



iPad mini 5 Wi-Fi Magnetic Sensor Replacement

Follow this guide to remove or replace the...

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INTRODUCTION

Follow this guide to remove or replace the magnetic sensor on an iPad mini 5 Wi-Fi. You may need to do this repair if the sleep and wake function is no longer working while using a Smart Cover.

This repair requires advanced soldering skills. The magnetic sensor cable is soldered to the screen. Make sure to follow [soldering safety procedures](#) such as wearing eye protection, working in a well-ventilated area, and washing your hands with soap and water after soldering.

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:

[iOpener](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Suction Handle](#) (1)
[Phillips #00 Screwdriver](#) (1)
[Spudger](#) (1)
[Tweezers](#) (1)
[Packing Tape](#) (1)
[Safety Glasses](#) (1)
[Polyimide Tape](#) (1)
[Hot Air Rework Station Hakko FR-810B-05](#) (1)
[Soldering Station Hakko FX888D-23BY](#) (1)
[Solder ROHS Lead Free Rosin Core](#) (1)

PARTS:

[iPad mini 4/5 Magnetic Sensor Cable](#) (1)
[iPad mini 5 Adhesive Strips](#) (1)

Step 1 — Apply tape to a cracked screen



- 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 — Opening Procedure



- [Heat an iOpener](#) and apply it to the left edge for two minutes.

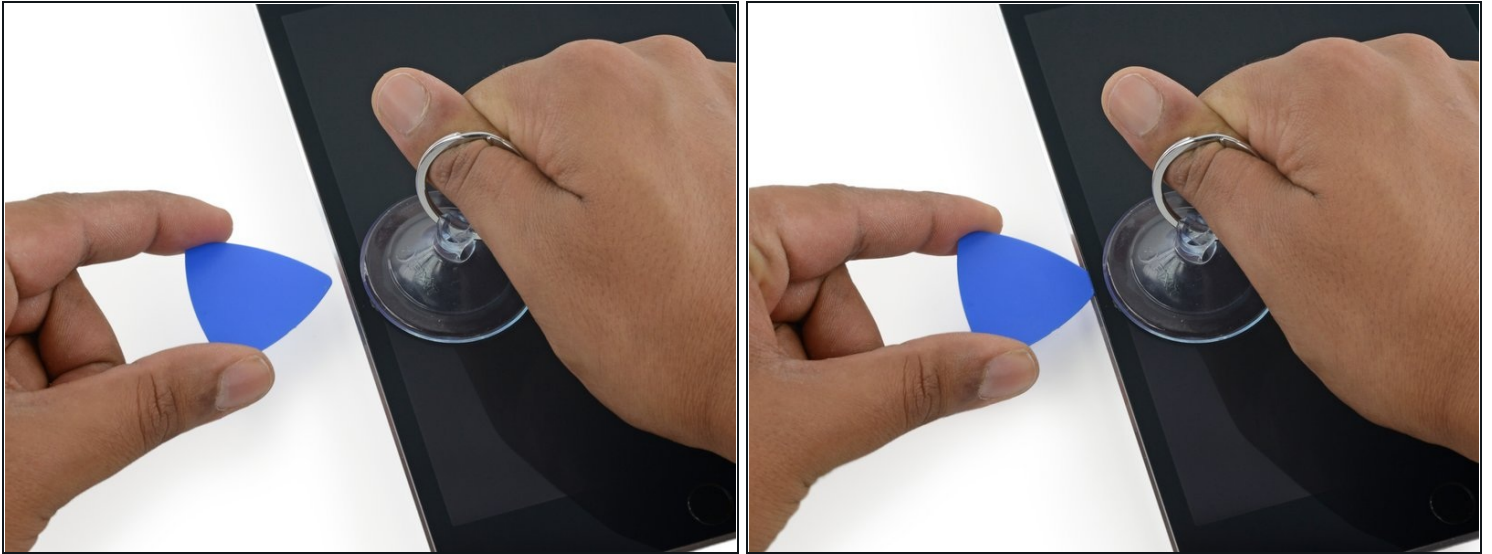
Step 3



- Apply a suction cup halfway up the heated side.
 - Be sure the cup is completely flat on the screen to get a tight seal.
- While holding the iPad down with one hand, pull up on the suction cup with strong, steady force to create a gap.
 - ⓘ Depending on the age of your device, this may be difficult. If you have trouble, apply more heat and try again.

⚠ Be careful to only lift the glass enough to insert an opening pick—any more and you risk cracking the glass.

Step 4



- While holding the glass up with the suction cup, insert the point of an opening pick into the gap between the glass and body of the iPad.

⚠ Don't insert the opening pick any deeper than 2 mm into the side of the display. Inserting the pick deeper than 2 mm could damage the backlight assembly, LCD display, or touchscreen.

Step 5



- Reheat and reapply the iOpener to the left edge for a few minutes.
- ⚠ Be careful not to overheat the iOpener during the repair procedure. Always wait at least ten minutes before reheating the iOpener.

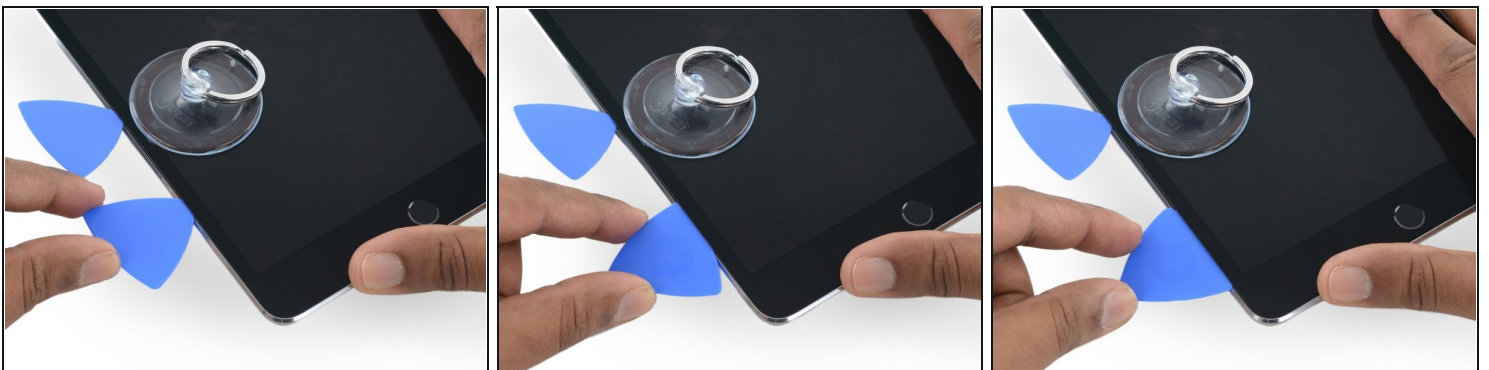
Step 6



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

⚠ Throughout the rest of the procedure, if you encounter significant resistance while sliding the pick, stop and reheat the section you're working on. Applying too much pressure with the pick can crack the glass.

Step 7



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

Step 8



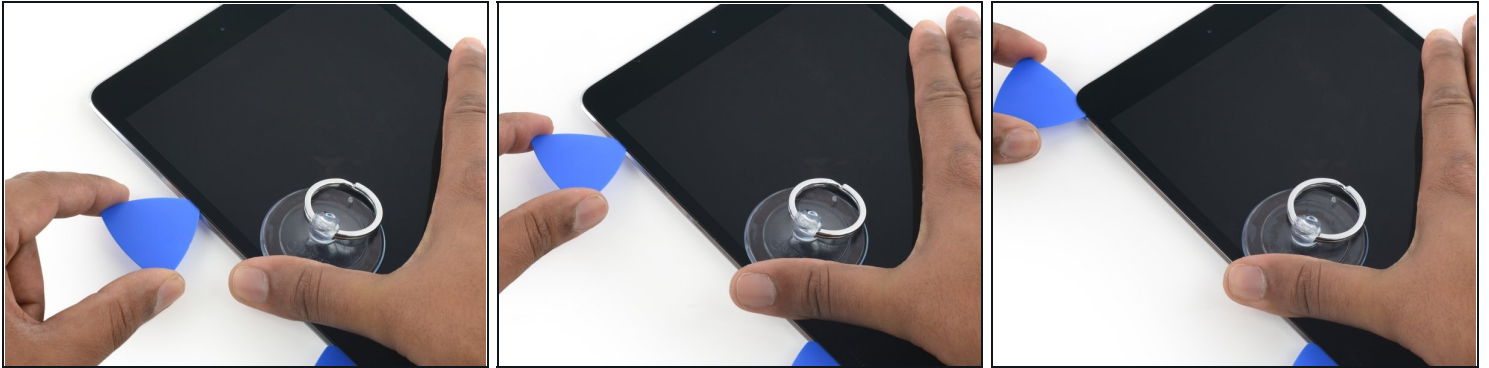
- Take the first pick you inserted and slide it up toward the top corner of the iPad.

Step 9



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

Step 10



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

Step 11



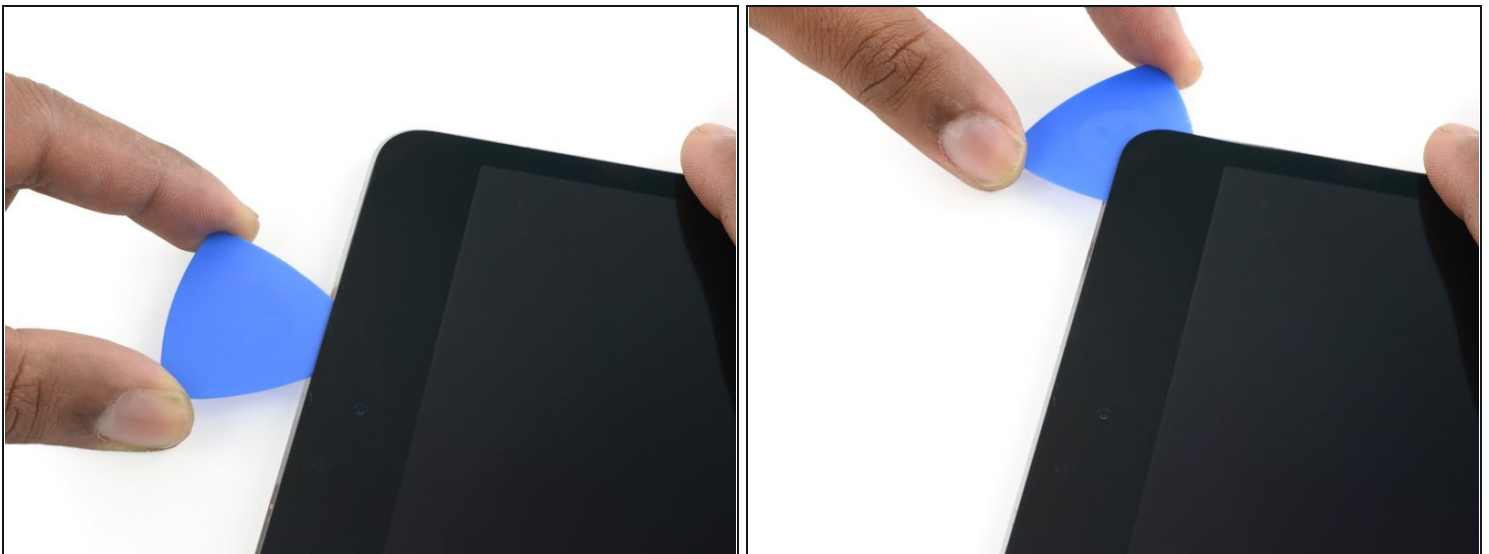
- Slide the opening pick along the top edge of the iPad, stopping just before you reach the camera.
 - As you reach the front-facing camera, pull the pick out slightly and continue sliding it across the top edge.
- ⚠️ Avoid sliding the opening pick over the front-facing camera, as you may smear adhesive onto the lens or damage the camera. The following steps will detail how to best avoid disturbing the front-facing camera.

Step 12



- Leave the opening pick in the iPad slightly past the front-facing camera.
- Take a second pick and insert it to the left of the camera, where the first pick just was. Slide it back to the corner to completely cut any remaining adhesive.
- Leave the second pick in place to prevent the corner adhesive from re-sealing as it cools.

Step 13



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

Step 14



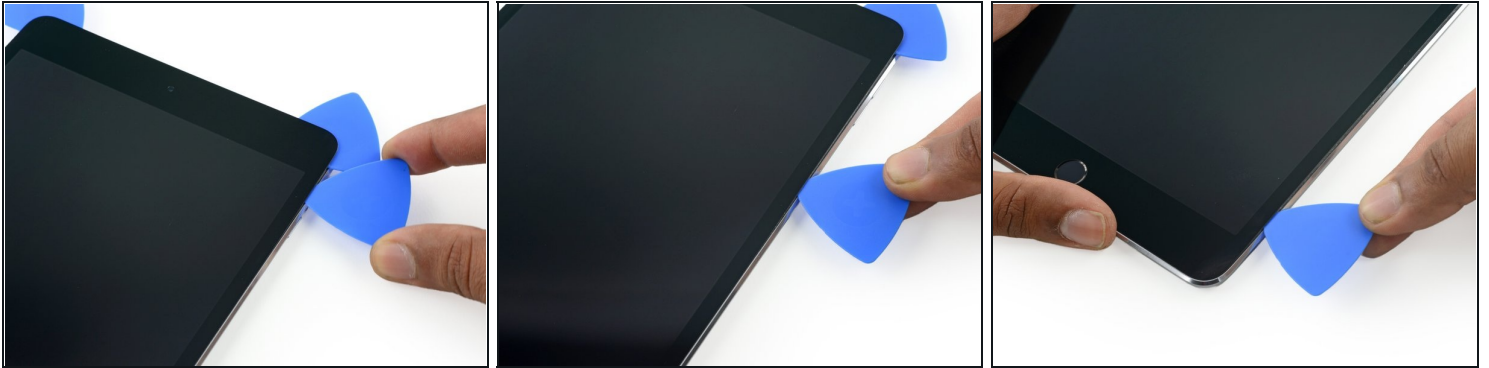
- Leave the three picks in the corners of the iPad to prevent re-adhering of the front panel adhesive.
- Reheat the iOpener and place it on the remaining long side of the iPad—along the volume and lock buttons.

Step 15



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

Step 16



- Continue sliding the opening pick down the right edge of the iPad, reheating the edge using an iOpener if necessary.

⚠ Be careful not to slice too deep near the bottom right corner, or you risk damaging the display cable.

Step 17



- Leave the opening picks in place and reheat the iOpener.
⚠ Remember not to overheat the iOpener—no more than once every ten minutes.
- Set the reheated iOpener on the home button end of the iPad and let it rest for a few minutes to soften the adhesive beneath the glass.

Step 18



- Insert a new opening pick at the bottom right corner of the display, below the last opening pick you used to slice down the right edge.
- Rotate the new pick around the lower right corner of the device.

Step 19



- Slide the pick from the bottom right corner along the lower edge of the device. Stop about half an inch shy of the home button.

Step 20



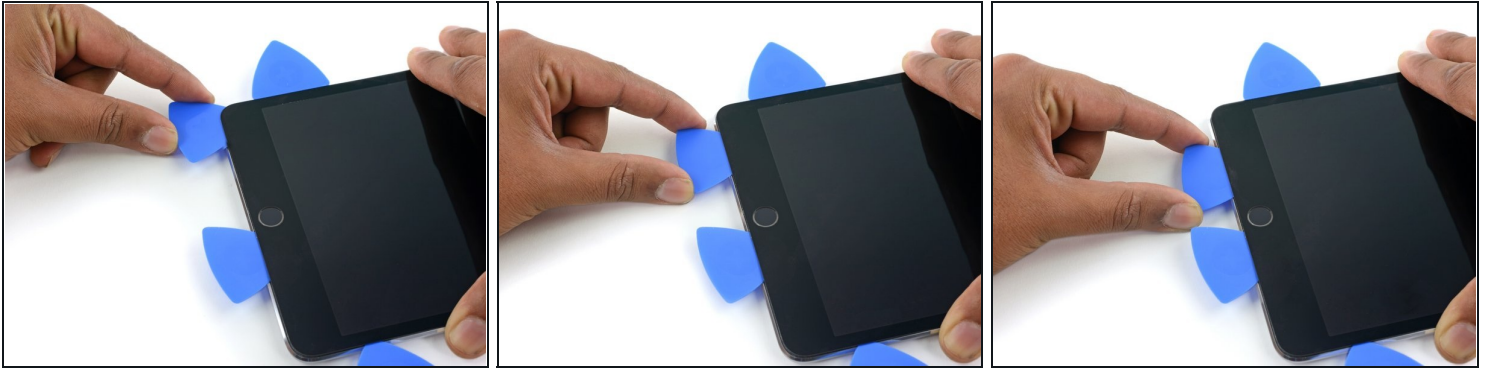
- Insert a final opening pick at the lower left corner of the iPad, directly below the existing one.

Step 21



- Slide the pick around the lower left edge of the iPad.

Step 22



- Continue sliding the pick at the lower left edge of the display toward the center of the iPad, until it is roughly half an inch from the home button.

Step 23



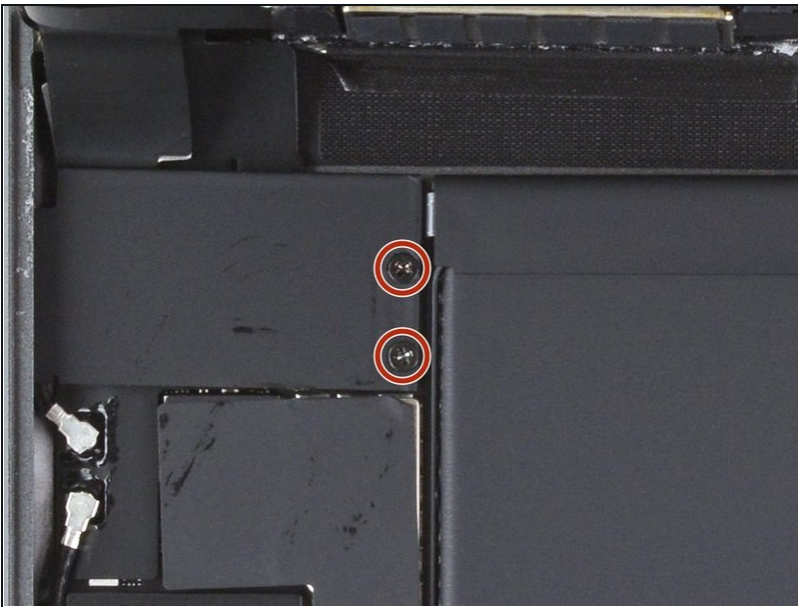
- Twist the two picks at the top edge of the iPad to break up the last of the adhesive holding the display assembly in place.
- Lift the display from the top edge to open the device.

Step 24 — Hold the screen perpendicular



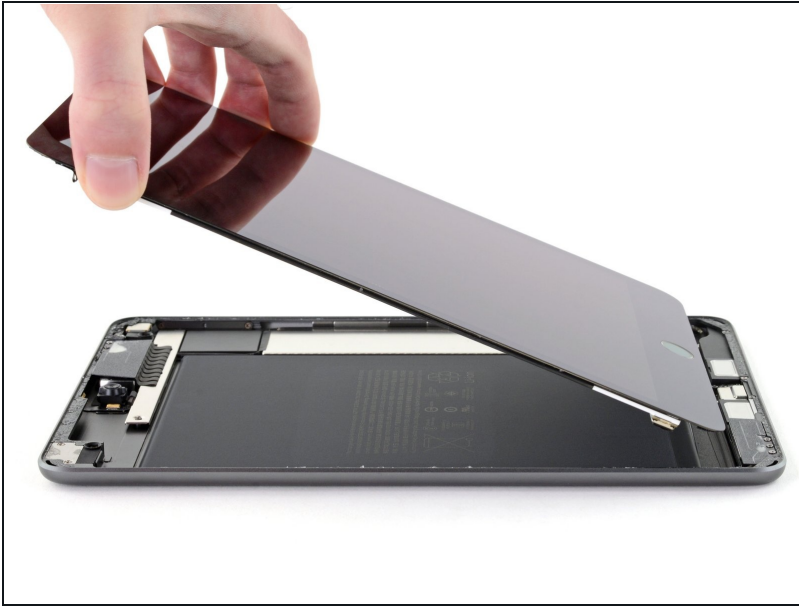
- To avoid stressing any cables, hold the screen perpendicular to the frame.

Step 25 — Remove the display cable bracket



- ① Continue to hold the screen perpendicular during this step.
- Use a Phillips screwdriver to remove the two 1.3 mm screws securing the display cable bracket.
- ① Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

Step 26 — Reposition the screen



- ① You'll need to reposition the screen to access the bottom side of the display cable bracket.
- Lower the screen to about 30 degrees above the frame.

Step 27 — Disconnect the battery



- ① The battery press connector is attached to the underside of the display cable bracket on the screw hole side.
- Insert the flat end of a spudger under the display cable bracket and lift up to disconnect the battery press connector from the logic board.
 - ⚠ Take care to pry only under the edge of the connector to prevent damaging the socket itself and surrounding components.
 - ✦ To re-attach [press connectors](#) like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend, causing permanent damage.
 - ⚠ Don't try to remove the display cable bracket as it's attached to the battery by the battery cable.

Step 28 — Rotate the display cable bracket

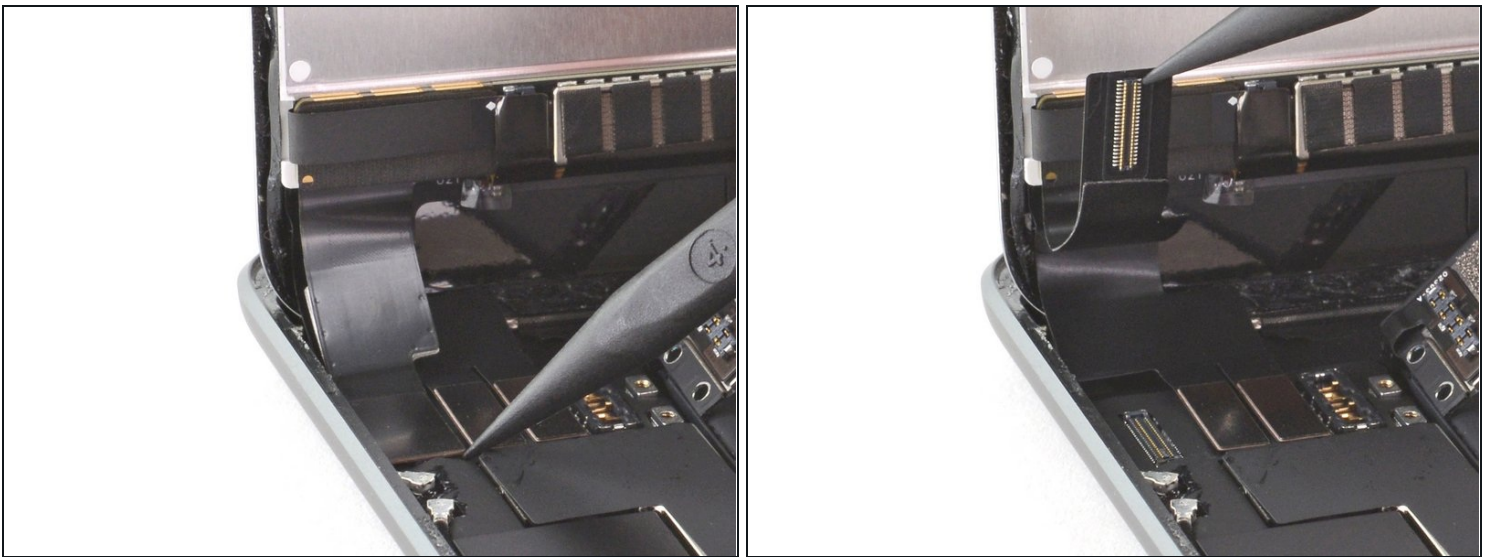


① The display cable bracket is secured by a clip under the edge of the frame.

- Use a pair of [tweezers](#) to pull the display cable bracket's clip out from under the frame's edge.
- Rotate the display cable bracket toward the battery.

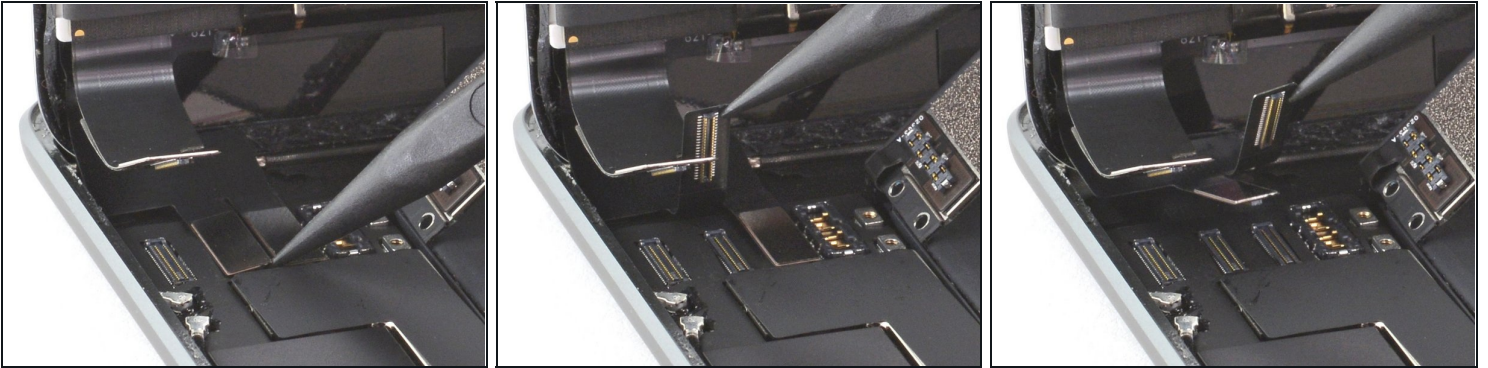
⚠ Don't bend the battery cable too much past vertical to avoid damaging it. You only need enough space to disconnect the display press connectors and prevent the battery connector from making contact with its socket during the repair.

Step 29 — Disconnect the display press connectors



- Use the pointed end of a spudger to disconnect the digitizer press connector from the logic board.

Step 30



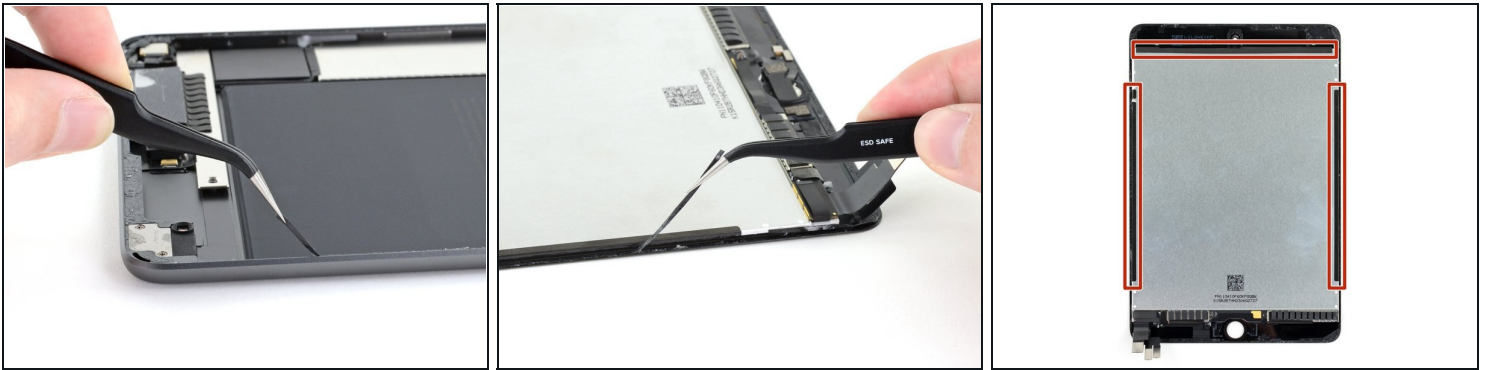
- Use the pointed end of a spudger to disconnect the second and third display press connectors.

Step 31 — Remove the screen



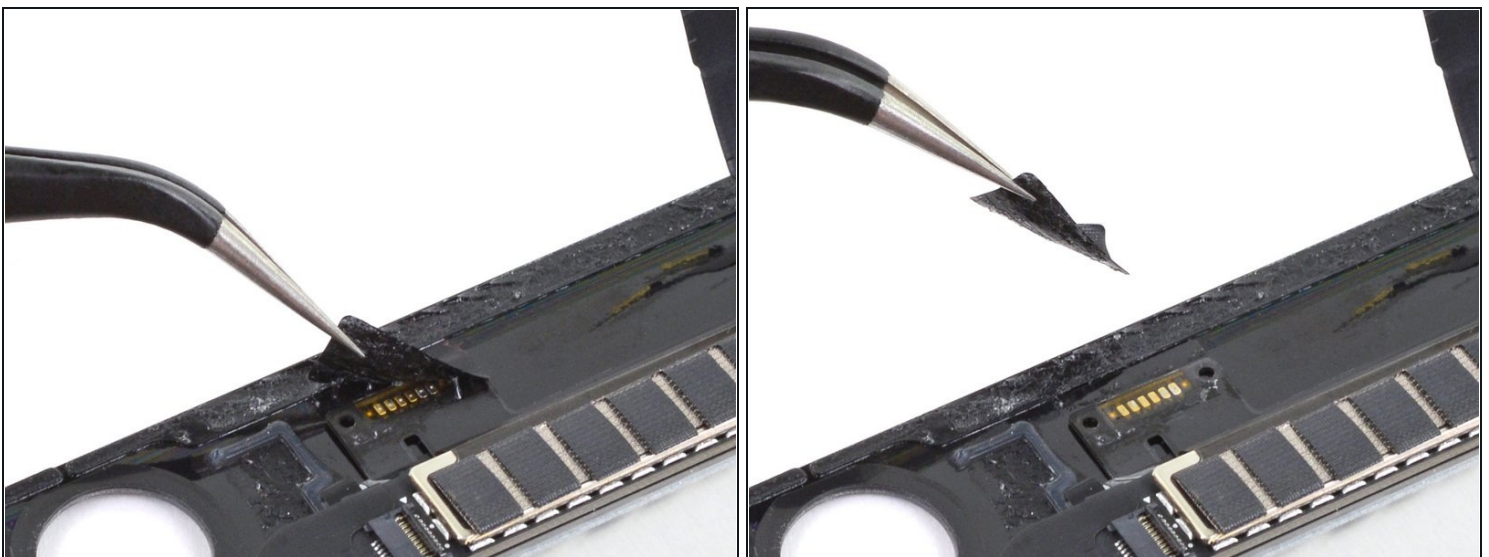
- Lift and remove the screen.

Step 32 — Screen reassembly information



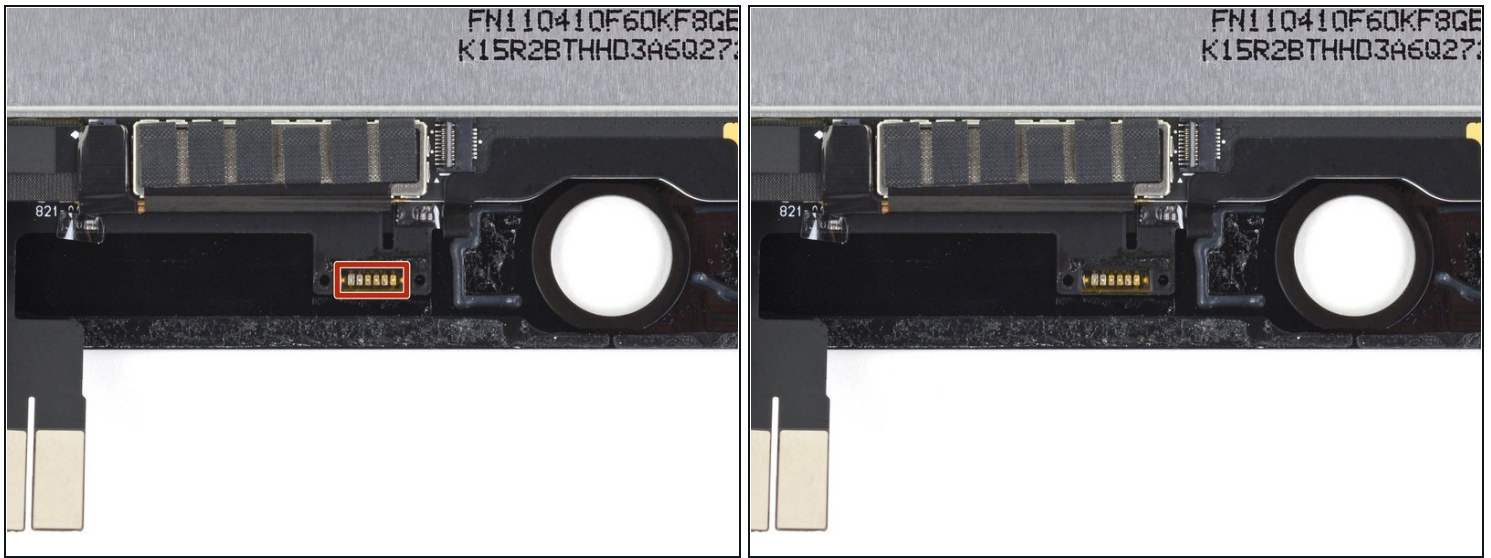
- ✦ During reassembly, remove any remaining adhesive and residue from the perimeters of the frame and the screen. Then, apply new adhesive to secure the screen to the frame.
 - Don't remove the black tape on the left, right, and upper edges of the display. These hold the display to the front glass.
- ✦ [Follow this guide](#) if you are using a pre-cut adhesive card. [Follow this guide](#) if you are using custom-cut adhesives.

Step 33 — Remove the magnetic sensor sticker



- Use a pair of [tweezers](#) to remove the sticker covering the magnetic sensor solder pads.

Step 34 — Desolder information



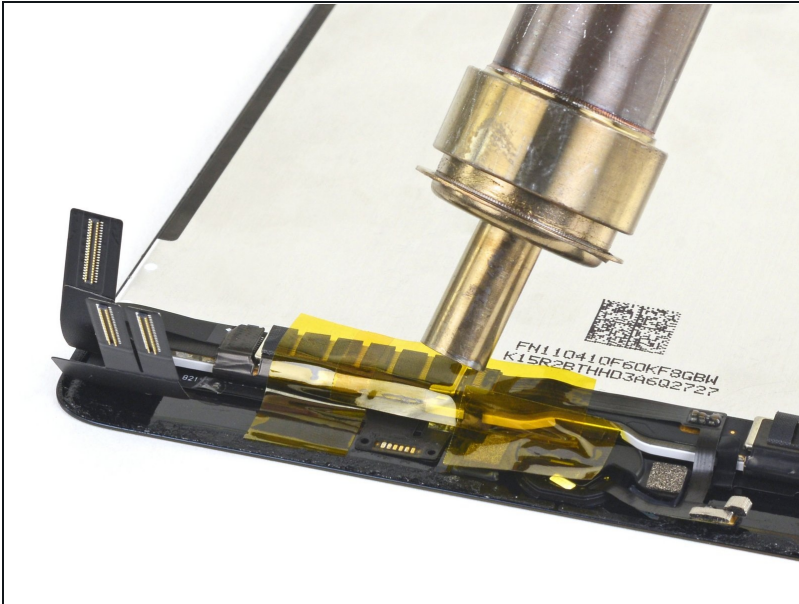
- In the next steps, you'll desolder the six solder pads securing the magnetic sensor to the screen.

Step 35 — Apply polyimide tape



- Apply polyimide tape to the area around the magnetic sensor solder pads to protect the components from heat.

Step 36 — Apply heat



- Use a soldering iron or hot air gun to apply heat evenly to the six magnetic sensor solder pads.

Step 37 — Remove the magnetic sensor cable



- When the solder on the solder pads is melted, use a pair of tweezers to separate the magnetic sensor from the screen.
 - ⓘ If the solder isn't melted, apply more heat and try again.
- When the area is cool enough to touch, remove the polyimide tape.
- Use a pair of tweezers to remove the magnetic sensor cable.
 - ⚠ The magnetic sensor cable is secured to the screen with light adhesive. Remove the magnetic sensor cable slowly to avoid damaging the cable under it.
- ☑ During reassembly, apply a piece of polyimide tape under the solder pads while soldering the magnetic sensor to avoid damaging the screen.

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 mini 5 Answers community](#) for help.