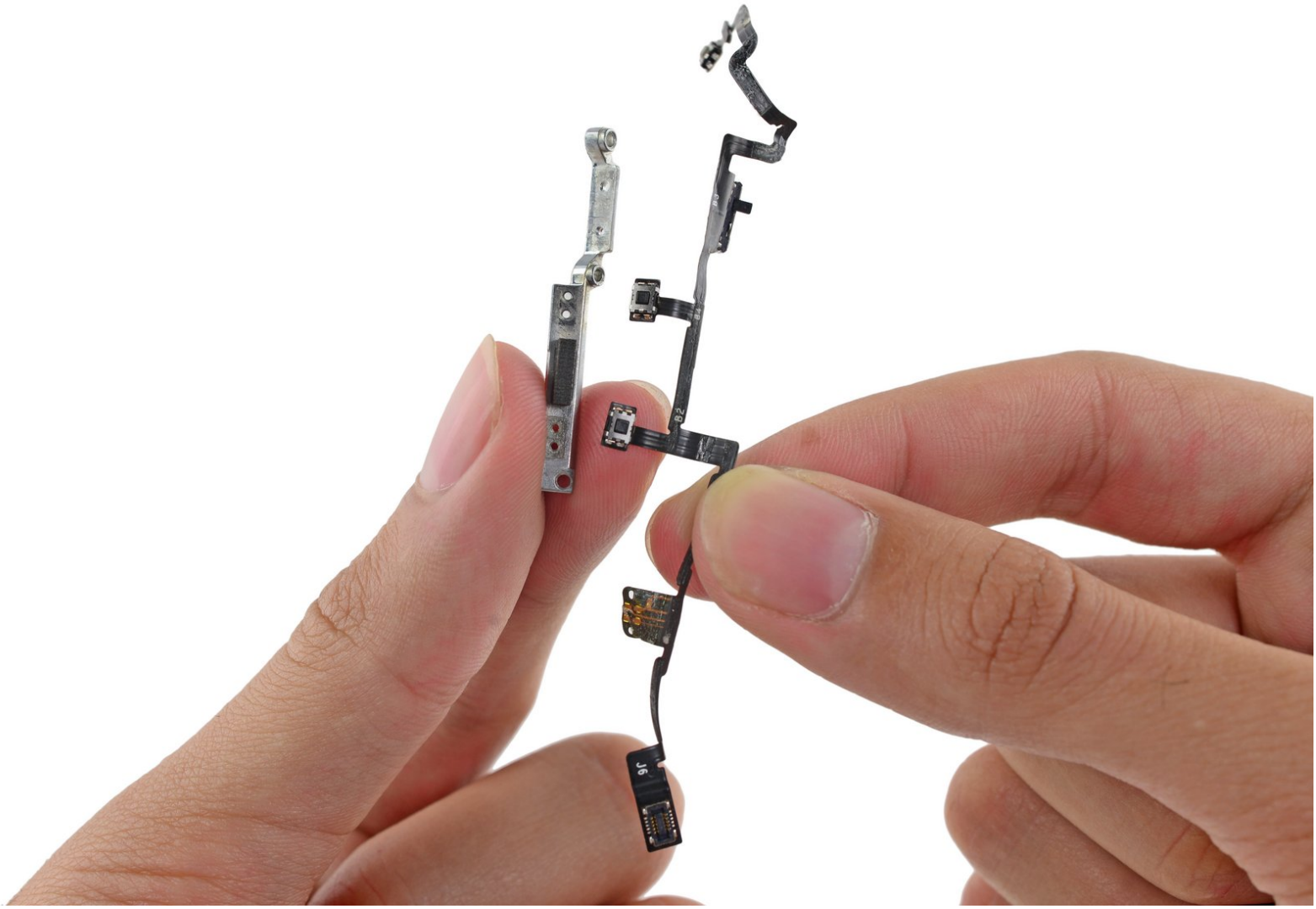
# iPad 2 GSM Volume and Power Button Cable Replacement

Replace the volume and power buttons and Smart Cover sensor in an iPad 2 GSM.

Written By: Sam Goldheart





## INTRODUCTION

Use this guide to replace the volume and power button cable assembly in your iPad 2 GSM. This assembly also includes the sensor responsible for detecting the magnet in a Smart Cover.

Parts of this guide were shot with a Wi-Fi model and as such the internals may look slightly different from the cellular model. The procedure is the same for both models except where noted.

### TOOLS:

- iOpener (1)
- iFixit Opening Picks set of 6 (1)
- Phillips #00 Screwdriver (1)
- iFixit Opening Tools (1)

### PARTS:

- iPad 2 Volume and Power Button Cable (1)
- iPad 2nd, 3rd, and 4th Gen Lock/Silent Switch Cover (1)
- iPad 2nd 3rd 4th Gen Volume Button (1)
- iPad 2nd 3rd 4th Gen Power Button (1)
- iPad 2 Adhesive Strips (1)



## Step 1 — iOpener Heating



We recommend that you clean your microwave before proceeding, as any nasty gunk on the bottom may end up stuck to the iOpener.

- Place the iOpener in the center of the microwave.

For carousel microwaves: Make sure the plate spins freely. If your iOpener gets stuck, it may overheat and burn.

## Step 2


- Heat the iOpener for **thirty seconds**.
- Throughout the repair procedure, as the iOpener cools, reheat it in the microwave for an additional thirty seconds at a time.

⚠ Be careful not to overheat the iOpener during the repair. Overheating may cause the iOpener to burst.

⚠ Never touch the iOpener if it appears swollen.

⚠ If the iOpener is still too hot in the middle to touch, continue using it while waiting for it to cool down some more before reheating. A properly heated iOpener should stay warm for up to 10 minutes.

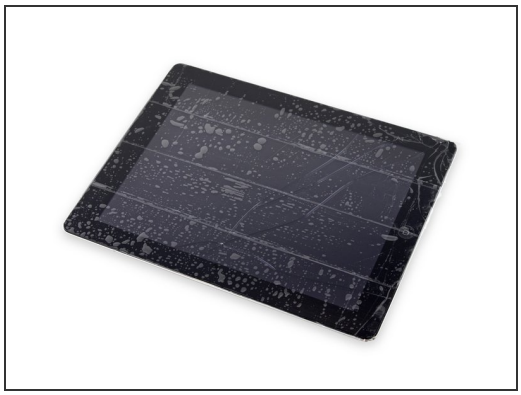
## Step 3


- Remove the iOpener from the microwave, holding it by one of the two flat ends to avoid the hot center.

⚠ The iOpener will be very hot, so be careful when handling it. Use an oven mitt if necessary.

## Step 4 — Front Panel





- 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.

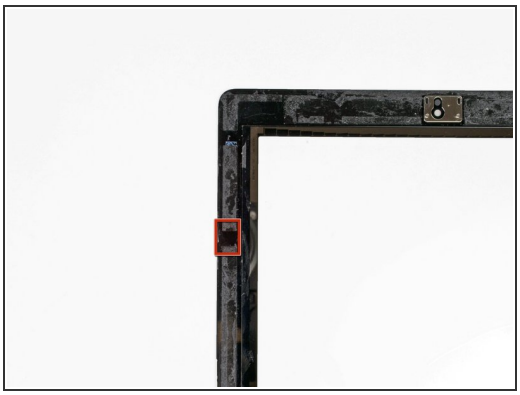
⚠ Wear safety glasses to protect your eyes, and be careful not to damage the LCD screen.

## Step 5

Again, as you may find yourself working with broken glass during this procedure, we strongly recommend wearing safety glasses for protection from flying shards.

- Lay the iOpener flat on the right edge of the iPad, smoothing it out so that there is good contact between the surface of the iPad and the iOpener.
- Let the bag sit on the iPad for approximately 90 seconds before attempting to open the front panel.

## Step 6



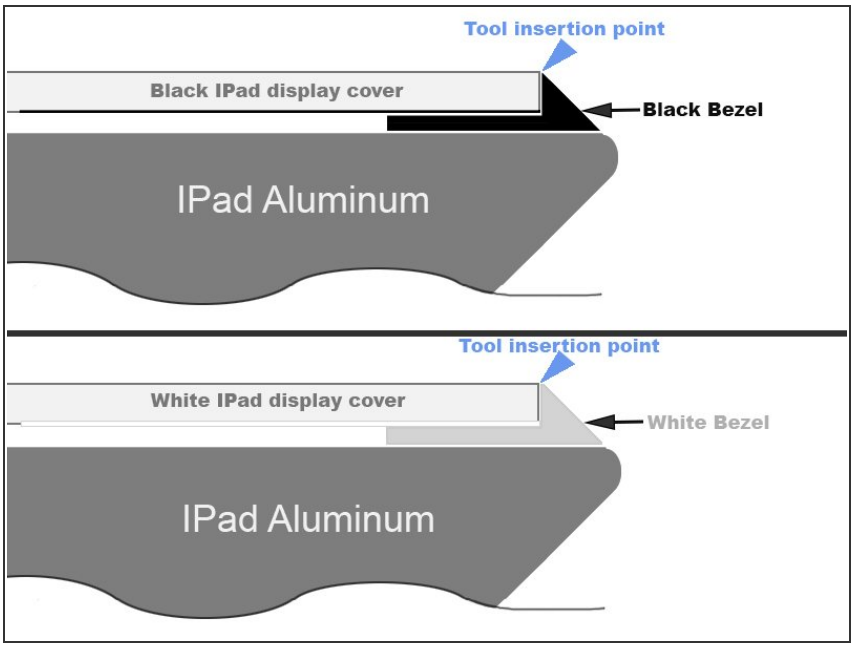
- There is a small gap in the iPad's adhesive ring in the upper right corner of the iPad, approximately 2.0 inches (~5 cm) from the top of the iPad. You are going to exploit this weakness.
- Align the tool with the mute button. Insert the tip of a plastic opening tool into the gap between the front glass and the plastic bezel. Just insert the very tip of the opening tool, just enough to widen the crack.

It may require some force to get the wedged tip of the opening tool between the glass and plastic. Work patiently and carefully, wiggling the plastic opening tool back and forth as necessary.



## Step 7




- Make sure you place the tool in the proper spot—between the plastic display bezel and the front panel glass.

## Step 8

- Keeping the tip of the plastic opening tool wedged between the front glass and plastic bezel, slide a plastic opening pick in the gap, right next to the plastic opening tool.

## Step 9



- Remove the plastic opening tool from the iPad, and push the opening pick further underneath the front glass to a depth of ~0.5 inches.

## Step 10


- While you work on releasing the adhesive on the right side of the iPad, reheat the iOpener, and replace it on the bottom edge of the iPad.

## Step 11



- While the bottom edge is being heated by the iOpener, begin releasing the adhesive from the right edge of the iPad.
- Slide the opening pick down along the edge of the iPad, releasing the adhesive as you go.

The adhesive is very strong, and some serious force may be required. Work carefully.

If you can see the tip of the opening pick underneath the front glass, pull the pick out just a little bit. While using the opening pick this deep won't damage anything, it may get adhesive residue all over the LCD.

## Step 12



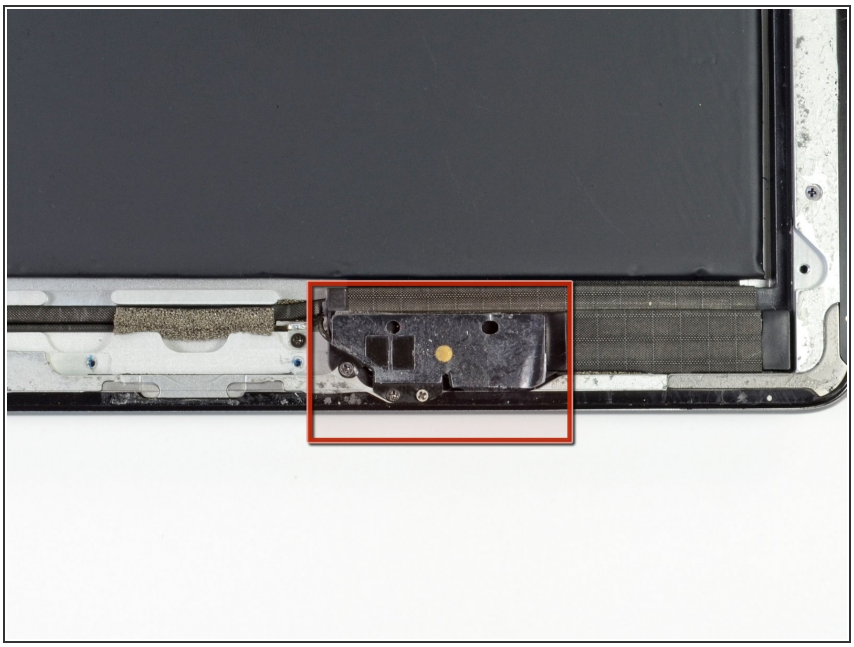
It may be necessary to move the heated iOpener back onto the right edge of the iPad as you release the adhesive. This depends on how long the iPad has been able to cool while you were working on it.

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

## Step 13


- Before removing the first opening pick from the bottom corner of the iPad, insert a second pick under the right edge of the front glass to keep the adhesive from re-adhering.
- Re-heat the iOpener, and move it to the top edge of the iPad.

## Step 14



The next few steps require extreme caution.

The Wi-Fi antenna is attached to the bottom right edge of the rear case of the iPad via screws and a cable. Because of the orientation of the Wi-Fi antenna, it is imperative to proceed with caution otherwise irreversible damage to the Wi-Fi antenna may result.

- You will have to release the adhesive securing the antenna to the front panel without damaging the delicate parts attaching the antenna to the bottom of the iPad. Follow the next steps carefully.

## Step 15

- Slide the opening pick around the bottom right corner of the iPad, releasing the adhesive there.

⚠ Do not slide the pick further than the bottom right corner. You may damage the Wi-Fi antenna by doing so.



## Step 16

⚠ This step requires you to move the opening pick along the bottom right edge of the front panel. The Wi-Fi antenna is very close to the corner and is easily severed if the adhesive is released improperly.

ⓘ Do not completely remove the pick from under the front glass, but pull it out just a little bit so that ~1/8" (3 mm) of the tip is still under the front glass.

- Slide the tip of the opening pick along the bottom edge of the iPad, releasing the adhesive over the Wi-Fi antenna.



## Step 17

- Once you have moved past the Wi-FI antenna (approximately 3" (75 mm) from the right edge, or right next to the home button) re-insert the opening pick to its full depth.
- Slide the pick to the right, releasing the adhesive securing the Wi-Fi antenna to the front glass.
  - The antenna is attached to the bottom of the iPad via screws and a cable. This step detaches the antenna from the front panel, ensuring that when you remove the panel, the antenna will not be damaged.



## Step 18

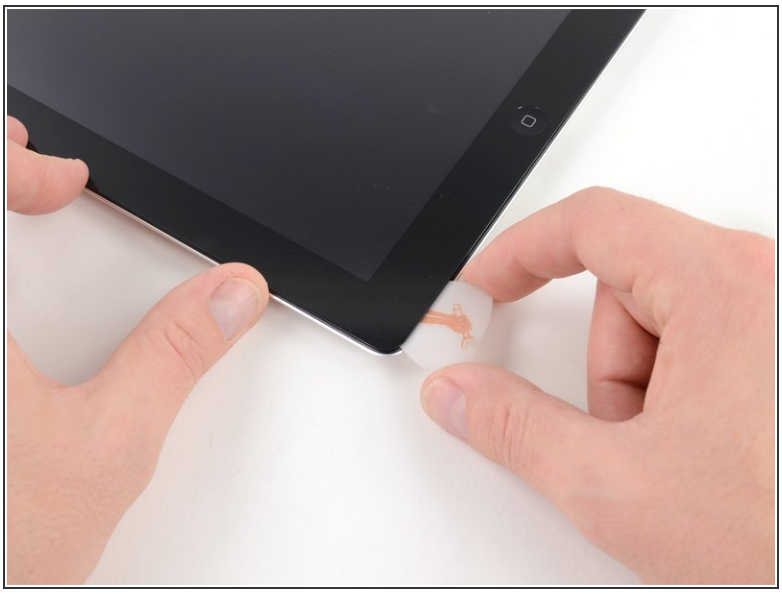


- Continue releasing the adhesive along the bottom of the iPad, pulling the opening pick out far enough to go around the home button, and re-inserting it to a depth of 1/2 inch (10 mm) once the pick is past the home button.

If the adhesive has cooled too much along the bottom edge, reheat the iOpener to warm the adhesive where you are working.

Do not heat the iOpener more than a minute at a time, and always allow at least two minutes before reheating it.

## Step 19




- Continue releasing the adhesive all the way along the bottom edge of the iPad.

  ⚠ On iPad 4 models, insert the pick to a maximum depth of 1/2 inch (10 mm) in this area, to avoid damaging the home button ribbon cable.

- Leave the opening pick wedged underneath the front glass near the home button.

## Step 20


- Reheat the iOpener in the microwave and set it on the left edge of the iPad to start warming the adhesive in that section.

## Step 21



- Slide the opening pick along the top edge of the iPad, pulling it out slightly to go around the front-facing camera bracket.
- The adhesive along this section is very thick, and a fair amount of force may be required. Work carefully and slowly, making sure to not slip and damage yourself or your iPad.

If the adhesive has cooled too much, replace the iOpener along the top edge and continue working. If the iOpener has cooled too much, reheat it.

If the opening pick is getting stuck in the adhesive, "roll" the pick as shown in step 9.

## Step 22

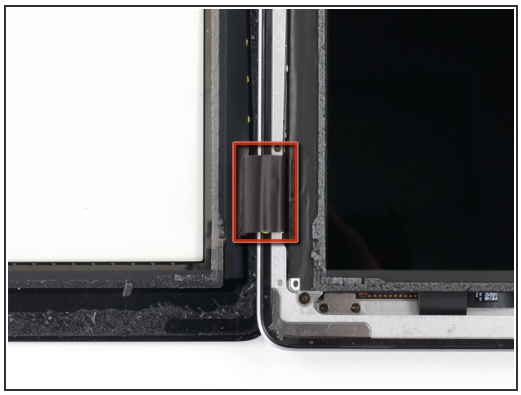
- Continue releasing the adhesive along the top edge of the iPad, and slide the opening pick around the top left corner.

If the adhesive is warm enough, remove the iOpener from the iPad for convenience. However, if the adhesive is still quite sticky, re-heat the iOpener and lay it on the left edge while you work.



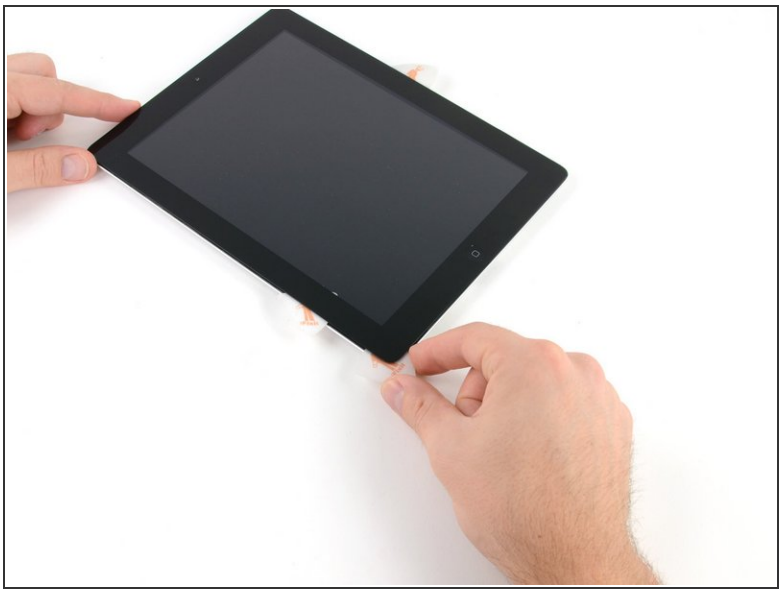
## Step 23


- Slide the opening pick along the left edge of the iPad, releasing the adhesive as you go. The adhesive is thin here due to the digitizer along the whole left side. Make sure the pick is not too deep (max 1/2 inch) 10 mm to prevent damaging the digitizer.

⚠ The digitizer cable is located approximately 2" (50 mm) from the bottom of the iPad. Stop sliding the pick when you get ~2.25" (60 mm) from the bottom of the iPad.

## Step 24



- Using the opening pick that is still underneath the bottom edge of the iPad, release the adhesive along the bottom left corner.

⚠ The bottom of the digitizer cable is only ~1" (25 mm) from the bottom of the iPad. Work carefully and slowly, making sure to not sever this cable.



## Step 25

- Using one of the opening picks, pry up the bottom right corner of the iPad and grab it with your fingers.

Some of the adhesive along the perimeter of the iPad may have stuck back down again. If this is the case, slide a pick underneath the edge of the iPad where the front glass is still stuck and "cut" the adhesive.

## Step 26

- Holding the iPad by the top and bottom right corners, rotate the front glass away from the iPad.

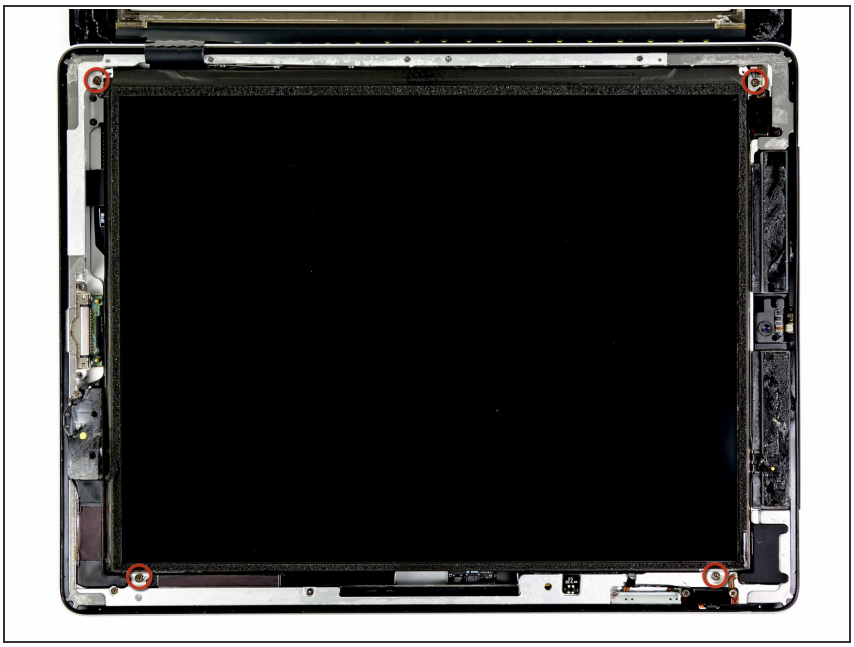
Be careful of any adhesive that may still be attached, and use an opening pick to cut any adhesive that may still be holding the front panel down.

During reassembly use a microfiber cloth and compressed air to clean any dust or fingerprints off the LCD before reinstalling the glass.



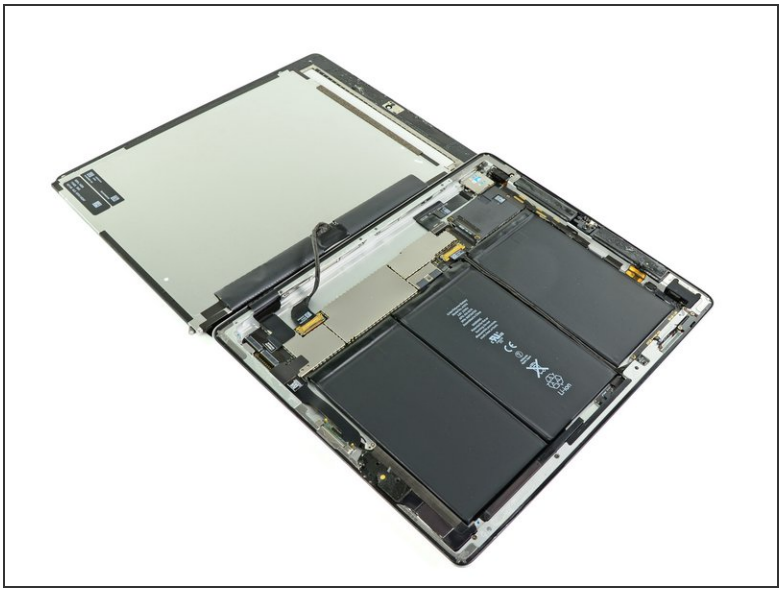
 

## Step 27 — LCD



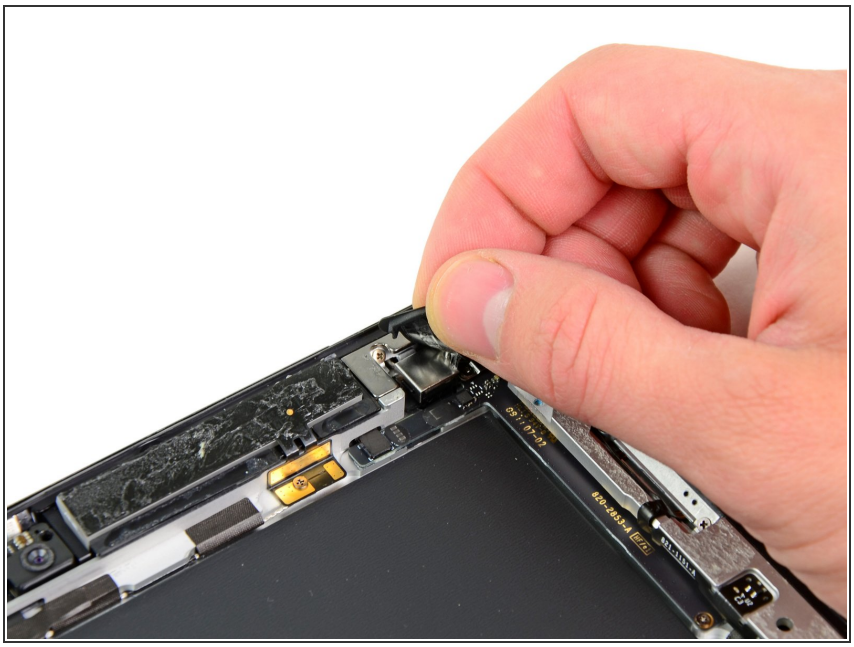
- Remove the four 2.0 mm Phillips screws securing the LCD to the rear case.

## Step 28



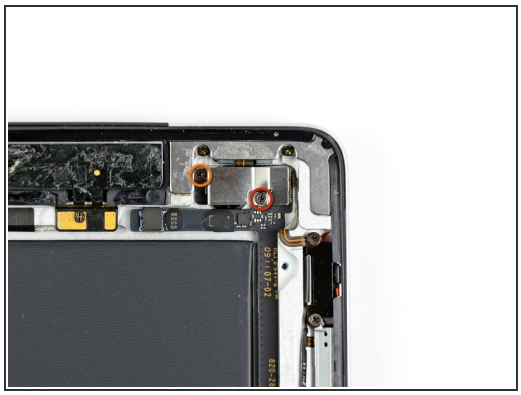
- Lift the LCD from its long edge closest to the volume buttons and rotate it out of the rear case.
- Lay the LCD on the front panel as seen in the second picture.

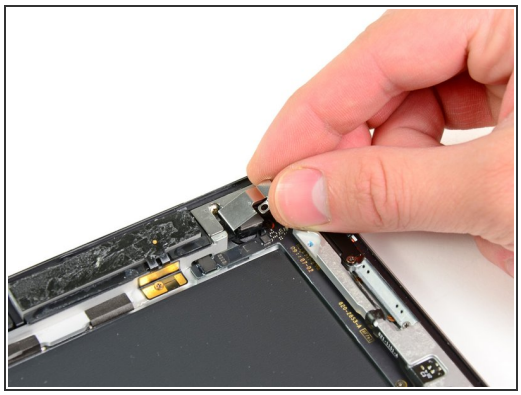
## Step 29 — Rear Camera

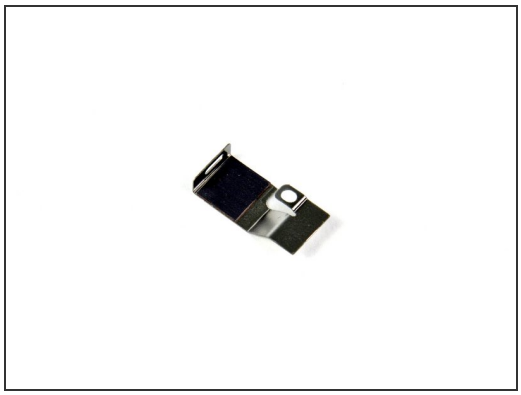


- Carefully peel the rubber cover off the metal camera retainer and remove it from the iPad 2.

## Step 30







- Remove the following two screws:
  - One 3.3 mm Phillips screw
  - One 2.1 mm Phillips screw
- Lift the metal retainer clip straight up from its recess in the rear panel.

If the camera comes up with the retaining clip, don't worry. Just separate the camera from the clip before reinstalling, so you can be sure to get the connector in the right place.

Be sure the small thermal pad is attached to the metal retaining clip as seen in the third picture when replacing the rear camera.



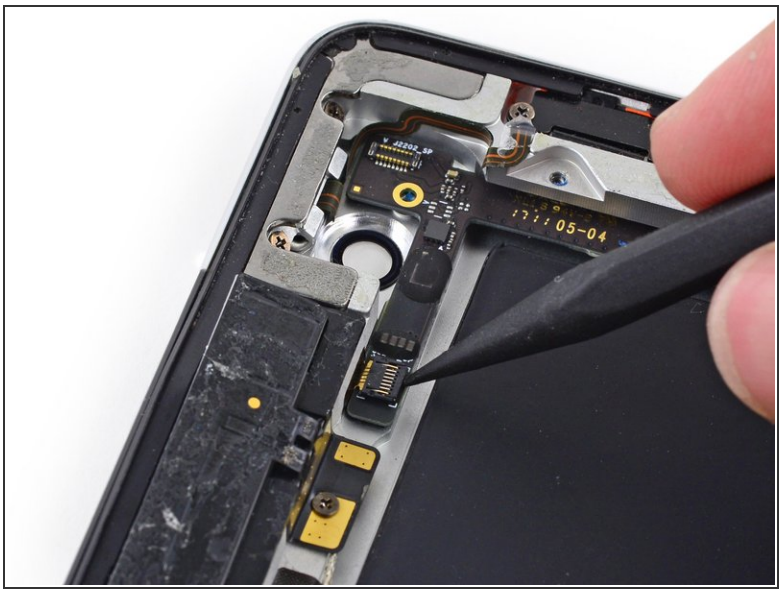
## Step 31

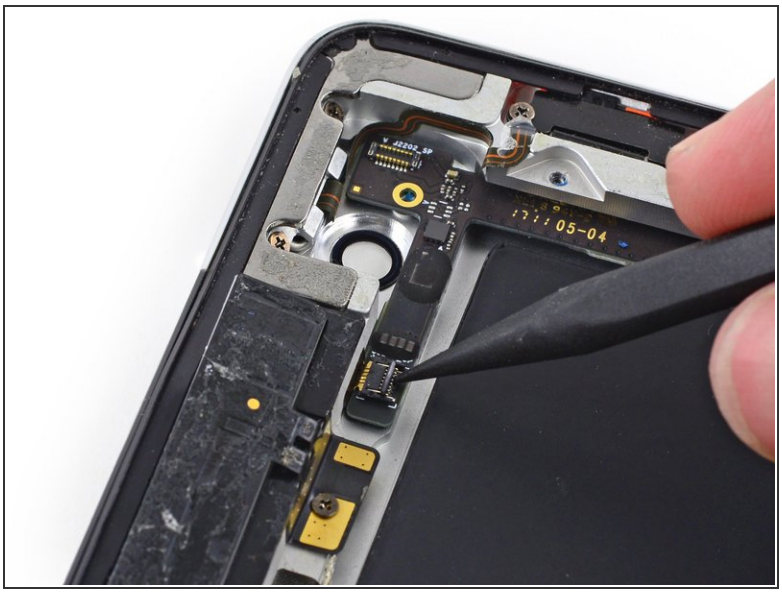
- Use a plastic opening tool to pry the rear camera connector up from its socket on the upper component board.
- Remove the rear camera.



## Step 32 — Volume and Power Button Cable





Remove any foam tape from the top of the GPS cable ZIF connector.

- Use the tip of a spudger to flip the retaining tab on the ZIF connector to release the GPS cable.

Do not attempt to disconnect this cable yet—it will come free when you remove the upper component board.

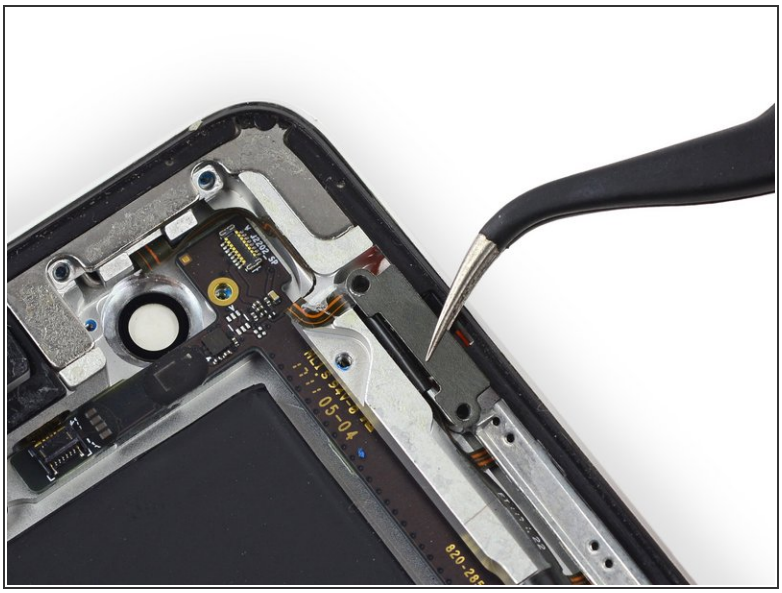
## Step 33

- Remove the following screws from the volume/power button assembly cable:
  - Two 2.5 mm Phillips #000 screws, at a 45º angle securing the power button.
  - Two 5 mm Phillips #000 screws
  - One 2 mm Phillips #000 screw at a 45º angle.



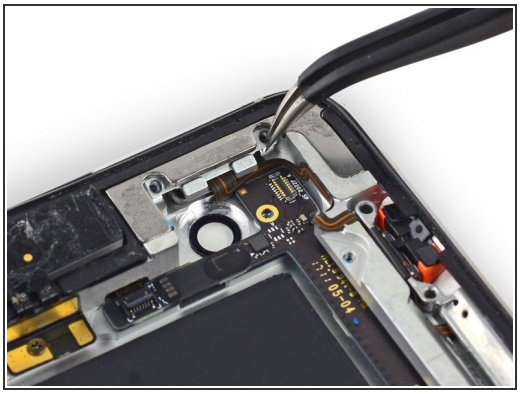
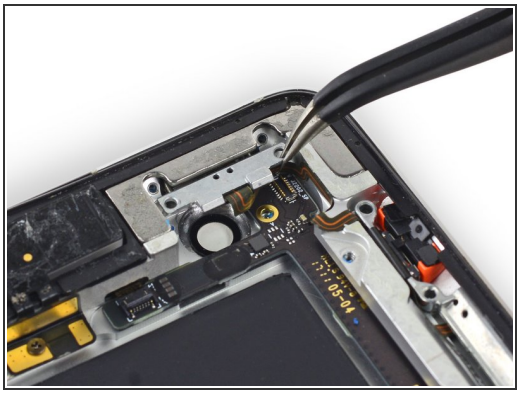
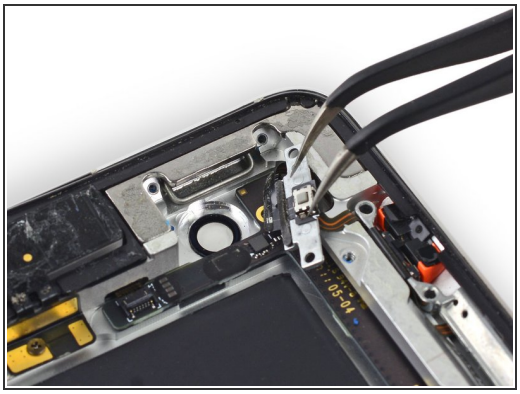
 

## Step 34




- Remove the metal bracket securing the rotation lock/silent switch.

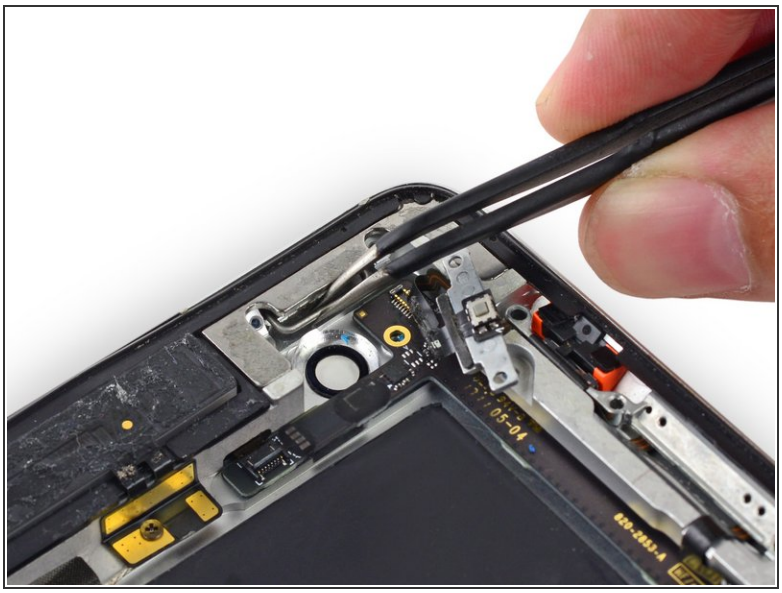
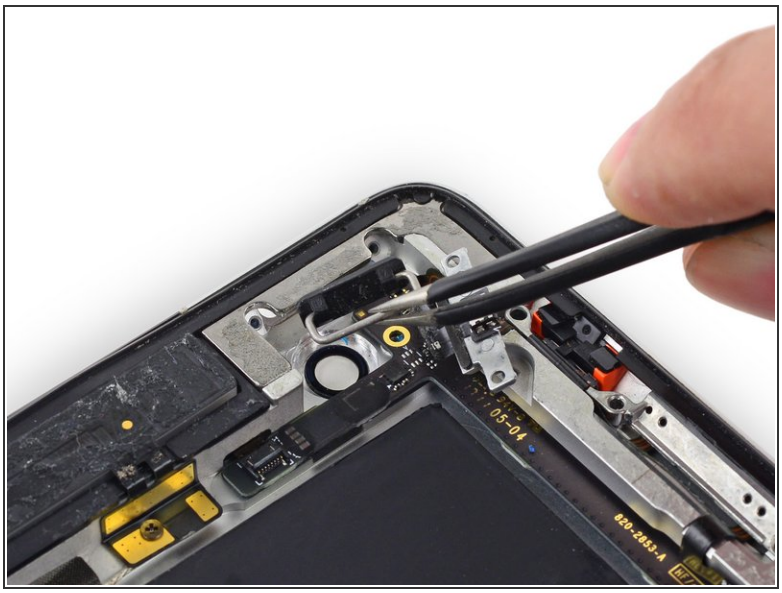
## Step 35

- Pull the power button cable out of the recess in the rear case and bend it out of the way.

The ribbon cable contains the mechanical button that needs to mate with the plastic button cover that remains in the case.

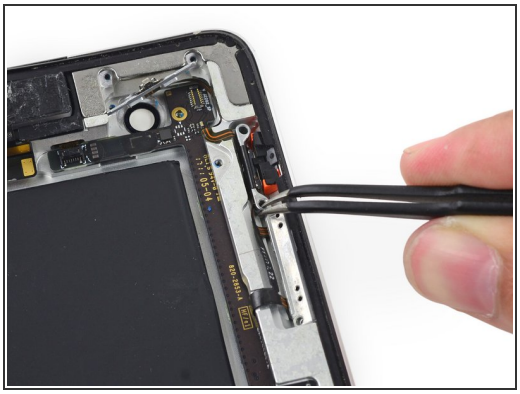
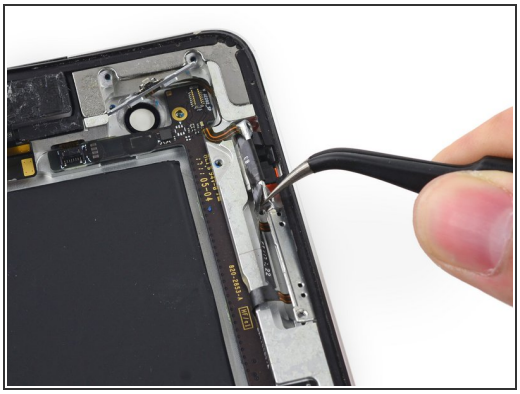
## Step 36

- Remove the sleep/power button form the rear case.

Note the orientation for reassembly; the metal spring bar should fall down toward the rear of the case.

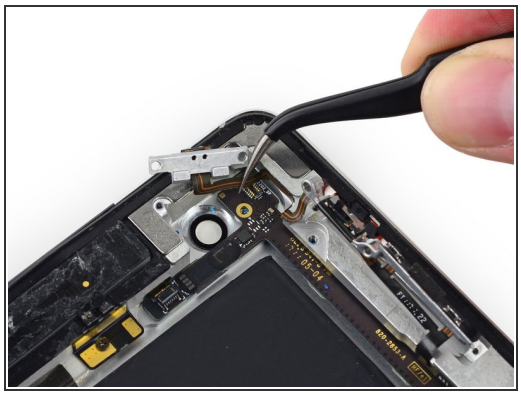
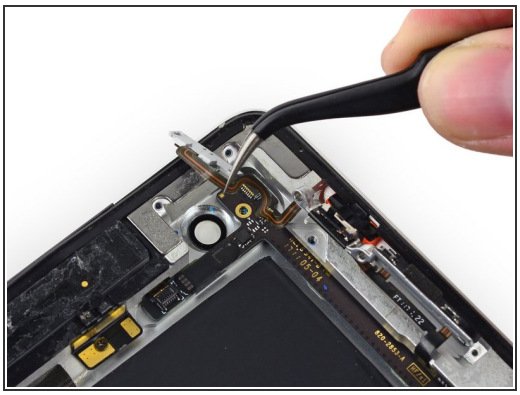
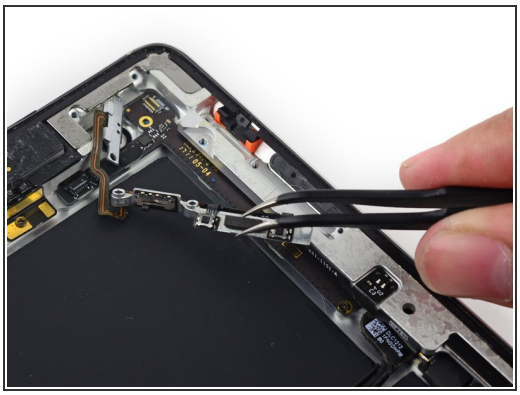
## Step 37


- Use the center screw hole of the volume control bracket to tilt it out toward the edge of the case and then pull it up out of its recess.

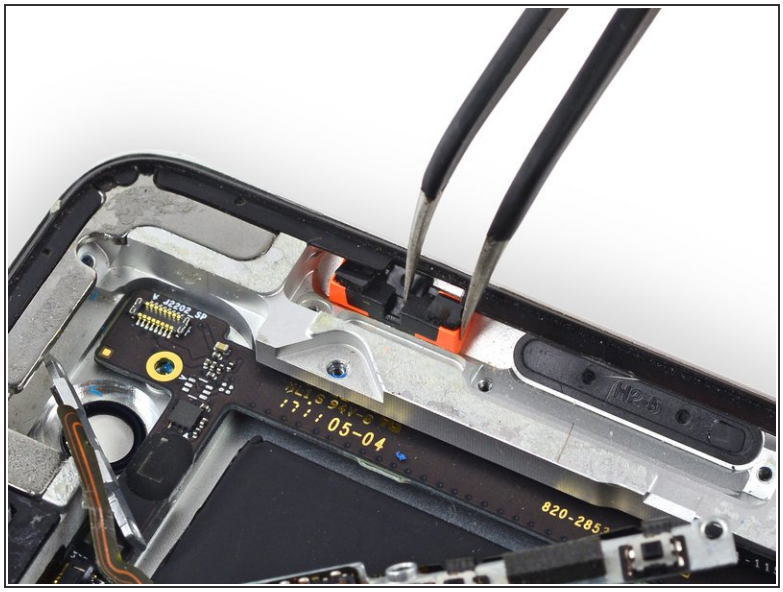
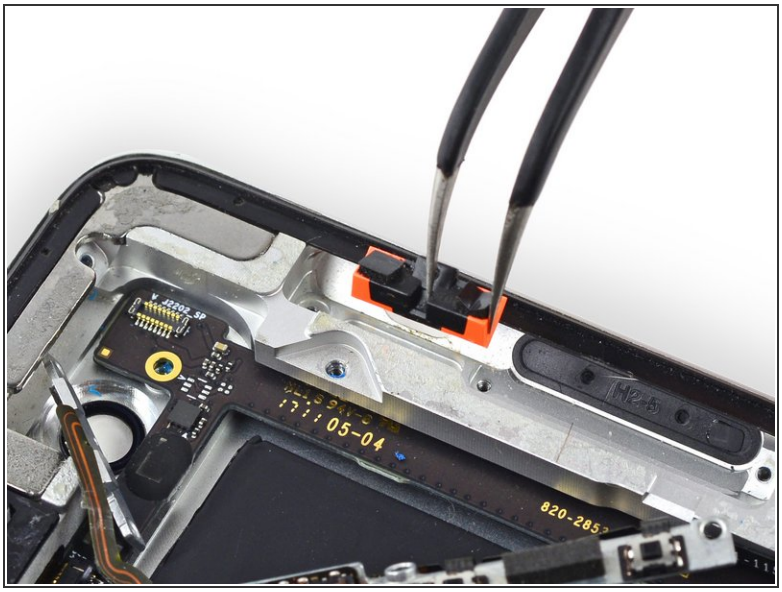
Do not remove the bracket entirely as it is still attached to the button ribbon cable.

## Step 38

- Gently peel the power and volume button cable away from the rear case.
- Bend the cable toward the inside of the rear case, but **do not attempt to remove it** as it is still connected to the upper component board.

## Step 39

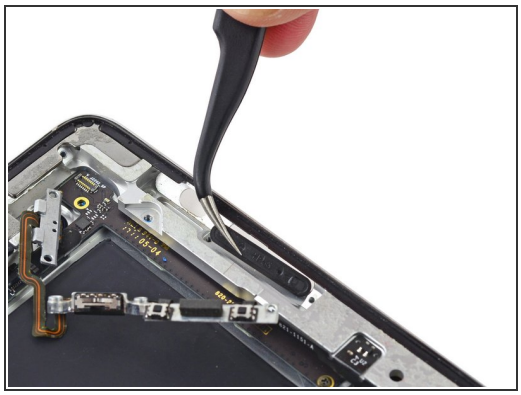



- Remove the rotation lock/silent switch from the rear case.

Note the orientation for reassembly. The mechanical switch will also need to mate with this button cover; ensure that they properly interlock.

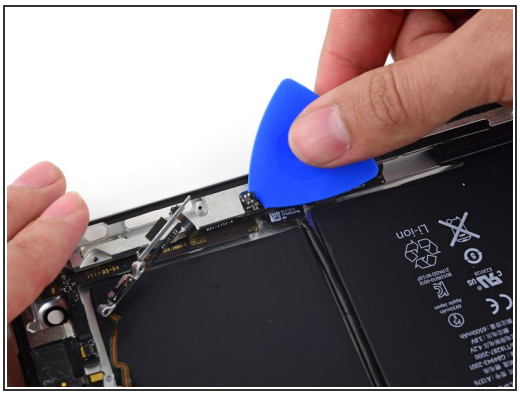
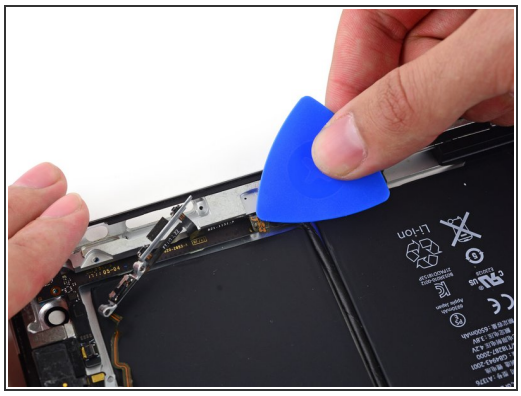
## Step 40





- Use the tip of a spudger to push the volume rocker into the interior of the rear case.
- Remove the volume rocker from the rear case.

## Step 41

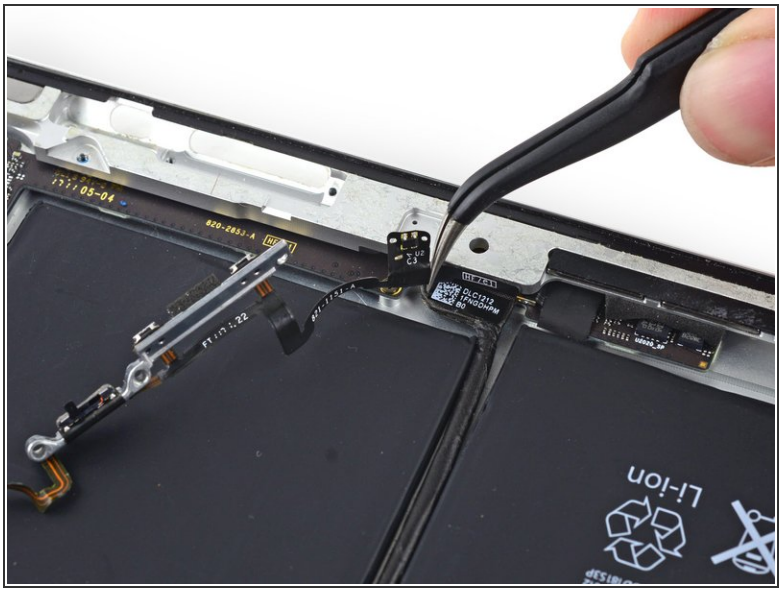
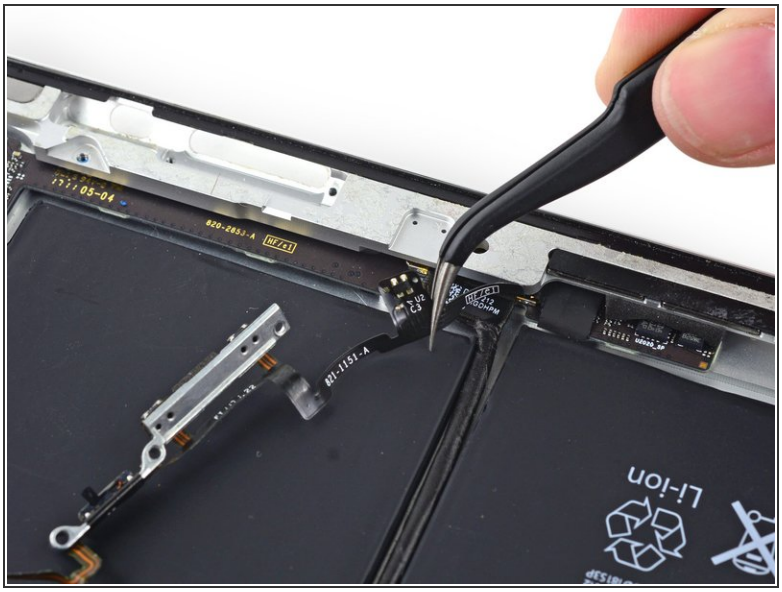




- Use the point of an opening pick to gently peel the Smart Cover sleep/wake sensor up off the rear case.

## Step 42


- Carefully peel the volume rocker portion of the button cable away from the rear case.

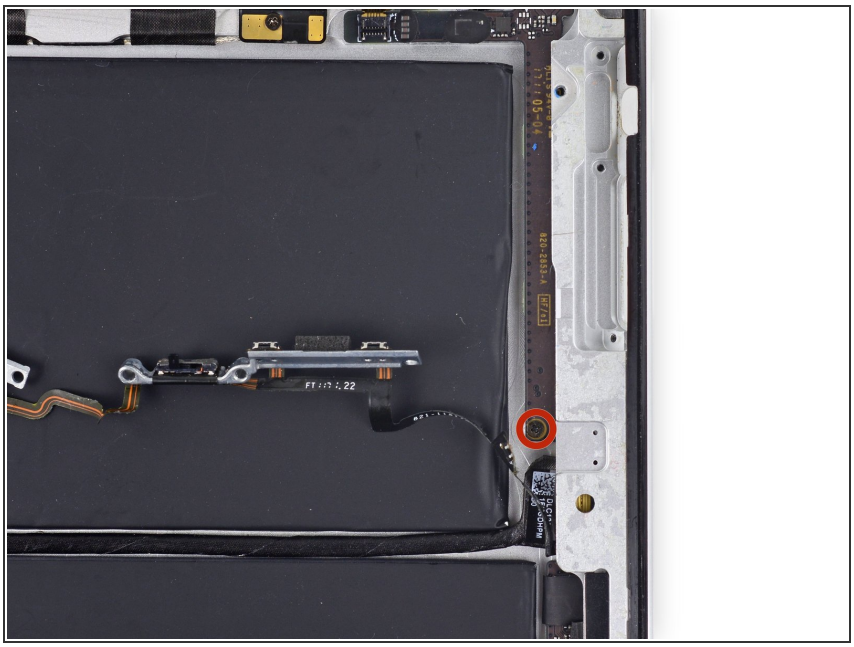
## Step 43

- Gently peel the last horizontal portion off of the rear case.

⚠ Do not remove the cable entirely, the cable is still attached by a connector taped to the upper component board.

## Step 44



- Remove the single 2 mm Phillips #000 screw from the lower end of the upper component board.

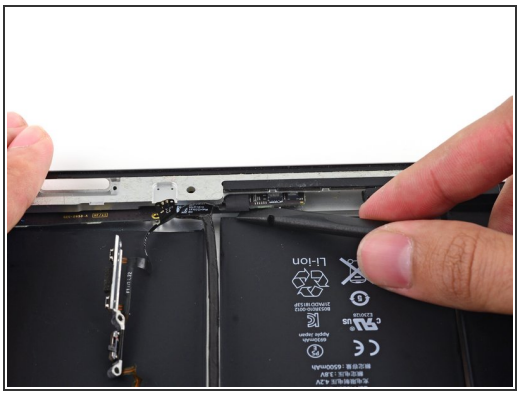
## Step 45



- Use a set of tweezers to remove the foam block from between the rear case and the upper component board.

## Step 46





- Insert a spudger under the end of the upper component board and gently slide it toward the volume rocker to free the board from adhesive.

⚠ Be very careful not to bend the board too much or scrape it against the top of the rear case.

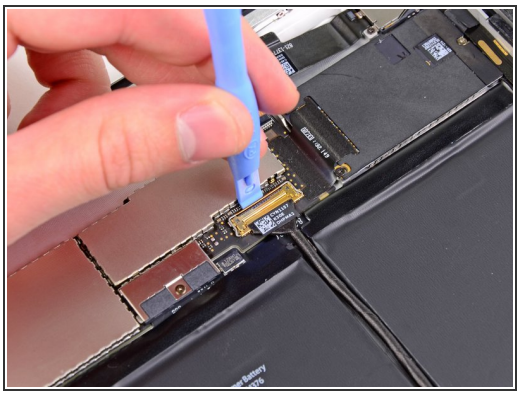
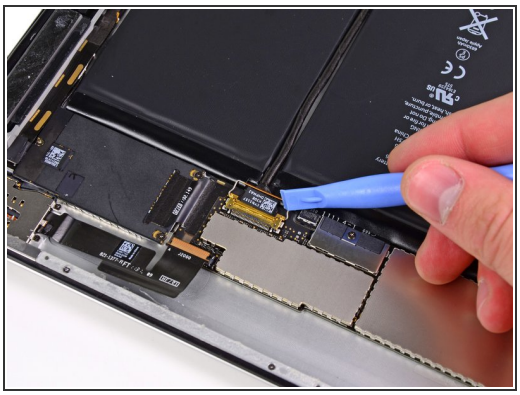
## Step 47


- Insert a spudger under the GPS connector end of the upper component board and lift it up off of its adhesive.

⚠ Be very careful not to scrape the board against the top of the rear case.

The GPS antenna cable will slide out of its ZIF socket when you do this. On reassembly, fit the cable back into the socket as you replace the upper component board.

## Step 48

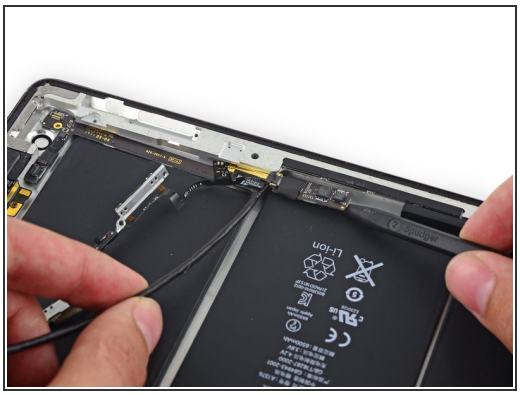

- Flip up the retaining bar securing the upper component board cable connector.
- Pull the connector straight out of its socket on the logic board.

⚠ Do not lift the cable upward as you disconnect it.

## Step 49


- Lift the end of the upper component board cable up off of the adhesive holding it to the rear case.

## Step 50

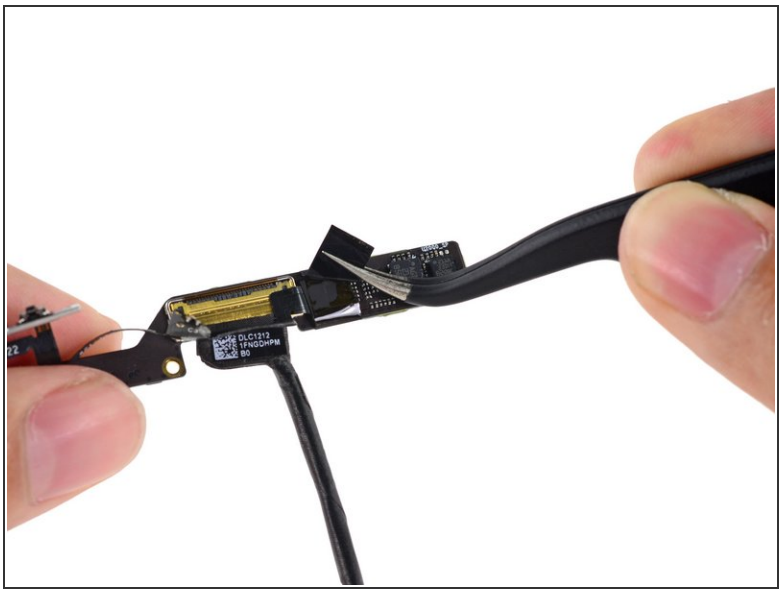



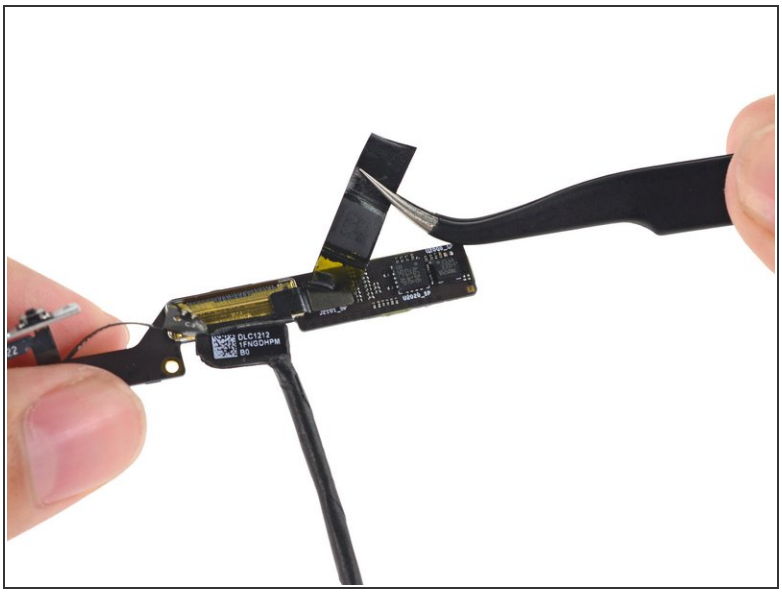

To remove the upper component board you will be pulling gently on its cable while lifting it up enough to clear the battery, but not high enough to scrape against the rear case. Go slowly and carefully.

- Insert the tip of a spudger under the upper component board to lift it slightly.
- Pull the board up and out of the space between the battery and the rear case bezel.
- Remove the upper component board.

On reassembly, you'll want to reconnect the GPS antenna cable at this point. Use tweezers and work carefully.

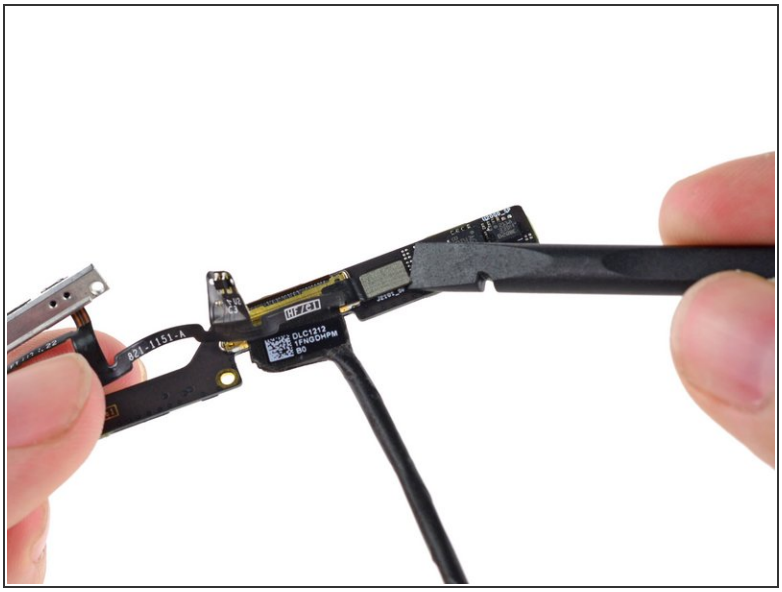
## Step 51

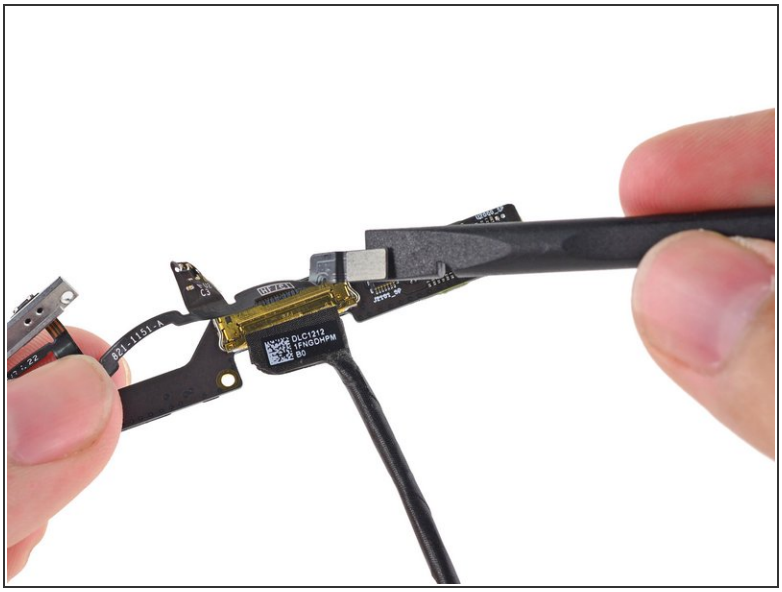




- Peel the tape covering the button cable connector off of the upper component board.

## Step 52



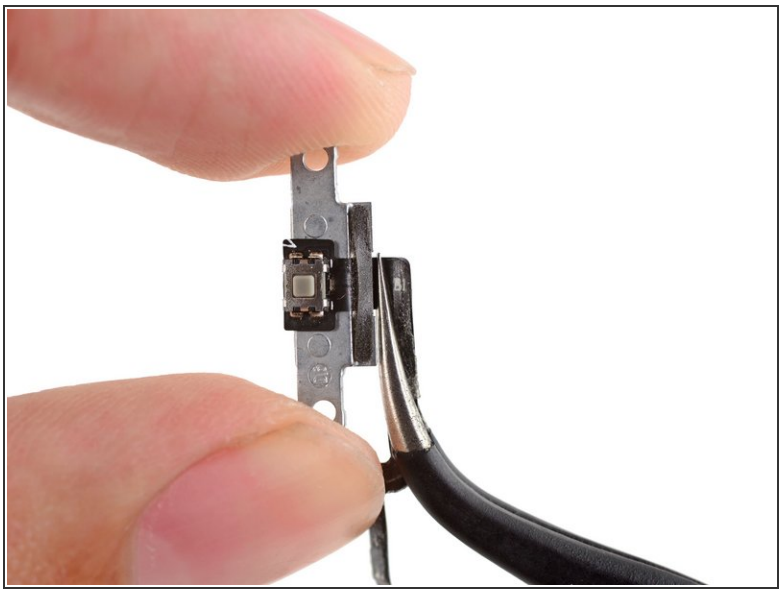
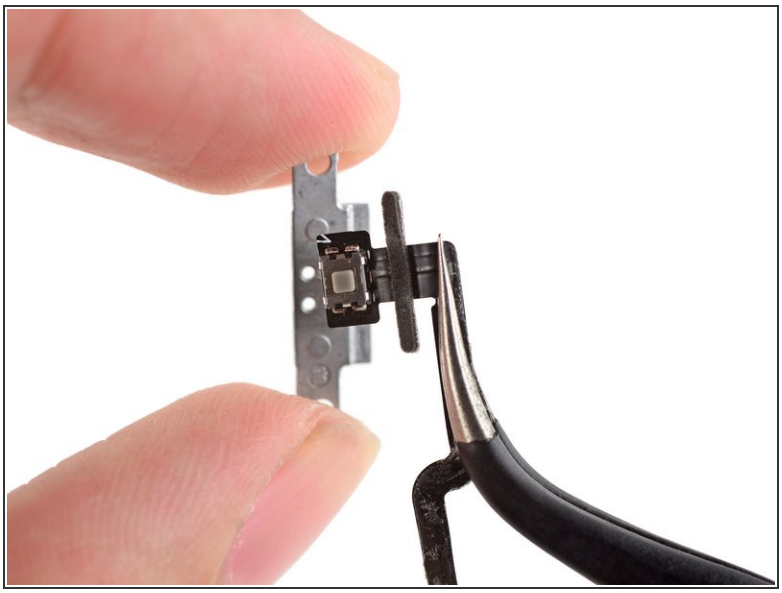


- Lift the button cable connector straight up off of its connector on the upper component board.



## Step 53

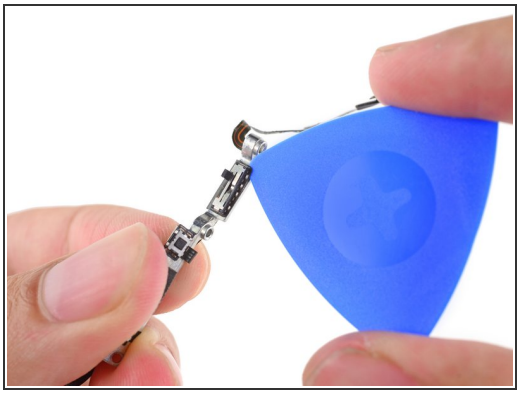



If your replacement part comes with the metal button brackets attached, you can skip the following steps.

- Peel the power button off of the power button bracket.

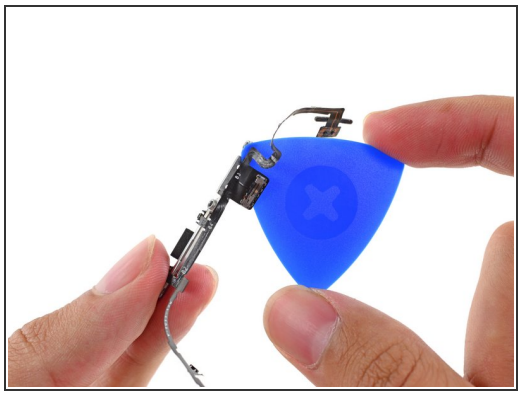
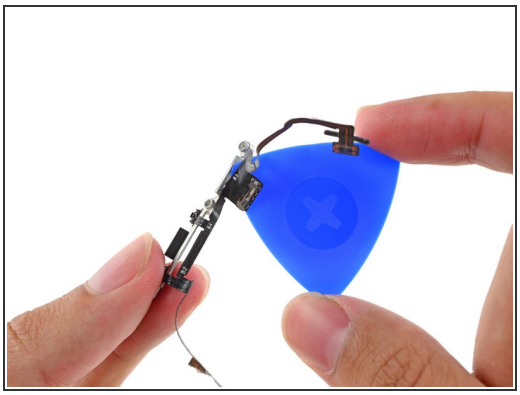
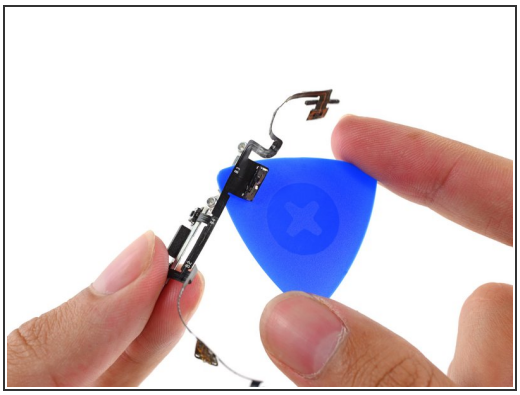
Note the orientation and adhesive placement for reassembly.

## Step 54



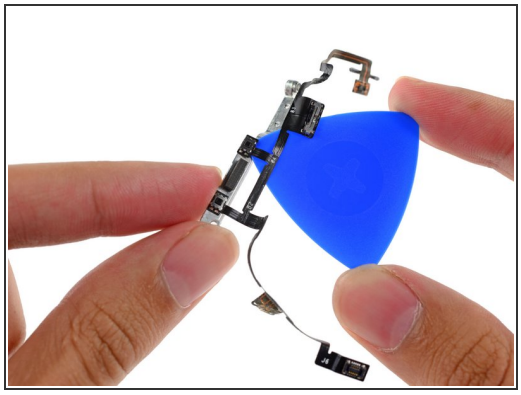
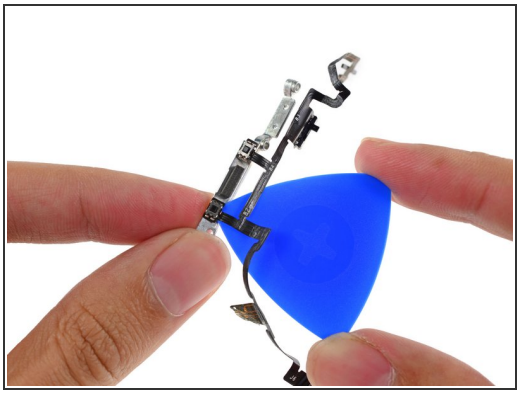
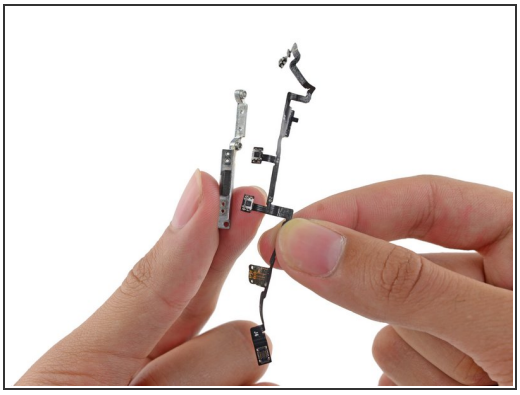
- Insert the point of an opening pick between the rotation lock/silent switch and its bracket to sever the adhesive there.

## Step 55

- Slide the opening pick under the remaining portion of the rotation lock/silent switch to peel it up off the button bracket.

## Step 56

- Use the point of the opening pick to peel the mechanical volume buttons up from the bracket.
- Remove the button cable assembly from the button bracket.

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