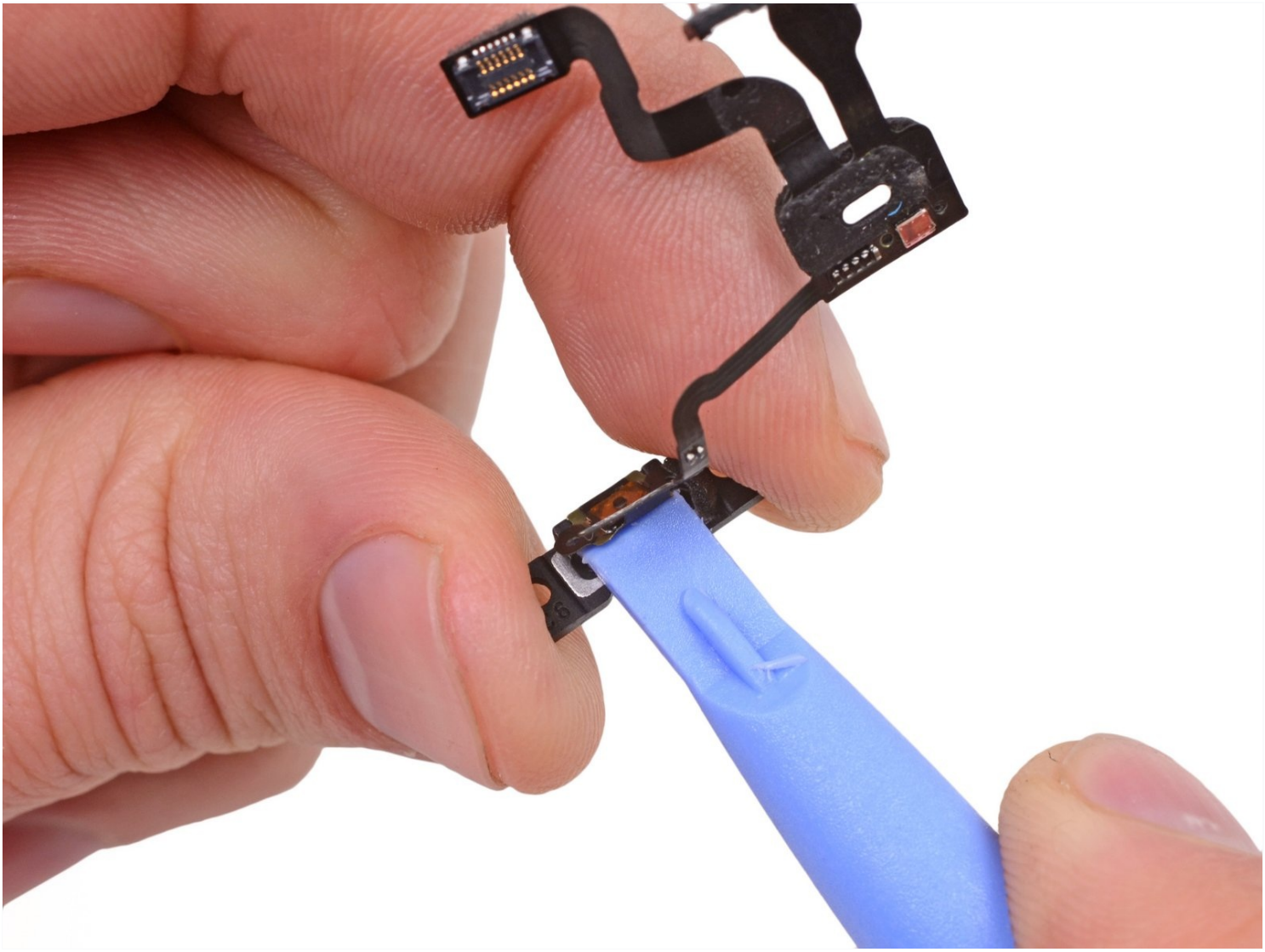
iPhone 4S Power and Sensor Cable Replacement

Use this guide to replace the power and sensor...

Написал: Walter Galan



ВВЕДЕНИЕ

Use this guide to replace the power and sensor cable. This part contains the proximity sensor, ambient light sensor and power cable.

Инструменты:

- P2 Pentalobe Screwdriver iPhone (1)
- SIM Card Eject Tool (1)
- Phillips #000 Screwdriver (1)
- iFixit Opening Tool (1)
- Tweezers (1)
- Standoff Screwdriver for iPhones (1)

ЗАПЧАСТИ:

- iPhone 4S Power and Sensor Cable (1)

Шаг 1 — Rear Panel



⚠ Before you begin, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.

- Power off your iPhone before beginning disassembly.
- Remove the two 3.6 mm Pentalobe P2 screws next to the dock connector.

ⓘ Be sure the driver is well-seated when removing Pentalobe screws—they are easy to strip.

Шаг 2





- Push the rear panel toward the top edge of the iPhone.

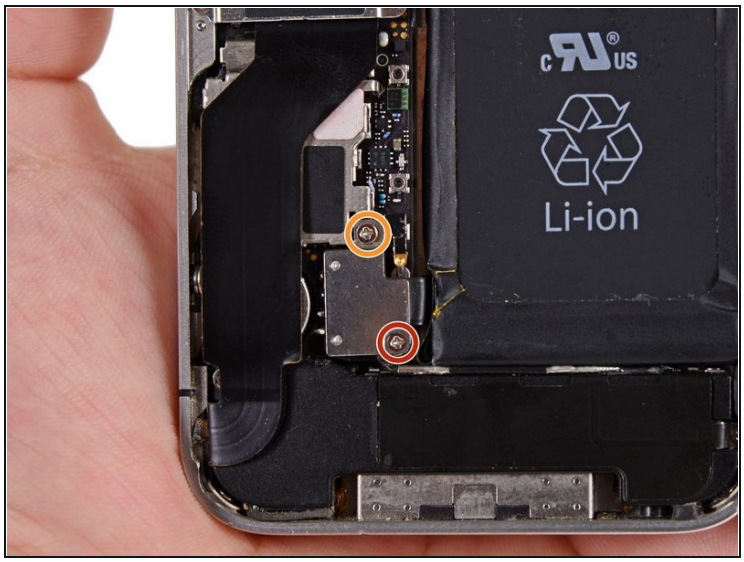
ⓘ The panel will move about 2 mm.

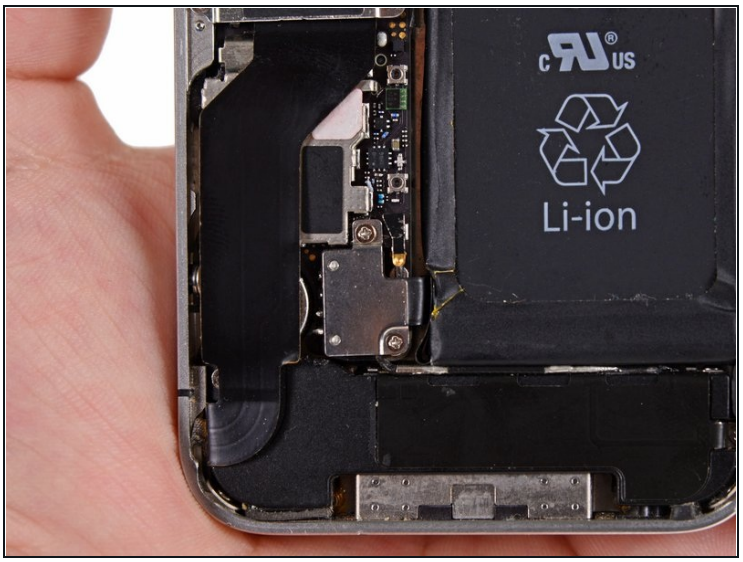
Шаг 3



- Pull the rear panel away from the back of the iPhone, being careful not to damage the plastic clips attached to the rear panel.
- Remove the rear panel from the iPhone.

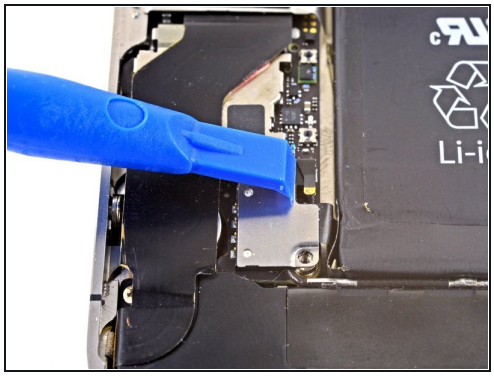
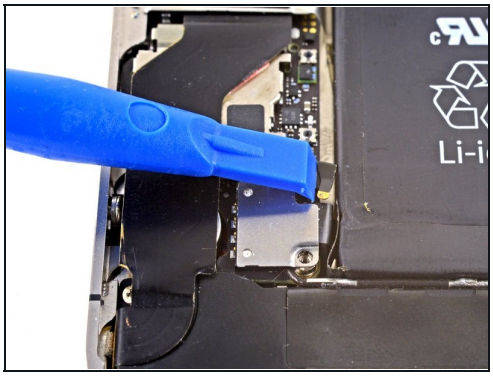
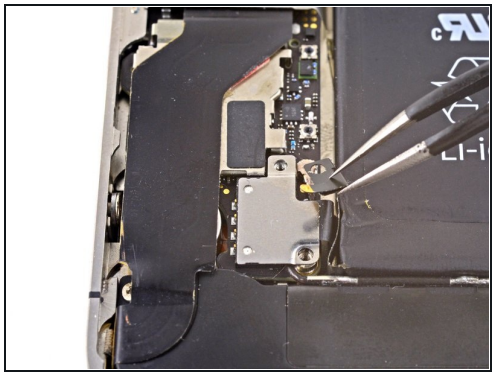
Шаг 4 — Battery





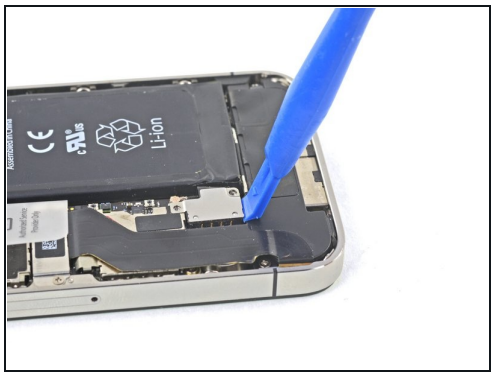
- Remove the following screws securing the battery connector to the logic board:
  - One 1.7 mm Phillips screw
  - One 1.5 mm Phillips screw

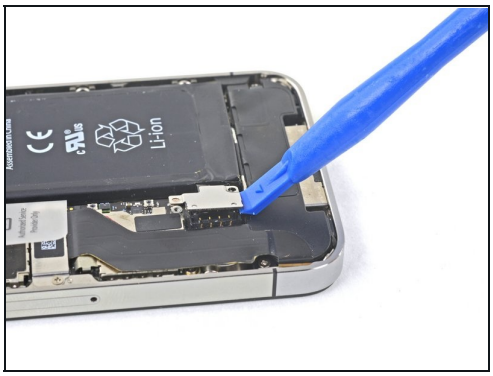
Шаг 5

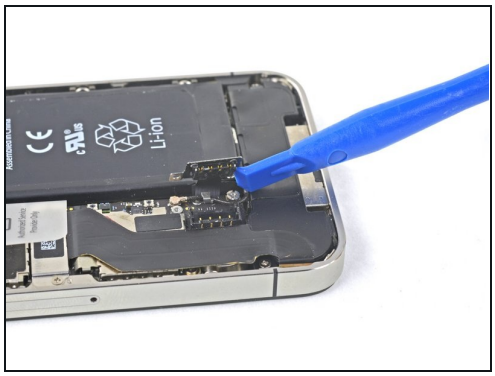




- Carefully push the pressure contact away from the battery connector until it slides free from its position.
- Remove the pressure contact.

Шаг 6





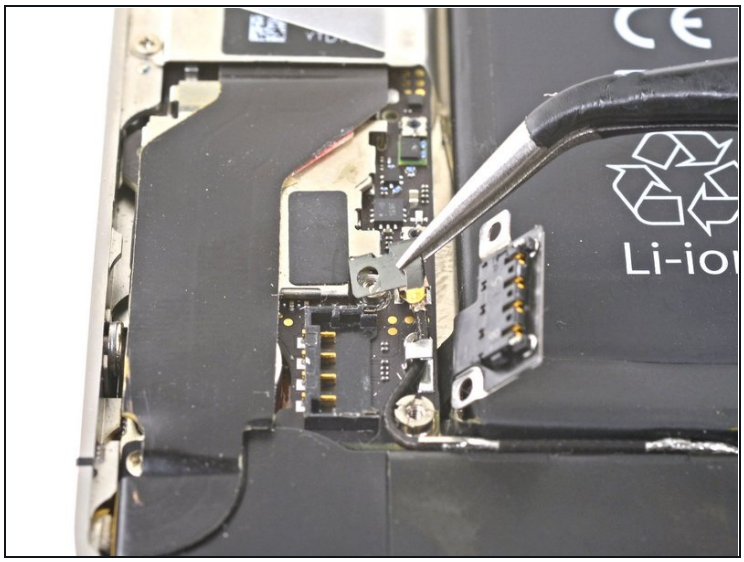


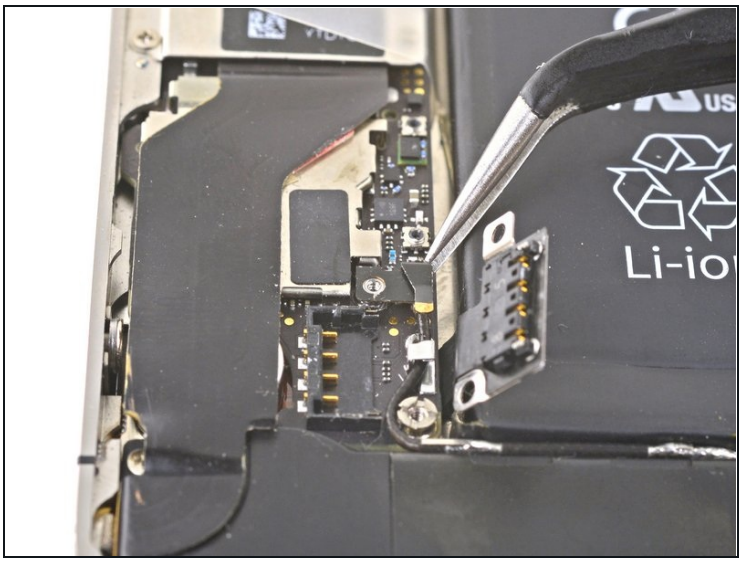
- Use a plastic opening tool to gently pry up the battery connector from its socket on the logic board.
  - Place the tip of the tool between the loudspeaker enclosure and the metal cover of the connector, and lift the bottom edge of the connector first.

ⓘ The battery connector comes off vertically from the logic board. Do not apply force sideways.

⚠ Be careful not to pry at the battery connector socket itself, or it may detach from the logic board. There are four very small solder points awaiting this mistake!

IIIar 7 — Reassembly tip





During reassembly, be sure to carefully position the pressure contact back in place. It should rest on top of the Philips screw post shown, and the gold contact should point towards the battery connector.

Be sure to clean the pressure contact with a degreaser such as windex or isopropyl alcohol. The oils on your fingers have the potential to create wireless interference.

Шаг 8





- Insert the edge of a plastic opening tool between the battery and the outer case near the bottom of the iPhone.
- Run the plastic opening tool along the right edge of the battery and pry up at several points to completely separate it from the adhesive securing it to the outer case.

If the adhesive is too strong, apply a few drops of high concentration (over 90%) isopropyl alcohol under the edge of the battery.

- Wait about one minute for the alcohol solution to weaken the adhesive.
- Use the flat end of a plastic opening tool to gently lift the battery.

Don't try to forcefully lever the battery out. If needed, apply a few more drops of alcohol to further weaken the adhesive. Never deform or puncture the battery with your pry tool.

If there's any alcohol solution remaining in the phone, carefully wipe it off or allow it to air dry before installing your new battery.

Шаг 9





- Use the exposed clear plastic pull tab to peel the battery off the adhesive securing it to the iPhone.

⚠ Be careful not to pull the plastic pull tab too hard as it can be ripped off very easily.

- Remove the battery.

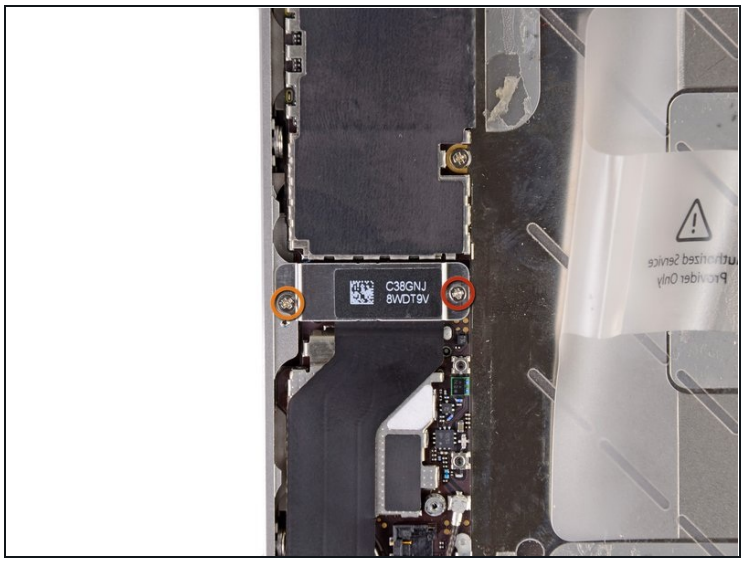
ⓘ If your replacement battery came in a plastic sleeve, remove it before installation by pulling it away from the ribbon cable.

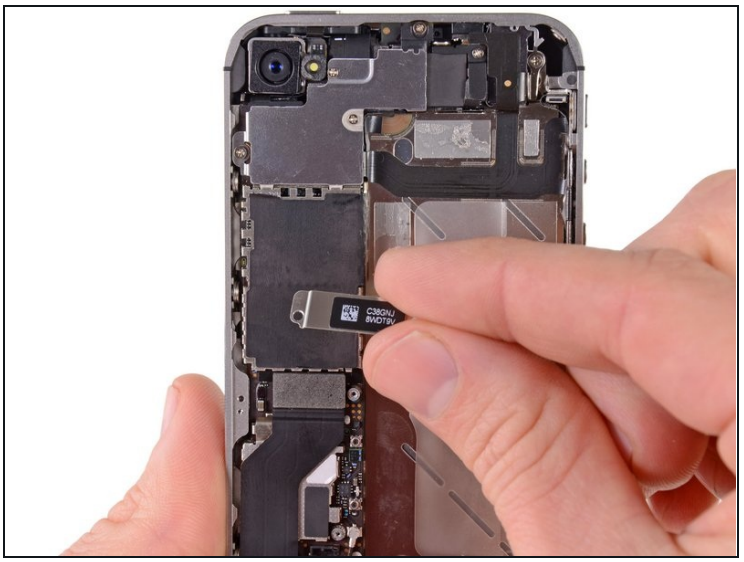
If your replacement battery came with an uncreased cable, carefully crease the cable into the proper shape before installing the battery into the phone.

While installing the replacement battery, temporarily connect the battery connector to the phone to ensure proper alignment. Once the battery is glued in place, disconnect the battery connector.

Perform a hard reset after reassembly. This can prevent several issues and simplify troubleshooting.

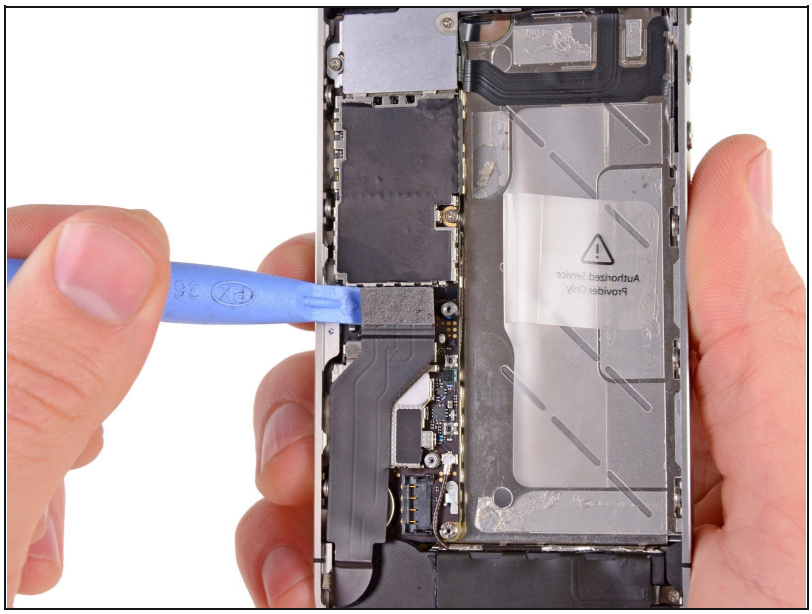
IIIar 10 — Dock Connector Cable





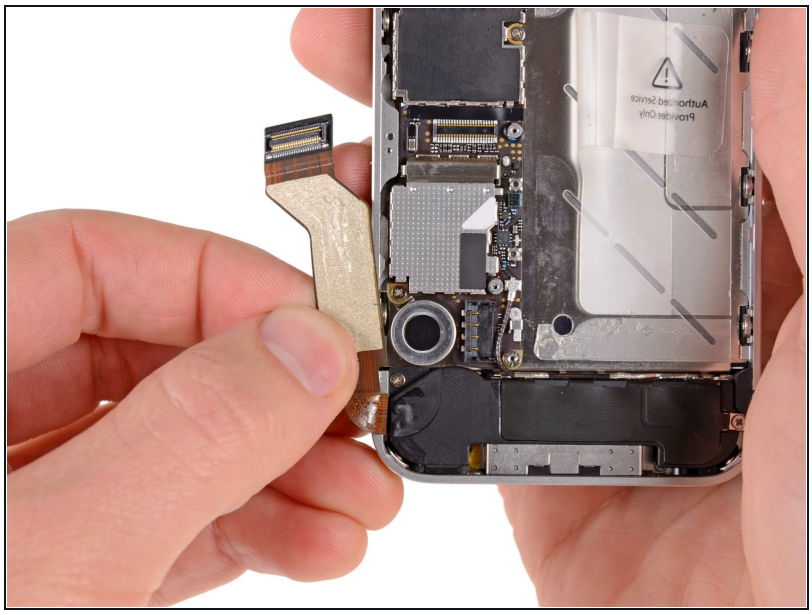
- Remove the following screws securing the dock connector cable cover to the logic board:
  - One 1.5 mm Phillips screw
  - One 1.2 mm Phillips screw
- Remove the metal dock connector cable cover.

IIIar 11



- Use the edge of a plastic opening tool to pry the dock cable up from its socket on the logic board.

Шаг 12



- Peel the dock connector cable off the adhesive securing it to the logic board and the side of the speaker enclosure.

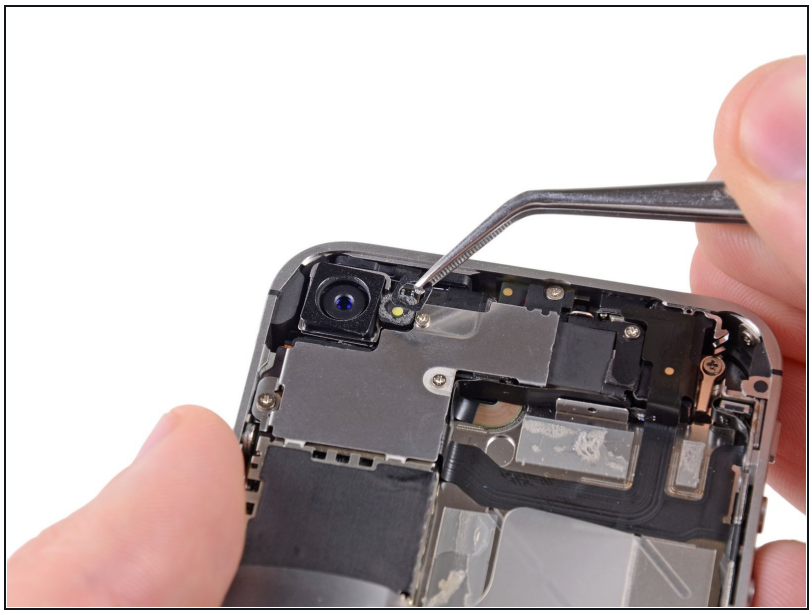
Шаг 13





- Use the edge of a plastic opening tool to pry the cellular antenna cable up from its socket on the logic board.
- De-route the cellular antenna cable out from under the metal fingers attached to the logic board.

Шаг 14 — Rear Camera



⚠ Be wary of the outer plastic ring located on top of the rear camera's flash assembly. It can be easily displaced if not removed during disassembly.

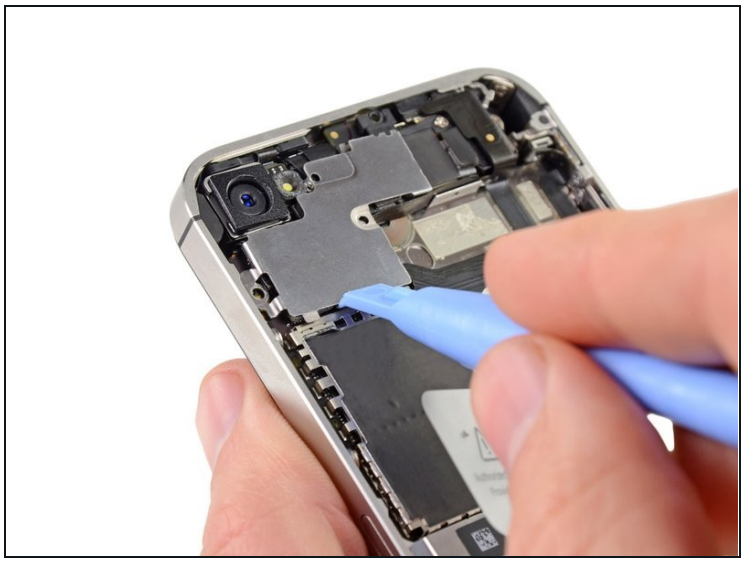
ⓘ You can use tweezers, a plastic opening tool, or a spudger to remove the outer plastic ring.

Шаг 15



- Remove the following four screws securing the cable cover to the logic board:
  - One 2.7 mm Phillips screw
  - One 2.6 mm Phillips screw
  - One 1.3 mm Phillips screw
  - One 1.2 mm Phillips screw

Шаг 16





- Use the edge of a plastic opening tool to pry the cable cover tabs out of their slots cut into the EMI shield on the logic board.
- Lift the cable cover from its edge nearest the top and remove it from the iPhone.

Шаг 17





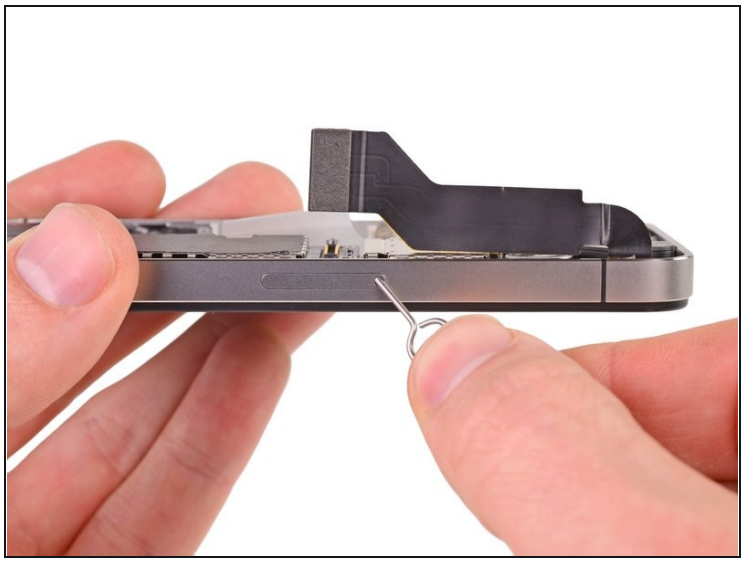
- Use the edge of a plastic opening tool to pry the rear camera connector up from its socket on the logic board.

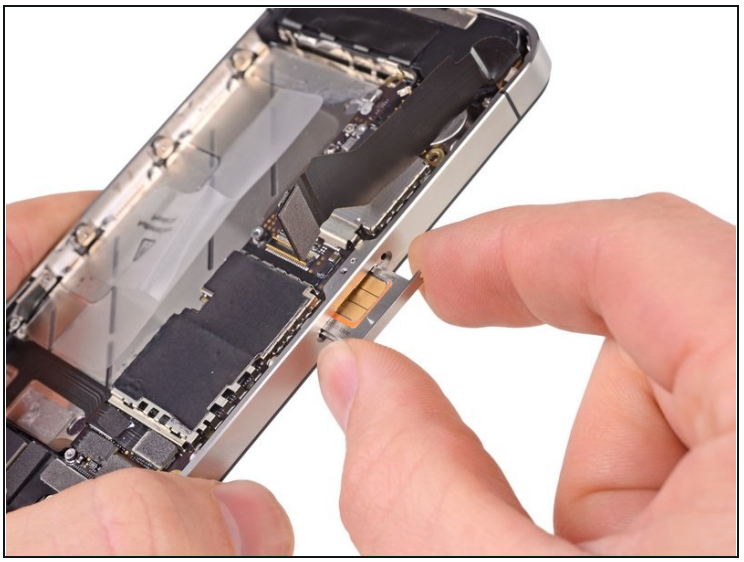
⚠ Be careful not to break any components off the surrounding area on the logic board as you pry upwards.

- Remove the rear camera from the iPhone.

There is a small rubber gasket that sits underneath the rear-facing camera. Make sure that it is properly seated before reassembly.

IIIar 18 — SIM Card



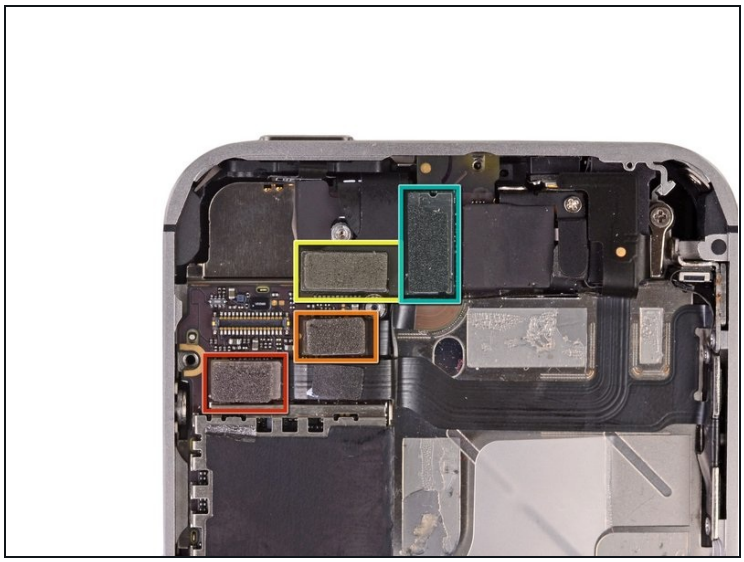


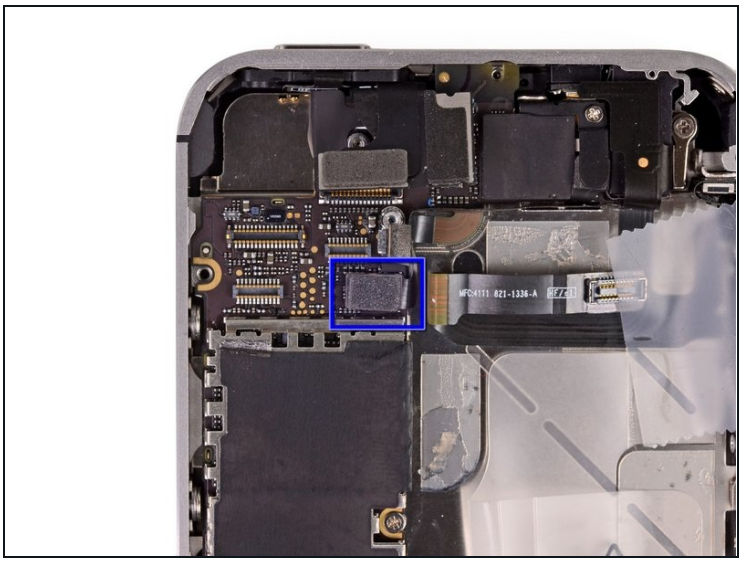
- Use a SIM eject tool or a paperclip to eject the SIM and its tray.

⚠ This may require a significant amount of force.

- Remove the SIM and its tray.

IIIar 19 — Logic Board



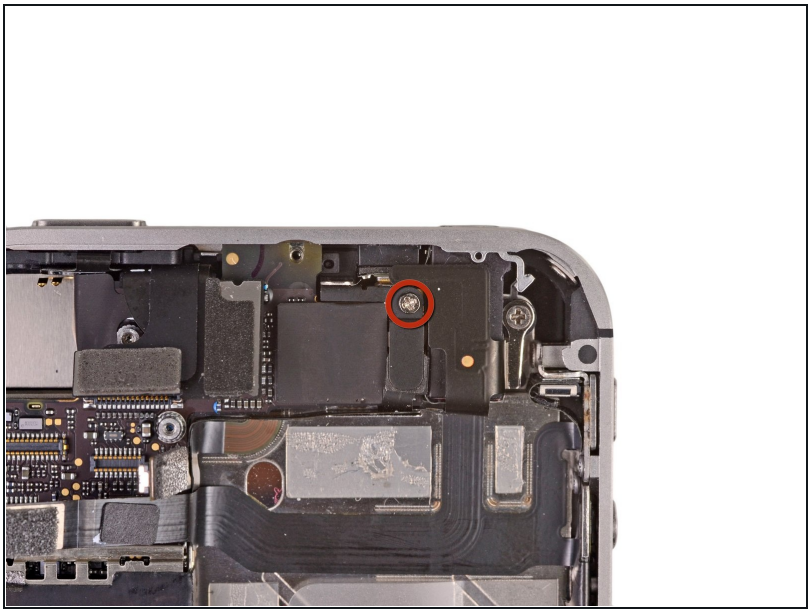


- Remove the five cables near the top of the logic board in the following order:
  - Headphone jack/volume button cable
  - Front facing camera cable
  - Digitizer cable
  - Display data cable
  - Power button cable (located underneath the headphone jack/volume button cable as shown in the second picture.)

ⓘ To disconnect the cables, use the edge of a plastic opening tool to gently lift their connectors up and out of the sockets on the logic board.

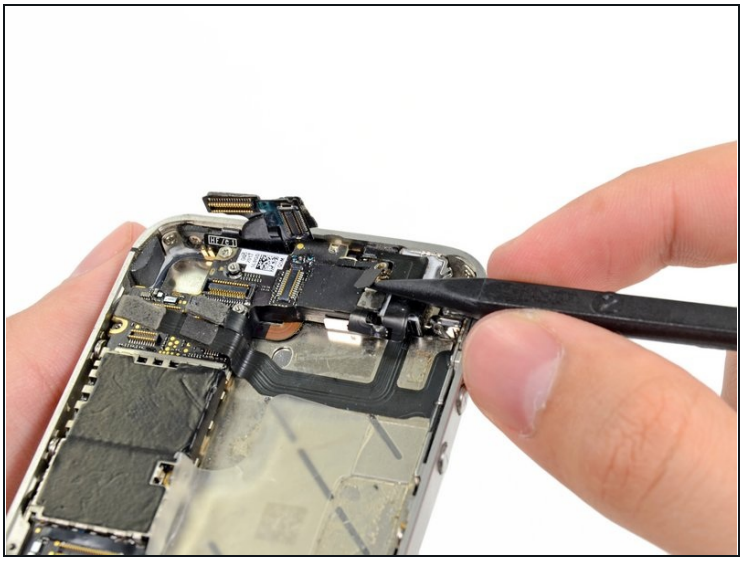
⚠ Be careful not to break any of the small and delicate surface mount components as you disconnect the cables.

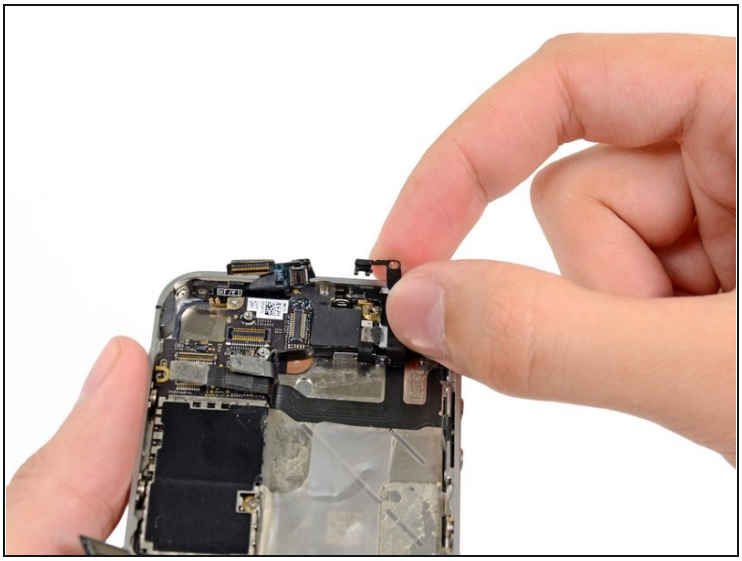
Шаг 20



- Remove the 1.5 mm Phillips screw securing the grounding clip to the logic board near the headphone jack.

Шаг 21





- Use the tip of a spudger to pry the small grounding clip up off the logic board.
- Carefully grasp the grounding clip and remove it from the iPhone.

⚠ Before reassembly, be sure to clean all metal-to-metal contact points on the grounding clip (**not** the mating halves of connectors) with a de-greaser such as windex or isopropyl alcohol. The oils on your fingers have the potential to cause grounding issues.

Шаг 22



- Remove the 4.8 mm standoff screw near the headphone jack.

Standoff screws are best removed using a standoff screwdriver or bit.

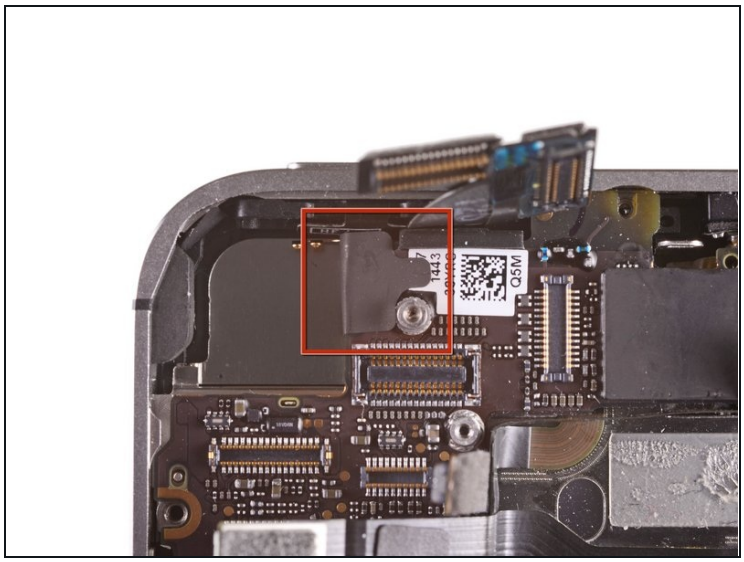
In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.

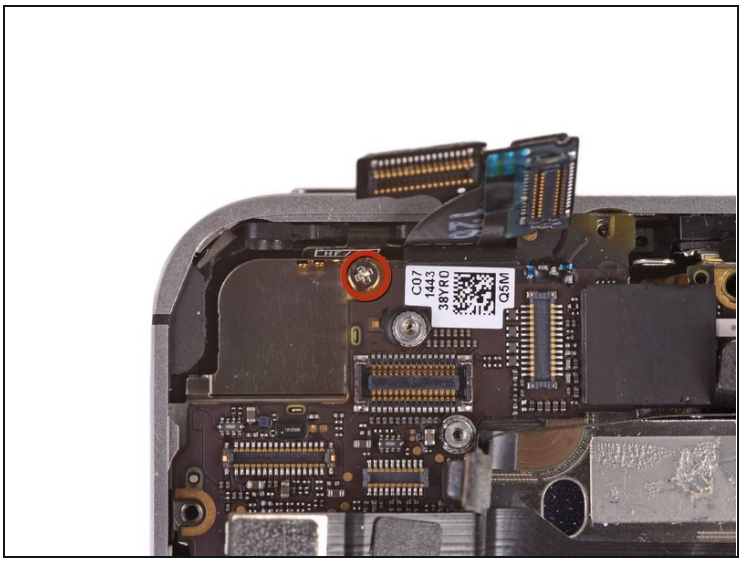
Шаг 23



- Use the edge of a plastic opening tool to disconnect the Wi-Fi antenna from the logic board.

Шаг 24





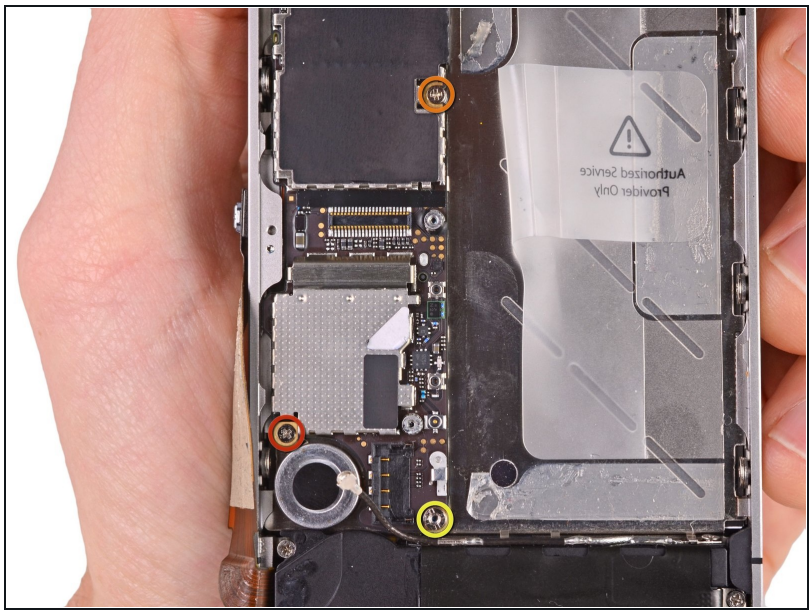
- If present, peel the piece of black tape covering the hidden screw near the power button.

- Remove the 2.6 mm Phillips screw securing the logic board near the power button.

⚠ (Use caution when removing this screw and removing the power contact held by it; the contact tab will come loose with the screw)

ⓘ Notice the small rubber bumper under the screen & digitizer cables (which are detached at top above the Q-code). This bumper can fall off of the logic board when removed or get stuck to the cables and fall off later.

IIIar 25



- Remove the following screws securing the logic board to the case:
  - One 2.5 mm Phillips screw near the vibrator motor
  - One 2.4 mm Phillips screw
  - One 3.6 mm standoff along the side of the logic board nearest the battery opening.

ⓘ Use a standoff driver bit and driver handle to remove the single 3.6 mm standoff screw.

⚠ In a pinch, a small flathead screwdriver will do the job—but use extra caution to ensure it doesn't slip and damage surrounding components.

Шаг 26

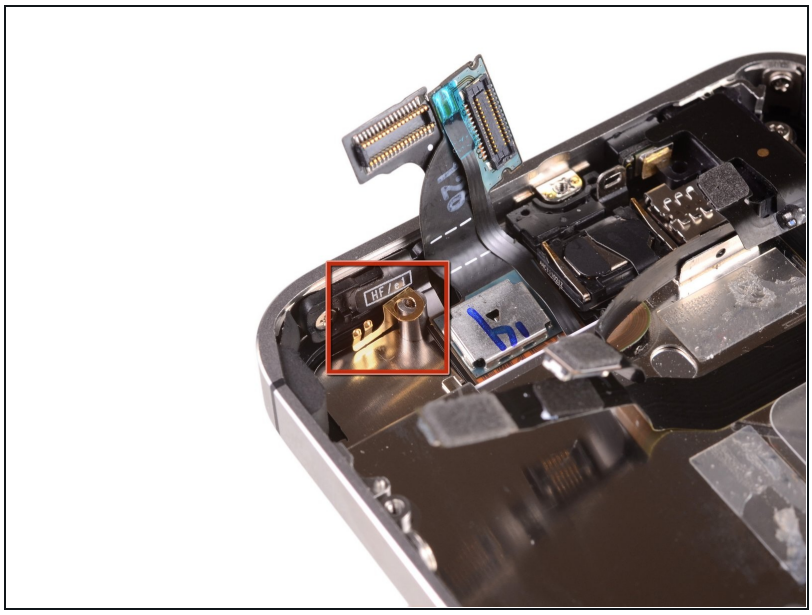


- Carefully lift the logic board from the end closest to the speaker enclosure and slide it away from the top edge of the iPhone.
- Remove the logic board.

⚠ Before reassembly, be sure to clean all metal-to-metal contact points on the logic board (**not** the mating halves of connectors) with a de-greaser such as windex or isopropyl alcohol. The oils on your fingers have the potential to cause grounding issues.

There is a small rubber bumper that sits on the top edge of the logic board where the digitizer and screen cables come through the case. It protects the cables as they bend over the top of the logic board. This can either get stuck to the cables or fall off the logic board when it comes out. Look back over step 22 for more details.

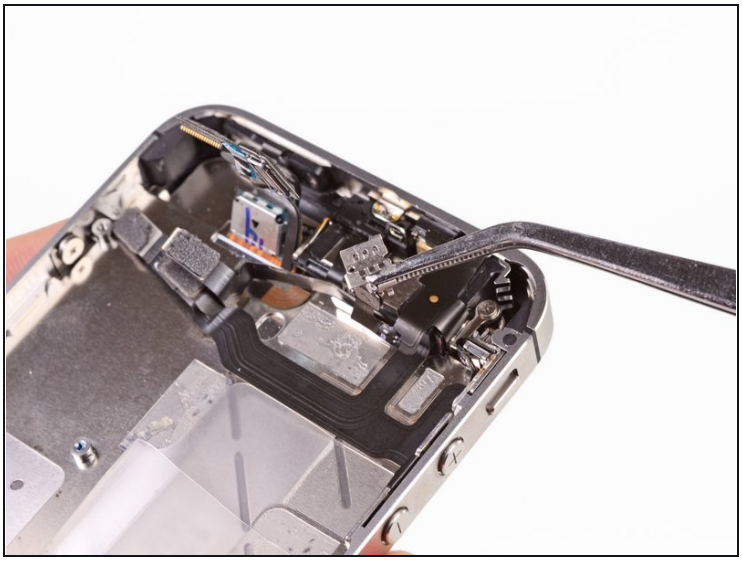
IIIar 27



⚠ Be sure not to lose the small grounding finger for the rear facing camera near the power button. This finger rests on top of the PCB, screwed down, and covered with the adhesive black plastic tape.

IIIar 28 — Front Facing Camera





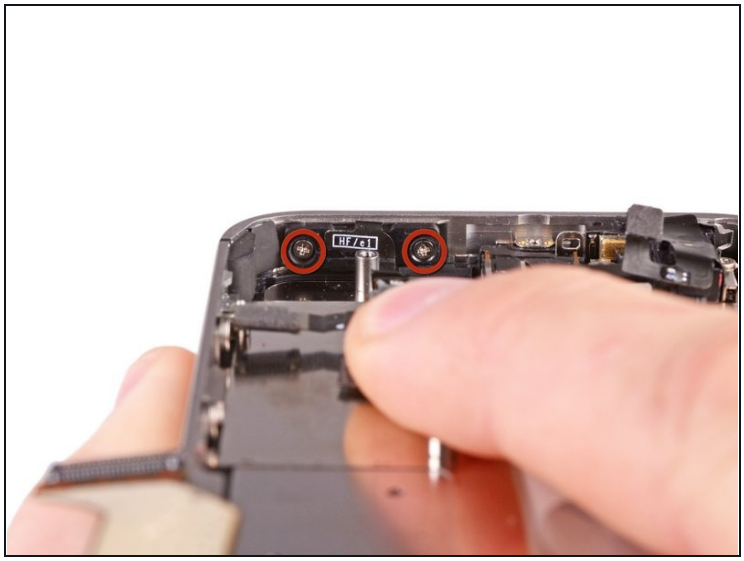
- Use the edge of a plastic opening tool to carefully pry the metal front facing camera retainer away from the case of your iPhone.
- Remove the front facing camera retainer.

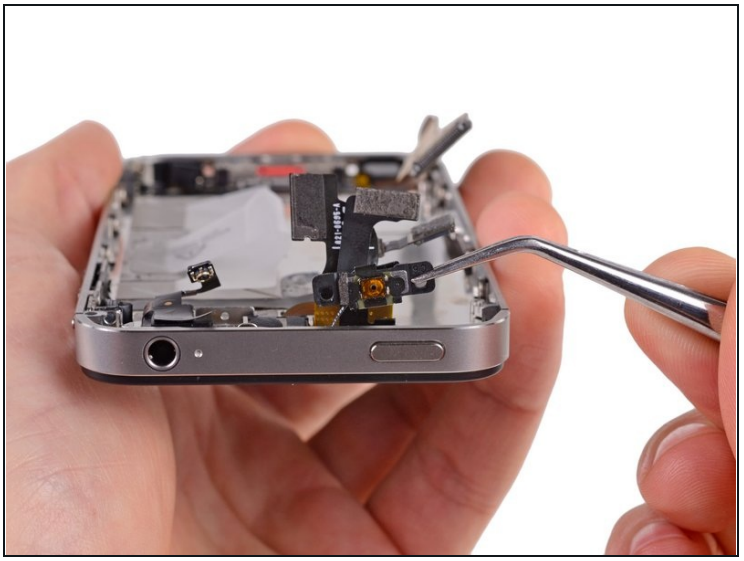
Шаг 29



- Remove the front facing camera.

Шаг 30 — Power Button



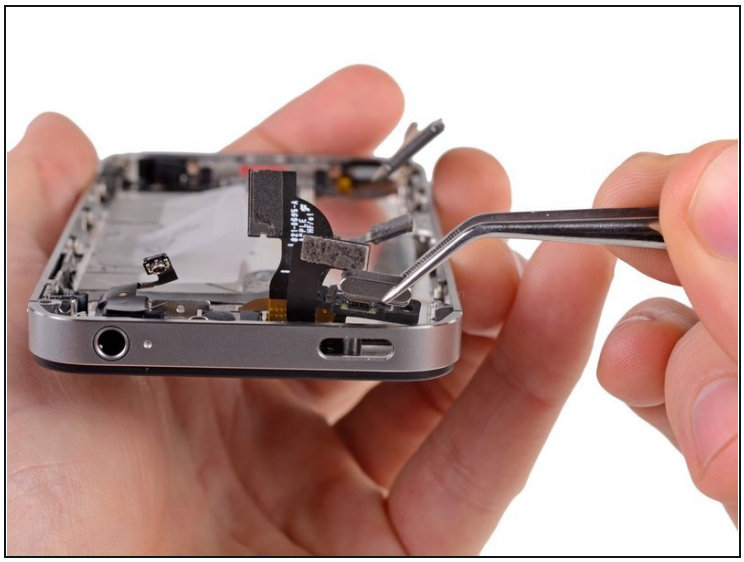


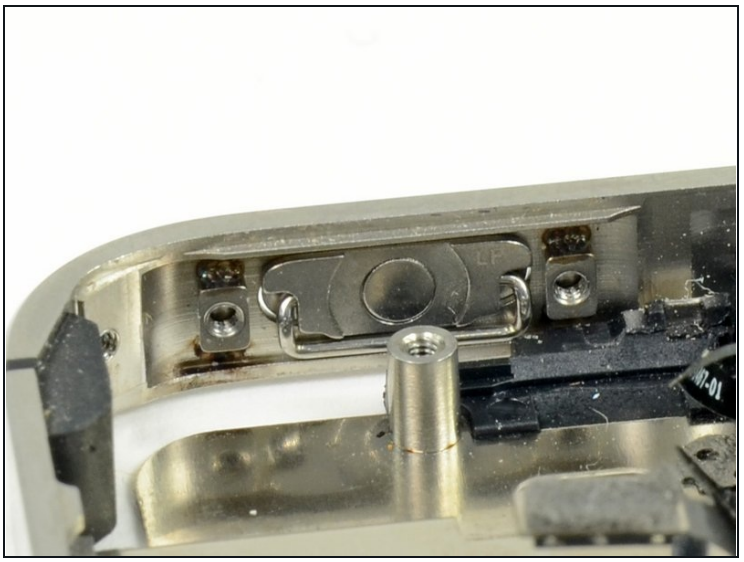
- Remove the two 1.6 mm Phillips screws securing the power button bracket to the outer case.

⚠ Take extra care with the display cables, which can prevent easy access to the right-hand screw. The cables are easily damaged.

- Slightly pull the power button bracket away from the outer case.

Шаг 31

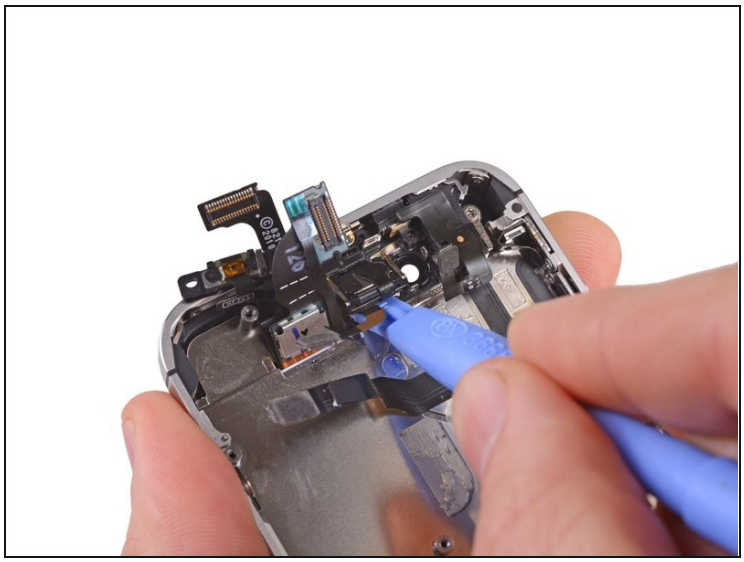


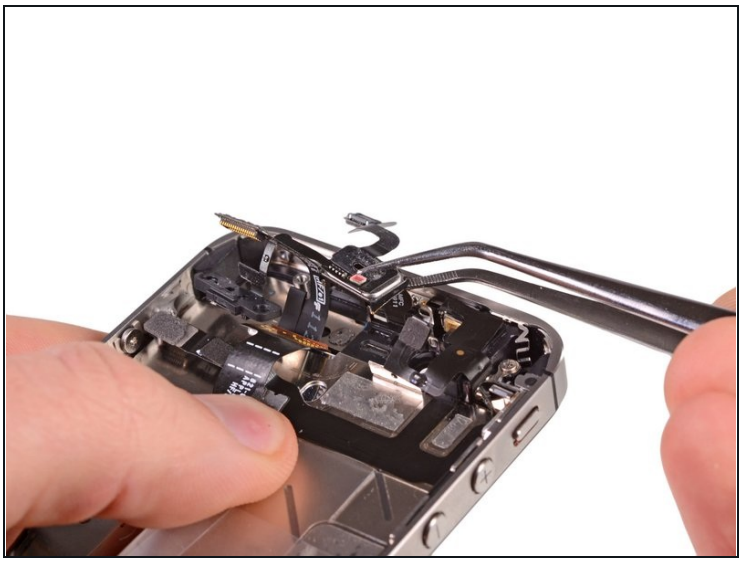


- Use a pair of tweezers to remove the power button from the iPhone.

ⓘ During reassembly, take note of the correct orientation of the power button. The metal loop should be facing downwards and the outward edges should be on top.

IIIar 32 — Power and Sensor Cable Assembly



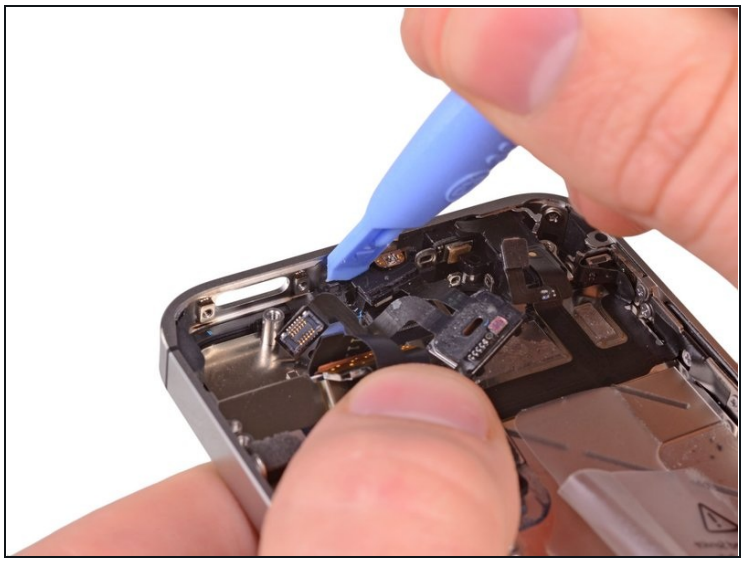
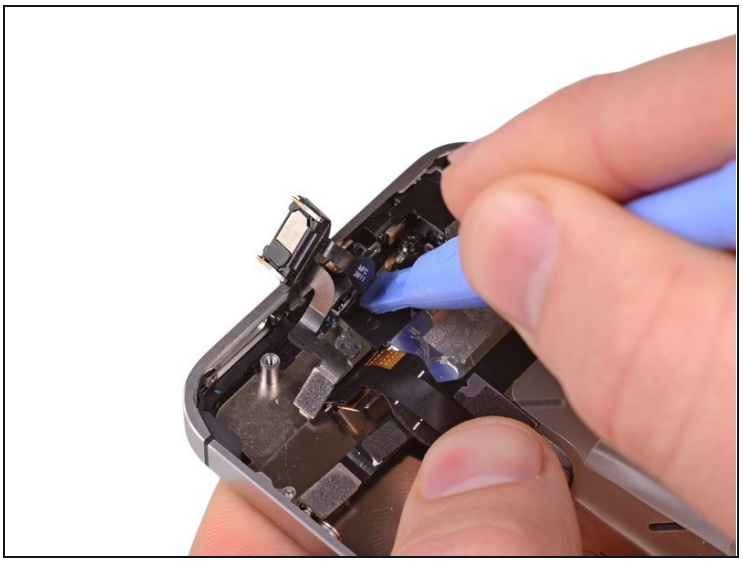


- Use the edge of a plastic opening tool to pry the earpiece speaker off the adhesive securing it to the outer case. Note that the power button cable is glued to the the case as well, and will need to be pried up.

- Use a pair of tweezers to unfold the earpiece speaker from its recess in the outer case.

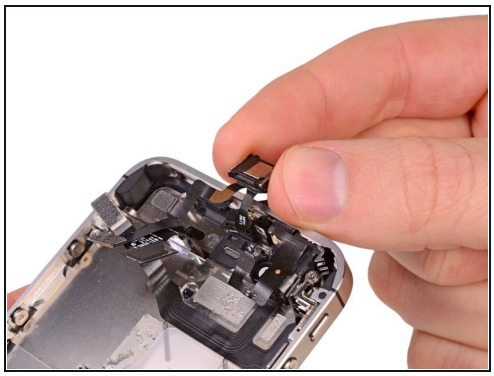
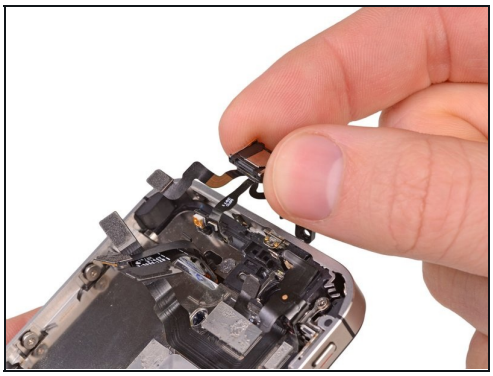
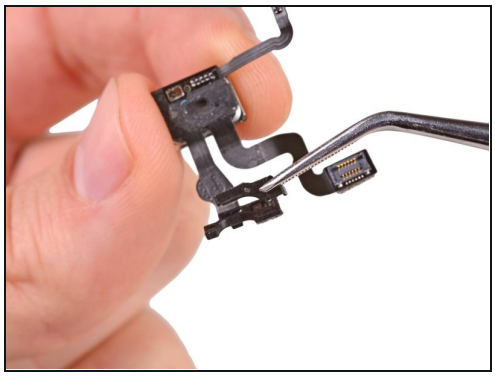
⚠ Be careful not to tear the cable from the earpiece speaker. They are adhered together, and the cable is very delicate.

Шаг 33

- Use the edge of plastic opening tool to gently move the top sensor assembly away from the outer case.
- Gently pry the top sensor assembly off the outer case.

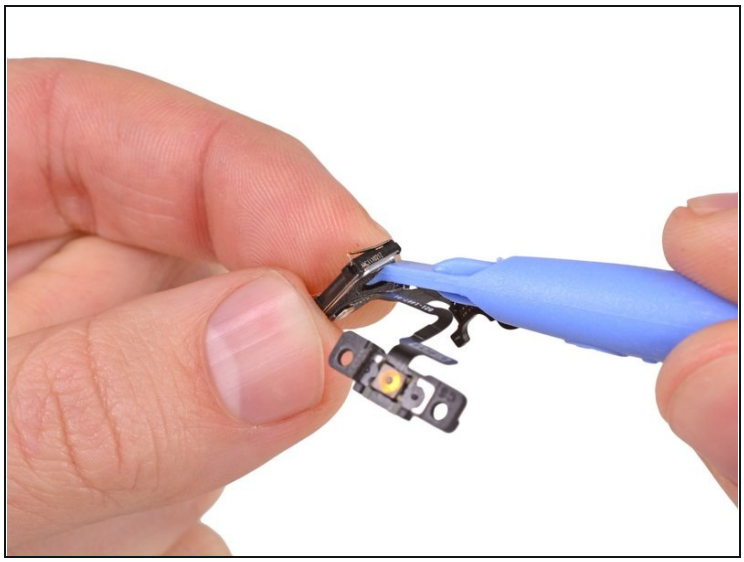
Шаг 34

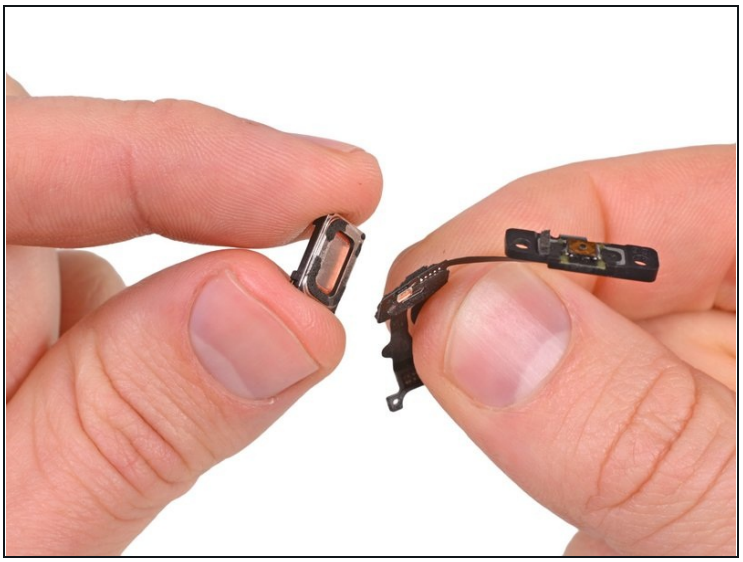




- Lift and remove the power and sensor cable assembly from the iPhone.

⚠ Be sure not to lose the small retainer clip located on the top sensor assembly.

IIIar 35 — Earpiece Speaker Assembly



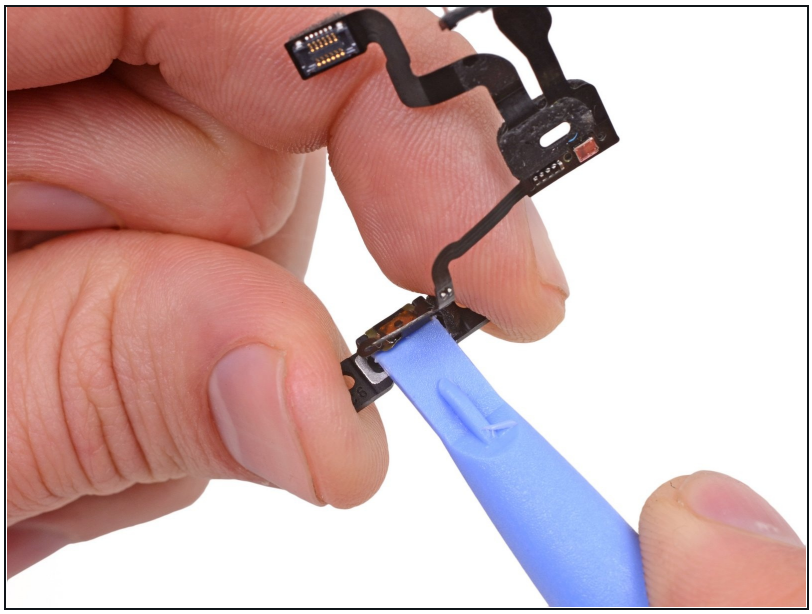


- Use the edge of a plastic opening tool to peel the earpiece speaker off the foam adhesive securing it to the iPhone.

ⓘ If you wish to reuse the earpiece speaker, try not to tear the foam adhesive that secures it to the iPhone's case.

- Remove the earpiece speaker.

IIIar 36 — Power and Sensor Cable



- Use the edge of a plastic opening tool to separate the power button contact from its plastic bracket.

Шаг 37



- Power and sensor cable remains.

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