# iPhone 5 Logic Board Replacement

Remove the logic board from your iPhone 5

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## INTRODUCTION

Resurrect your iPhone 5 with a new logic board.

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Step 1 — Display Assembly

- 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 iPhone's display until the whole face is covered.
  
  This will keep glass shards contained and provide structural integrity when prying and lifting the display.

- Wear safety glasses to protect your eyes from any glass shaken free during the repair.

Step 2

- Before disassembling your iPhone, be sure it is powered off.

- Remove the two 3.6 mm Pentalobe screws next to the Lightning connector.
Step 3 — iSclack Opening Procedure

The next two steps demonstrate using the iSclack, a great tool for safely opening the iPhone 5 that we recommend for anyone doing more than one repair. **If you aren't using the iSclack, skip to step 5.**

- Close the handle on the iSclack, opening the suction-cup jaws.

- Place the bottom of your iPhone in between the suction cups, against the plastic depth gauge.
  - The top suction cup should rest just above the home button.

- Open the handles to close the jaws of the iSclack. Center the suction cups and press them firmly onto the top and bottom of the iPhone.
Step 4

- Hold onto your iPhone securely and close the handle of the iSclack to separate the suction cups, pulling the front panel up from the rear case.

- The iSclack is designed to safely open your iPhone just enough to separate the pieces, but not enough to damage the home button cable.

- Peel the two suction cups off your iPhone.

- **Skip the next three steps and continue on step 7.**
Step 5

- Press a suction cup onto the screen, just above the home button.

_information_ Be sure the cup is completely on the screen to get a tight seal.

_information_ If you're opening an iPhone with cracked glass, neatly lay a couple strips of packing tape across the front and squeeze out as many bubbles as you can. This will give the suction cup a surface to grab, and minimize the spread of broken glass.
Step 6

- Make sure the suction cup is firmly attached to the front panel assembly.

- While holding the iPhone down with one hand, pull up on the suction cup to slightly separate the front panel assembly from the rear case.

- Take your time and apply firm, constant force. The display assembly is a much tighter fit than most devices.

- With a plastic opening tool, begin to gently pry the rear case down, away from the display assembly, while you pull up with the suction cup.

- There are several clips attaching the front panel assembly to the rear case, so you may need to use a combination of the suction cup and plastic opening tool to free the front panel assembly.
Step 7

- Continue to pry up around the sides of the front panel assembly, detaching the clips along the left and right side.
Step 8

⚠️ Do not try to completely remove the front panel assembly from the rear case, as there are several ribbon cables still attached at the top of the iPhone.

⚠️ Be sure to disconnect the battery first before proceeding with the repair as not doing so can sometimes cause the phone to run hot and/or have issues with touch sensitivity.

- Once the clips have been released on the bottom and sides of the front panel assembly, pull the bottom of the assembly away from the rear case.
- Lift the front panel assembly slowly up to about 90 degrees from the rear case.
Step 9

- Remove the following screws securing the front panel assembly cable bracket to the logic board:
  - Two 1.2 mm Phillips screws
  - One 1.6 mm Phillips screw

  This screw tends to not be attracted to a magnetized screwdriver. Take care not to lose it when removing, and make sure it gets back into the right place—a magnetized screw may interfere with the compass.

Step 10

- Remove the front panel assembly cable bracket from the logic board.

  User note: To ensure correct installation, make sure you clip the small hooks of the bracket under and then lower towards the outside of the phone.
Step 11

- Use a plastic opening tool to disconnect the three front panel assembly cables:
  - Front-facing camera and sensor cable
  - LCD cable
  - Digitizer cable

⚠️ When reassembling your phone, the LCD cable may pop off the connector. This can cause white lines, or nothing at all to appear when powering your phone back on. If that happens, simply reconnect the cable and power cycle your phone. The best way to power cycle your phone is to disconnect and reconnect the battery.

Step 12

- Remove the front panel assembly from the rear case.
Step 13 — Battery

- Remove the following two screws securing the metal battery connector bracket to the logic board:
  - One 1.8 mm Phillips screw
  - One 1.6 mm Phillips screw

Step 14

- Remove the metal battery connector bracket from the iPhone.
Step 15

- Use a plastic opening tool to gently pry the battery connector up from its socket on the logic board.

⚠️ Be very careful to only pry up on the battery connector and not the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.
Step 16

It may be possible to remove the battery simply by pulling on the plastic pull-tab. A slow continual pull seems to work best. If this is insufficient, proceed with the prying outlined in this step.

⚠️ Use the plastic opening tool to gently pry the battery up, only at the three points shown. Prying anywhere else, especially near the clear plastic pull tab, may result in damage to the logic board.

⚠️ Again, do not pry too hard, and only in the locations shown; well above and below the clear plastic pull tab. Otherwise, you may deform or puncture the battery or damage the logic board.

⚠️ Be careful when prying at the top of the battery. Do not insert the opening tool more than 2 mm under the battery or you risk severing the volume control cables.

Step 17

⚠️ If necessary, use the exposed clear plastic pull tab to peel the battery off the adhesive securing it to the iPhone.

- Remove the battery.

⚠️ During reassembly, make sure the battery is seated firmly against the rear case. This will prevent any damage to other components when reinstalling the front panel assembly.
Step 18 — Logic Board Assembly

- Use the tip of a spudger to pry the cellular data antenna cable connector up from its socket on the logic board, just above the speaker enclosure.

Step 19

- Remove the following two screws securing the top logic board bracket to the rear case:
  - One 1.5 mm Phillips screw
  - One 2.3 mm Phillips screw
Step 20

- Remove the bracket from the top of the logic board.

⚠️ Be sure not to break off the tiny grounding tab that sticks up off of the bracket next to the rear facing camera.

ℹ️ On newer models, the bracket may be attached to the camera housing and will not come completely out.

Step 21

- Use the flat end of a spudger to disconnect the following three cables from the logic board:
  - Upper interconnect cable
  - Button assembly cable
  - Lower interconnect cable
Step 22

- Remove the two 1.3 mm Phillips screws from the inner top of the rear case.

Step 23

- Remove the single 1.2 mm Phillips screw remaining in the mid-section logic board bracket.
Step 24

- Remove the mid-section bracket from the logic board.

Step 25

- Use a spudger to pry the Lightning connector cable connector up from its socket on the logic board.
- Gently peel the cable back and out of the way of the logic board.
Step 26

- Depress the SIM card release on the right side of the iPhone with a SIM card eject tool or a bent paperclip to eject the SIM card tray.

- Remove the SIM card tray from the iPhone.
Step 27

- Remove the following screws securing the logic board to the rear case:
  - Two 2.3 mm Phillips screws
  - Two 2.7 mm standoff screws.

  These screws have a Phillips bit pattern, but we found the best removal tool to be a 2.5 mm flathead driver.

- One non-magnetic 2.7 mm standoff screw

  Be sure to put this screw back in its original position at the top of the logic board. A magnetized screw may interfere with the digital compass.

- Reassembly hint: when putting the standoffs back in, use the tip of a spudger like a screwdriver to get them started.
Step 28

- Rotate the logic board assembly toward the battery side of the rear case.

⚠️ Do not attempt to completely remove the logic board assembly from the rear case, yet; there is still one cable connected to the underside of the logic board.

- The flash surround is adhered to the flash unit and the rear case. If it stays on the rear case remove with tweezers and mount it back on the flash unit.

- Note: when reassembling your device, be sure that the lower interconnect cable is not tucked underneath the logic board.

Step 29

- Use the tip of a spudger to pry the Wi-Fi antenna cable connector up from its socket on the underside of the logic board.
Step 30

- Remove the logic board assembly from the rear case.
- While your logic board is out of your phone, keep it on a grounded anti-static mat to prevent any damage to the circuitry.

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Step 31 — Rear-Facing Camera

- Remove two 1.1 mm Phillips screws securing the rear-facing camera bracket to the logic board.
Step 32

- Remove the rear-facing camera bracket from the logic board.

Step 33

- Use the flat end of a spudger to disconnect the rear-facing camera cable from its socket on the logic board.
Step 34

- Remove the rear-facing camera from the logic board.
- Your replacement part may not come with the flash surround—if not, remove it from the old camera and transfer it to your replacement.

Step 35 — Logic Board

- Use the flat end of a spudger to disconnect the bottoms of the interconnect cables from their sockets on the logic board.
To reassemble your device, follow these instructions in reverse order.

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