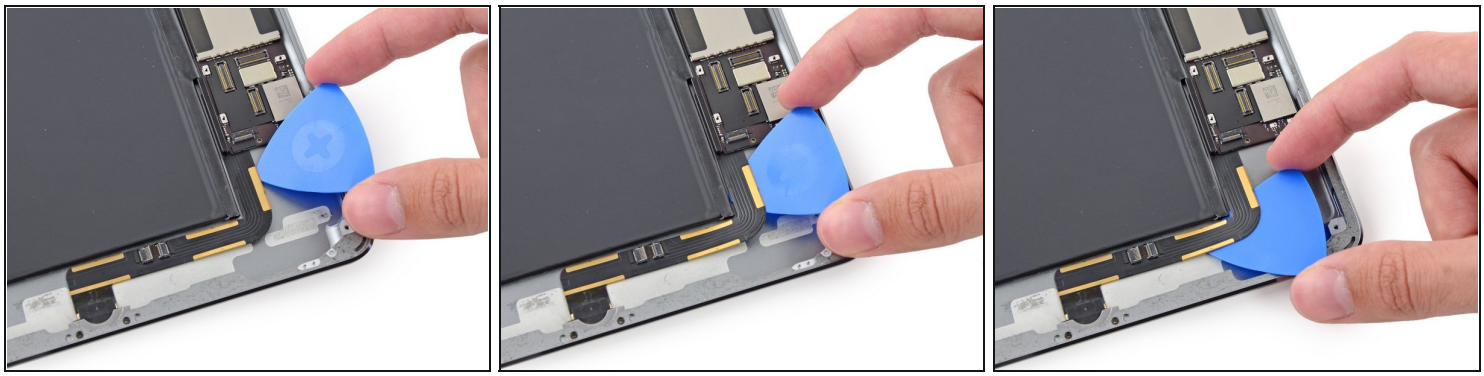
Step 83

- Slide an opening pick under the logic board from the front-facing camera to the rear facing camera.

Step 84

- Place a heated iOpener along the bottom edge of the iPad.
  - ⓘ Again, let the iOpener sit for at least a minute to soften the adhesive through the rear case.

Step 85



ⓘ The Lightning connector cable is stuck to the case with some adhesive. To detach the adhesive you will be sliding an opening pick between the cable and the case. **Be very careful** not to cut the Lightning connector cable itself.

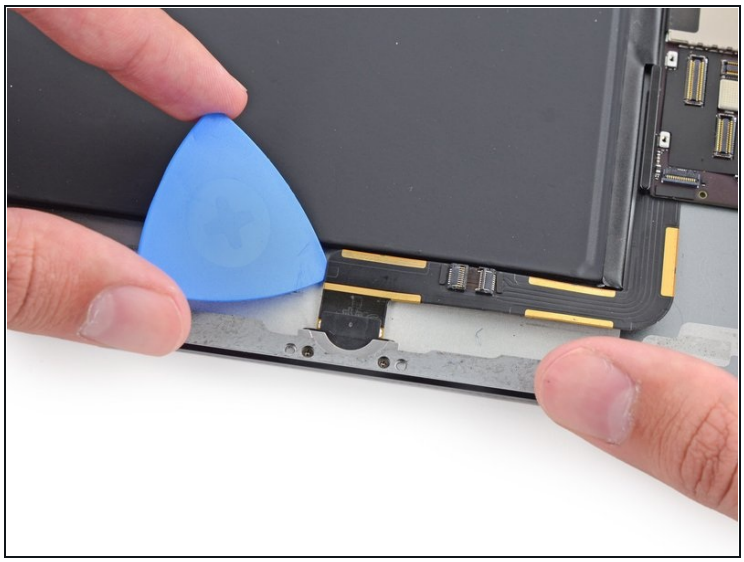
- Insert an opening pick under the Lightning cable where it meets the logic board.
- Slide the pick down and around the bend in the cable.

Step 86

- Continue to slide the opening pick under the cable, stopping before the cable bends to the Lightning connector.

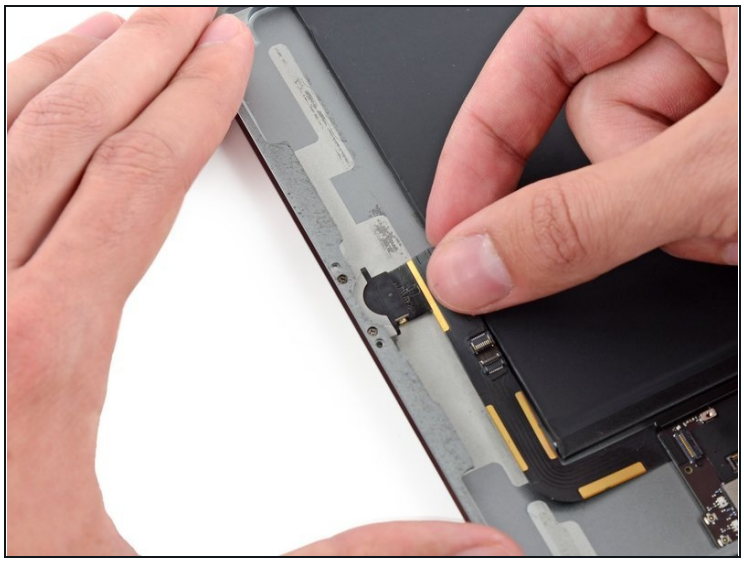
⚠ Move slowly and carefully. If the opening pick does not slide easily, apply more heat and try again. If you use excessive force, you will likely slip and sever the Lightning connector cable.

Step 87



- Finally, slide the opening pick between the battery and the Lightning connector itself to separate the last of the adhesive underneath the cable.

Step 88



- Pull the Lightning connector straight out of its recess in the rear case.

Step 89

- Place a heated iOpener on the left side of the rear case, where the logic board is adhered.

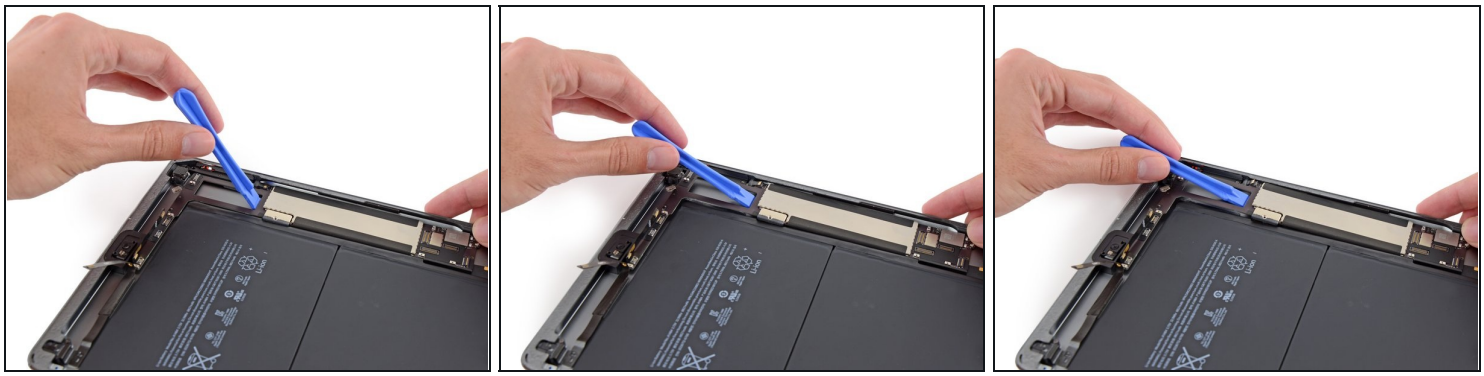
  ⓘ Let the iOpener sit for at least a minute to soften the adhesive through the rear case.

Step 90

- Insert a plastic opening tool in the rectangular gap in the upper area of the logic board, and pry the logic board up from the rear case.

- While keeping the opening tool underneath the logic board, slide it down the length of the gap to free the upper end of the logic board from the adhesive.

Step 91



- Pry up the logic board at the lower edge of the rectangular gap, near the EMI shield.

⚠ Lift the end of the logic board slowly. If you encounter significant resistance, stop prying and reapply the iOpener.

Step 92

- Slide an opening pick under the logic board between it and the battery.
- Slide the pick from the base to the center of the logic board to cut the adhesive.

⚠ Take care not to cut the battery with the opening pick; a punctured battery can be very dangerous. If you encounter resistance, reheat and reapply the iOpener.

Step 93

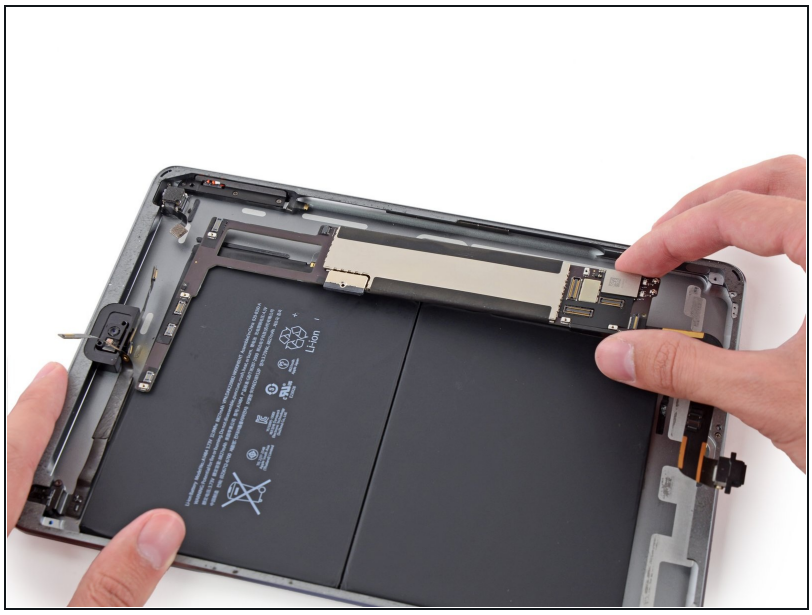


- Slide the pick up the length of the logic board.
- Once the adhesive has been cut, pry the battery side of the logic board upward off of the rear case.

Step 94


- Continue to lift the logic board along the edge nearest the battery, until you can get an opening pick against the far edge of the logic board.
- Cut any adhesive holding the outer edge of the logic board to the rear case.

Step 95



- Remove the logic board from the iPad.

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