

iPhone 5c Battery Replacement

Power draining too quickly? Won't hold a charge...

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INTRODUCTION

Power draining too quickly? Won't hold a charge like it used to? Use this guide to replace the battery in your iPhone 5c. If your battery is swollen, <u>take appropriate precautions</u>.

This guide instructs you to remove the front panel assembly, this is intended to prevent damage to the display cables. If you feel comfortable supporting the display carefully while peeling the battery out of the body, skip the display removal and go to the battery removal steps.

For optimal performance, after completing this guide, <u>calibrate</u> your newly installed battery: Charge it to 100% and keep charging it for at least two more hours. Then use your iPhone until it shuts off due to low battery. Finally, charge it uninterrupted to 100%.

[video: https://www.youtube.com/watch?v=8GZAJF9xed8]

TOOLS:PARTS:Phillips #000 Screwdriver (1)
Tweezers (1)iPhone 5c Battery (1)
Part OnlySpudger (1)
P2 Pentalobe Screwdriver iPhone (1)
iFixit Opening Tool (1)
Suction Handle (1)
iOpener (1)iPhone 5s/5c/SE (1st Gen) Battery
Adhesive Strips (1)Suction Handle (1)
iOpener (1)iOpener (1)
Plastic Cards (1)
iSclack (1)

Step 1 — Taping the display glass



- 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.

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



Step 2 — Removing the Pentalobe screws

- ▲ Before you proceed, 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 3.8 mm P2 Pentalobe screws on either side of the Lightning connector.

Step 3 — Starting the iSclack Opening Procedure



- (i) The next two steps demonstrate using the <u>iSclack</u>, a great tool for safely opening the iPhone 5c that we recommend for anyone doing more than one repair on an iPhone 5, 5s, or 5c. If you aren't using the iSclack, skip to <u>Step 5</u>.
- 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 — Finishing the iSclack Opening Procedure



- 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 any cables.

(i) Peel the two suction cups off your iPhone.

• Skip the next three steps and continue on to <u>Step 8</u>.

Step 5 — Manual Opening Procedure



- Press a suction cup onto the screen, just above the home button.
- (i) Be sure the cup is completely on the screen to get a tight seal.

Step 6 — Start lifting the front panel assembly



(i) 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.
- (i) 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.
- (i) 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.



- Pull the plastic nub to release the vacuum seal on the suction cup.
- Remove the suction cup from the display assembly.

Step 8 — Opening up the phone



- Lift the home button end of the front panel up to gain access to the connectors near the top of the phone.
- Open the display to about a 90° angle, and lean it against something to keep it propped up while you're working on the phone.
 - In a pinch, you can use an unopened canned beverage to hold the display.
- Add a rubber band to keep the display securely in place while you work. This prevents undue strain on the display cables.



 Remove the two 1.6 mm Phillips #000 screws securing the metal battery connector bracket to the logic board.

Step 10



• Remove the metal battery connector bracket from the iPhone.

Step 11 — **Disconnecting the battery connector**



- Use a spudger or a clean fingernail 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 itself and not the socket on the logic board. If you pry up on the logic board socket or the board itself, you may destroy the socket or damage nearby components on the board.



- Remove the following Phillips #000 screws securing the front panel assembly cable bracket to the logic board:
 - Two 1.3 mm screws
 - One 1.7 mm screw
 - One 3.25 mm screw
- It is especially important to keep track of your screws in this step for reassembly. Accidentally using the 3.25 mm screw or the 1.7 mm screw in the **bottom right** hole will result in significant damage to the logic board causing the phone to no longer boot properly.
- Be careful not to over-tighten the screws. If they don't fit easily when you are securing them, they may be the wrong size—don't force them.



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

Step 14 — Disconnecting the front panel assembly cables



• Use a plastic opening tool or a fingernail to disconnect the front-facing camera and sensor cable connector.

 \triangle Be sure to **only** pry up on the connector, and not on the socket on the logic board.



- A Make sure the battery is disconnected before you disconnect or reconnect the cables in this step.
- Use a plastic opening tool or a fingernail to disconnect the LCD cable connector.
 The LCD and Digitizer connectors are on the same cable assembly, so prying the LCD connector up should disconnect both connectors. Double check that the two cables are fully disconnected before removing the display.
- When reassembling your phone, the LCD cable may pop off its connector. A blank screen, or white lines on the display could be caused by a loose connection. Should this happen, reconnect the cable and power cycle your phone. The best way to power cycle your phone is to disconnect and reconnect the battery.

Step 16 — Separating front panel assembly and rear case



• Remove the front panel assembly from the rear case.

Step 17 — Battery



• Run the tip of a spudger between the battery and the headphone jack to unfold the battery adhesive tab.

Step 18



• Pull the battery adhesive tab away from the phone.



• Cut the black battery adhesive tab between the two white adhesive strips, separating them.



- Try to keep the strips flat and unwrinkled during this procedure; wrinkled strips will stick together and break instead of pulling out cleanly.
- Slowly pull one of the battery adhesive strips away from the battery, toward the bottom of the iPhone.
- Pull steadily, maintaining constant tension on the strip as it slips out from between the battery and the rear case. For best results, pull the strip at a 60° angle or less.
- Guide the strip carefully around the corner and up the side of the battery. Be careful not to snag it on any of the other internal iPhone components.
- (i) The strip will stretch to many times its original length. Continue pulling, re-grabbing the strip near the battery if necessary, until the entire strip comes free.



• Repeat to remove the second strip.



- Remove the battery from your iPhone.
- ▲ If one, or both, of the adhesive strips tears, and you are unable to retrieve it with a set of <u>tweezers</u>, **do not pry** the battery out of the phone. Continue on to the next steps to safely remove your battery.

Step 23 — Battery removal with latent adhesive



- Apply a few drops of isopropyl alcohol (90% or greater) under the battery and let it flow around the adhesive to help weaken it. High concentration isopropyl alcohol acts as a solvent and dries without leaving any residue, so it will not hurt your iPhone.
- Carefully wedge a <u>plastic card</u> under the battery on the side nearest the logic board.
 Do not pry against the logic board or you may damage the phone.

Avoid prying near the top edge of the battery, or you may damage the <u>upper</u> <u>component ribbon cable</u>.

• Slide the card from the top of the battery to the bottom, pushing toward the edge of the case.

(i) If necessary, repeat the same procedure with the case side of the battery.



- If the battery is still stuck to the case, follow our <u>iOpener</u> <u>heating instructions</u> or use a hair dryer to heat the adhesive securing your battery to the rear case.
 - Lay the iOpener flat on the backside of the iPhone to the right of the camera. Smooth it out so that there is good contact between the back of the iPhone and the iOpener.
 - Let the bag sit on the iPhone for approximately 90 seconds before attempting to remove the battery.
 - If using a hair dryer or heat gun, heat the back of the iPhone until it's slightly too hot to touch.

⚠ Do not apply heat directly to the battery.

⚠ Overheating the iPhone may ignite the battery.



- Lift and remove the battery from the iPhone.
 - 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.
- A There should be no resistance. If the battery remains stuck, reheat the iOpener and pry again.
- If your replacement battery came in a plastic sleeve, remove it before installation by pulling it away from the the ribbon cable.
- Before you adhere the replacement battery, temporarily reconnect the battery connector to the motherboard socket. This ensures that the battery is properly aligned in its recess.
 - Adhere the battery, disconnect it, and continue reassembling your device.
- If your new battery doesn't have adhesive preinstalled, refer to <u>this guide</u> to replace the adhesive strips.

Perform a <u>hard reset</u> after reassembly. This can prevent several issues and simplify troubleshooting.

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 the above steps in reverse order.

Take your e-waste to an <u>R2 or e-Stewards certified recycler</u>.

Repair didn't go as planned? Check out our <u>Answers community</u> for troubleshooting help.