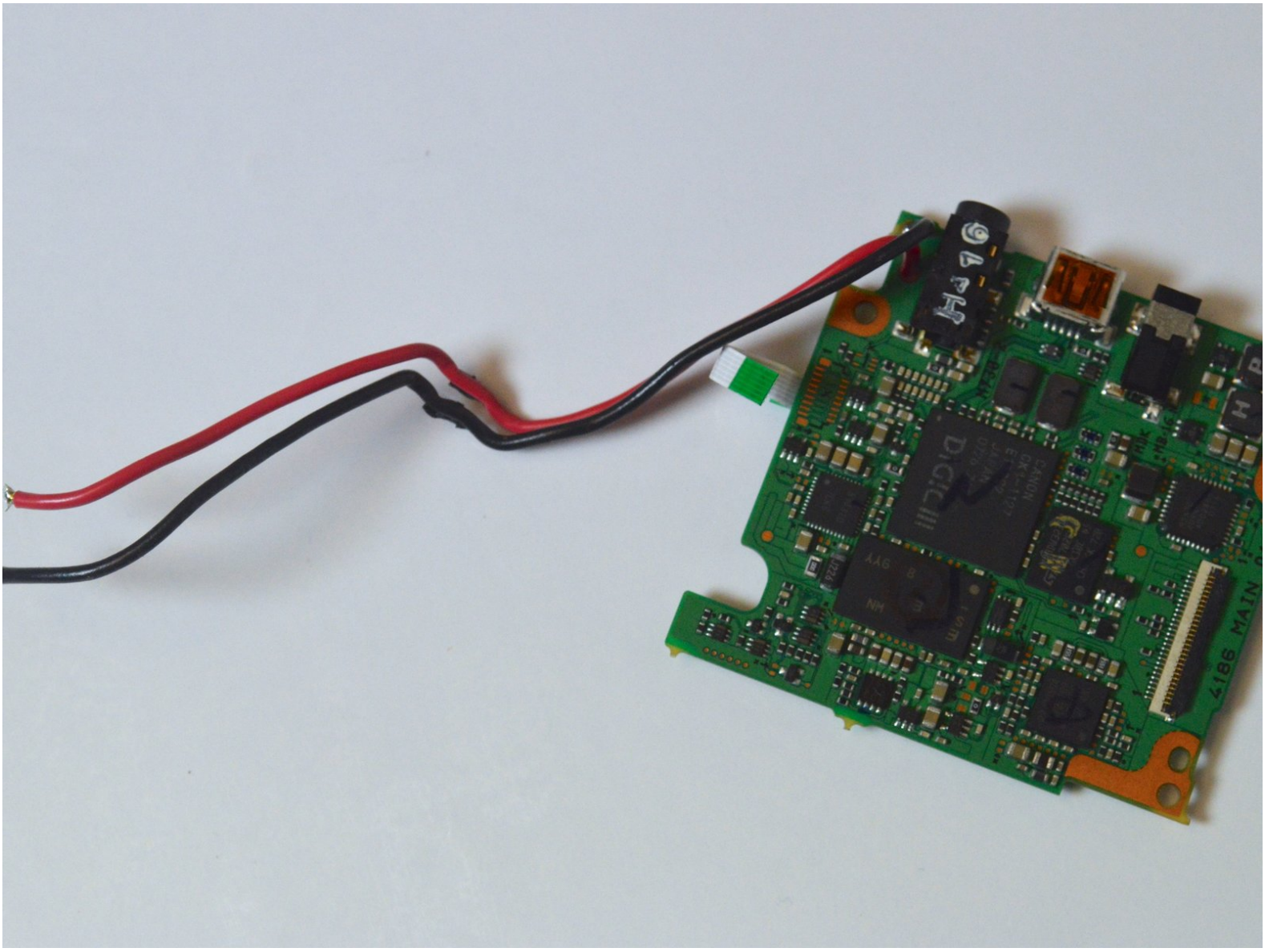
Canon Powershot A720 IS Motherboard Replacement

This guide will show how to replace the motherboard of the Canon Powershot A720 IS.

Written By: Jamie



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INTRODUCTION

This guide will assist in replacing the motherboard for the Canon Powershot A720 IS. Due to the difficulty of this project, it is important to be sure that the motherboard is what needs to be replaced. Improperly handling the motherboard can potentially result in permanent damage to the camera or the motherboard. To reduce the risk, an anti-static bracelet should be used. This project does require the use of a soldering iron; therefore, make sure you know how to safely and properly solder.

Be mindful to not touch the surface of the board. The oils in your hands can be harmful to the motherboard. If you need to adjust the camera, make sure to hold on to the case.

TOOLS:

- Magnetic Project Mat (1)
- Phillips #00 Screwdriver (1)
- iFixit Opening Tool (1)
- Soldering Workstation (1)
- Spudger (1)
- Anti-Static Wrist Strap (1)
- Tweezers (1)

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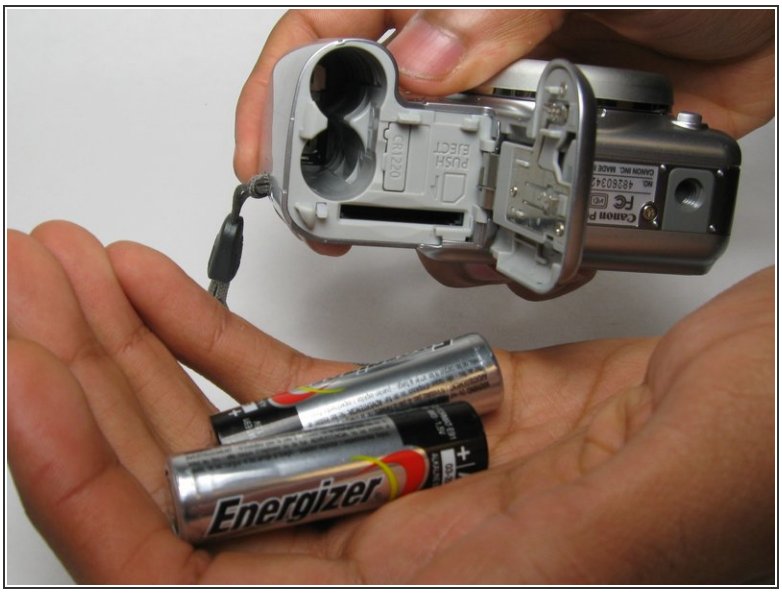
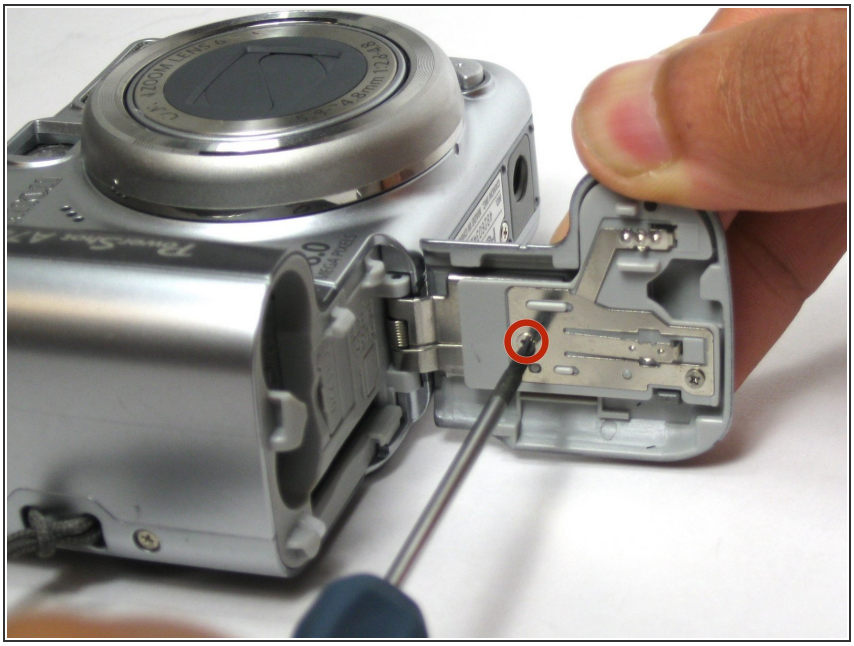
Step 1 — Motherboard



- Push the grey rubber battery lock on the bottom of the camera to open the battery compartment.
- Remove the batteries and set them aside.

Step 2



- Place the camera down so that the lens is facing up.
- Remove the single 4 mm screw from inside the battery door using a Phillips #00 screwdriver.
- Remove the door from the camera.

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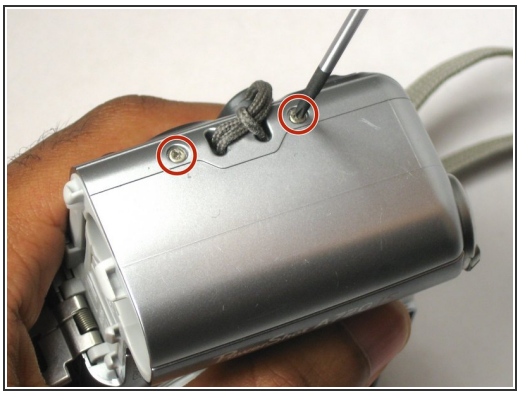
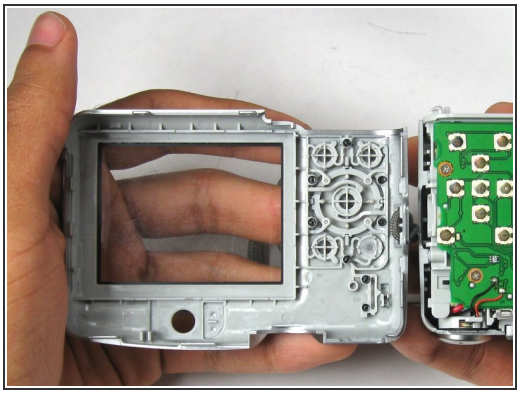
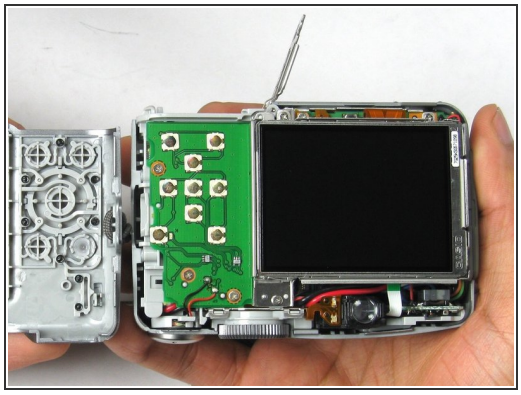
Step 3



- Remove the six 4 mm screws on the sides and bottom of the camera using a Phillips #00 screwdriver.

Step 4

- Separate the back case panel from the main camera body.

⚠ When separating the back panel, be careful; the internal wiring and electronics are fragile.

ⓘ The gray rubber cover labeled DC IN DIGITAL A/V OUT may fall out.

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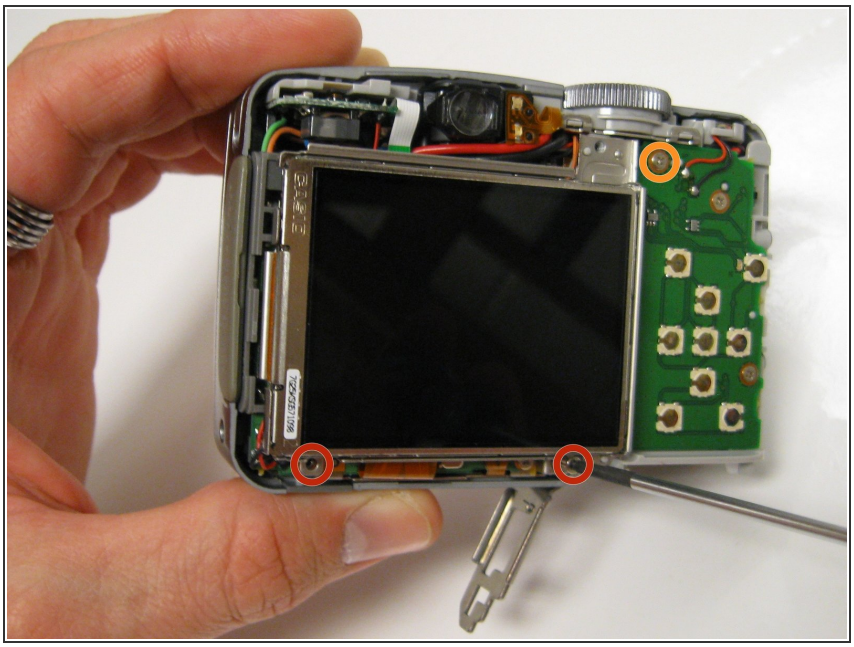
Step 5



- Remove the two 3 mm screws below the LCD screen mount using a Phillips #00 screwdriver.
- Remove the top 4 mm screw using a Phillips #00 screwdriver.

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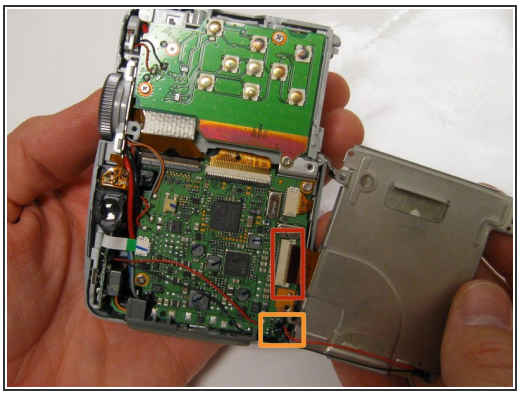
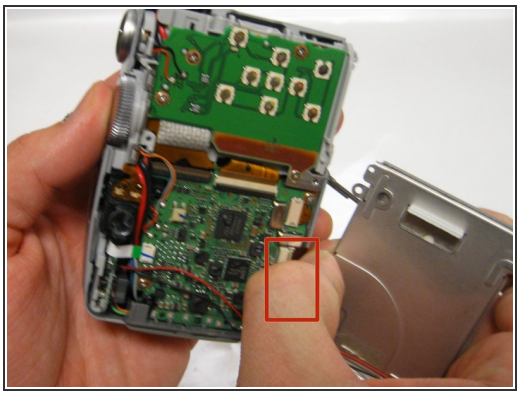
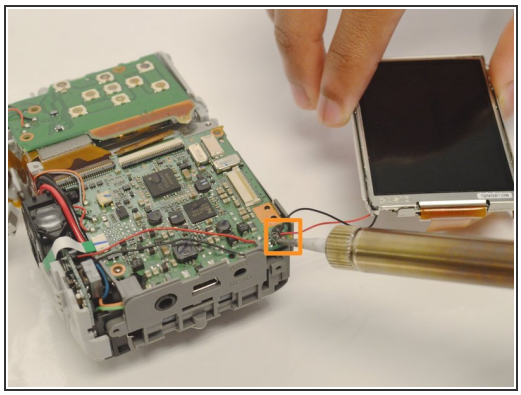
Step 6

- Carefully lift and turn over the LCD screen so that you are able to access the motherboard.
- Carefully disconnect the LCD screen ribbon cable from its ZIF connector with your thumb and index finger.

When removing the ribbon, it is best to firmly grasp the ribbon cable with your thumb and pointer finger. Pull out the cable as straight as possible. This is the best practice to prevent damage to the ribbon cable.

Be careful to not rip the ribbon wire or the red and black power wires when pulling the LCD screen out.

- Use the soldering iron to separate the black and red power wires from the motherboard.

Not knowing where the power wires go could disrupt the power distribution and lead to power outages and damage to the motherboard. The black wire is the negative power wire and the red wire is the positive power wire.

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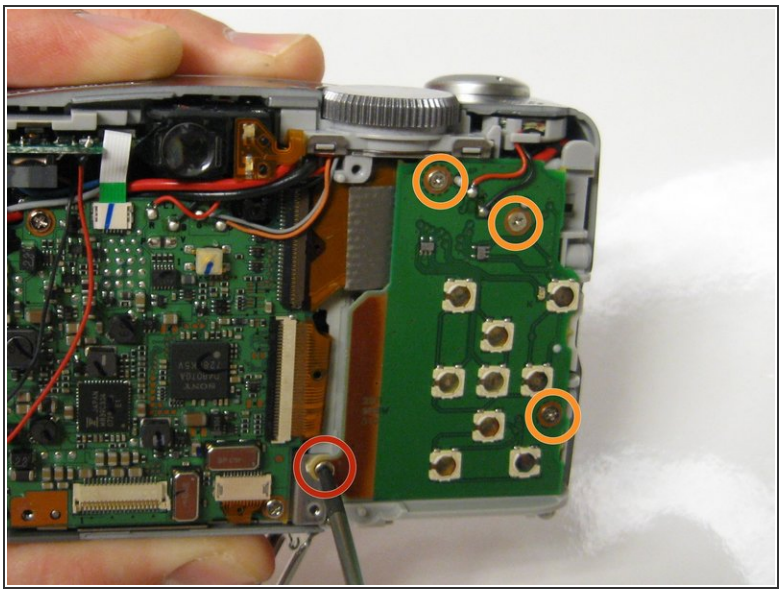
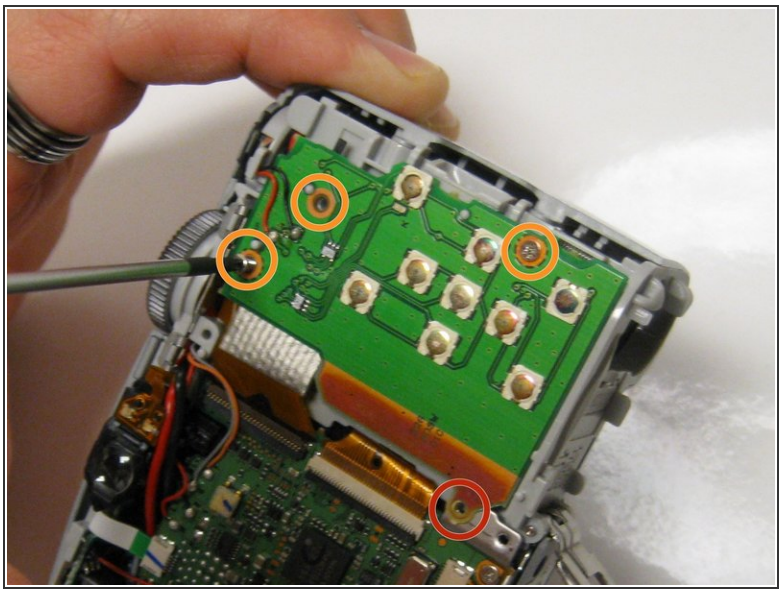
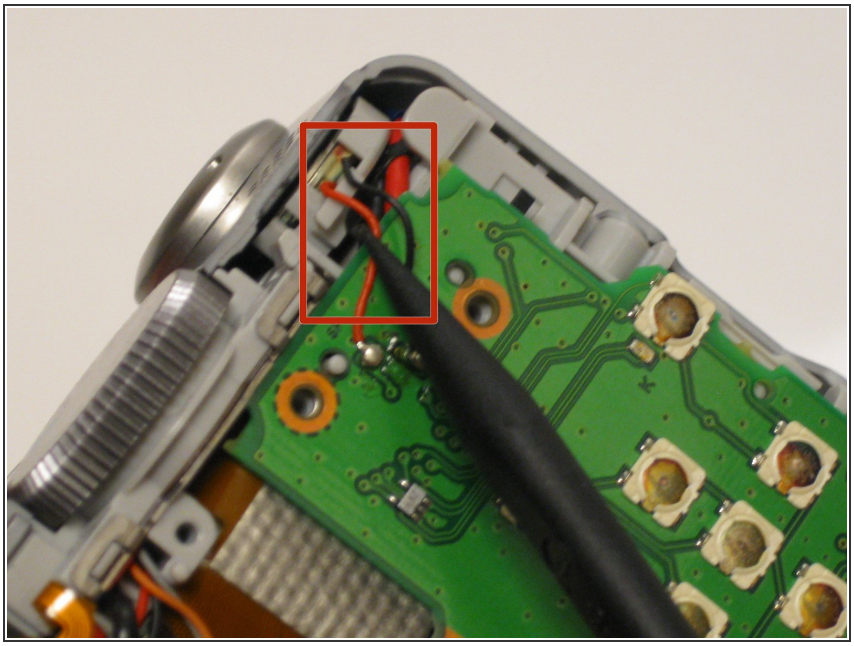
Step 7





- Remove the 3 mm screw that is between the circuit boards using a Phillips #00 screwdriver.
- Remove the three 3.5 mm screws that are on the button circuit board using a Phillips #00 screwdriver.

Step 8



- Use the spudger to carefully unclip both wires from underneath the shutter button and the dial housing unit.

⚠ Be careful not apply too much force on the wires with the spudger because you may rip them off.

Make a note of which wire goes where. Putting the wires back in the wrong spot may cause damage to the camera.

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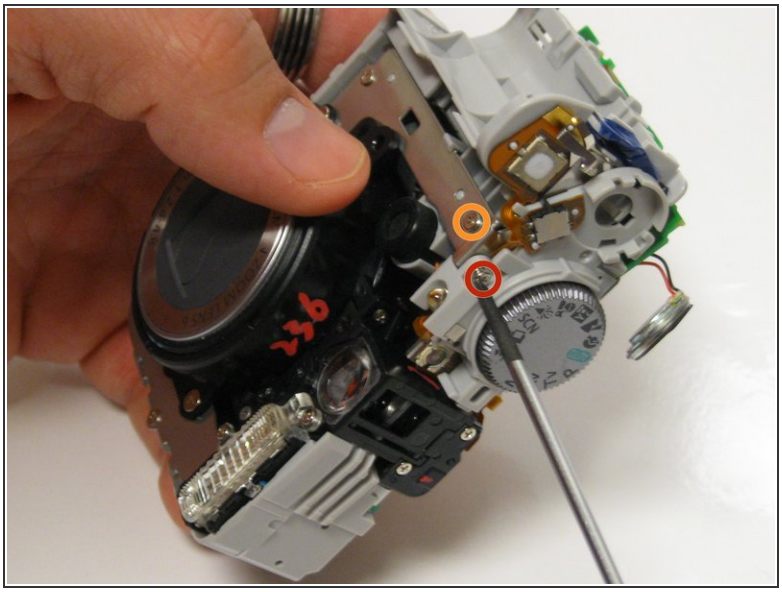
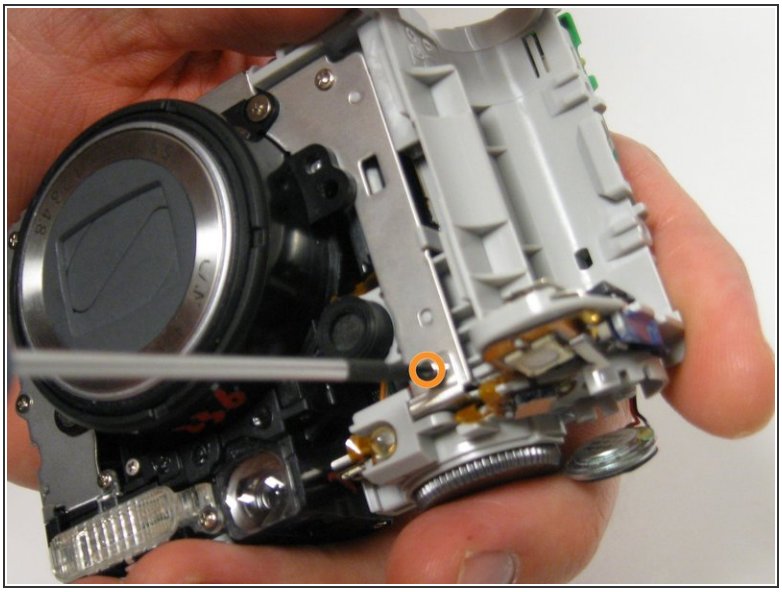
Step 9





- Turn the camera over and remove the 4.5 mm screw that is next to the settings dial using a Phillips #00 screwdriver.
- Remove the 3 mm screw from the metal frame to detach the battery housing unit using a Phillips #00 screwdriver.

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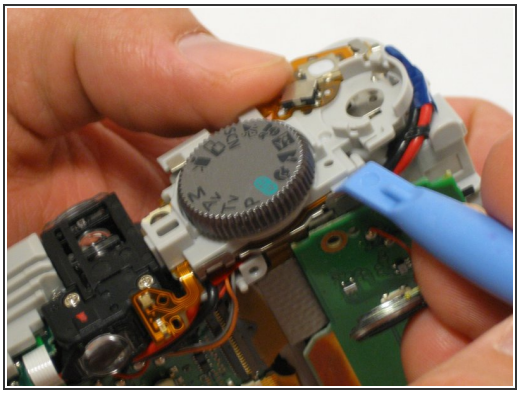
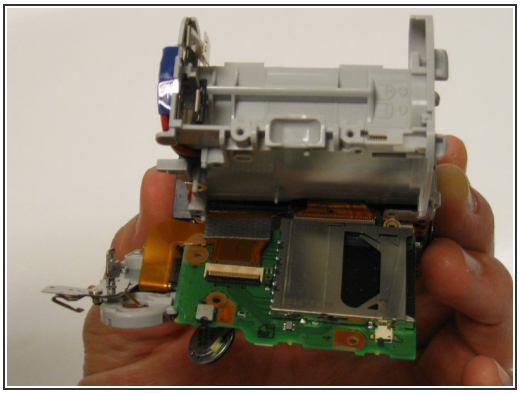
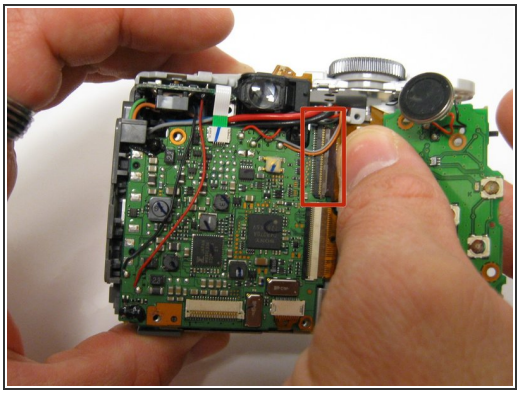
Step 10

- Use the plastic opening tool to separate the user button circuit board from the shutter button and settings dial housing unit.
- Carefully disconnect the ribbon cable that is attached to the user buttons circuit board from the ZIF connector that is attached to the motherboard with your thumb and index finger. Get as close to the ZIF connector as possible without touching the motherboard.

⚠ Be careful not to the rip the ribbon cable out of the ZIF connector when removing.

- Remove the user button circuit board.

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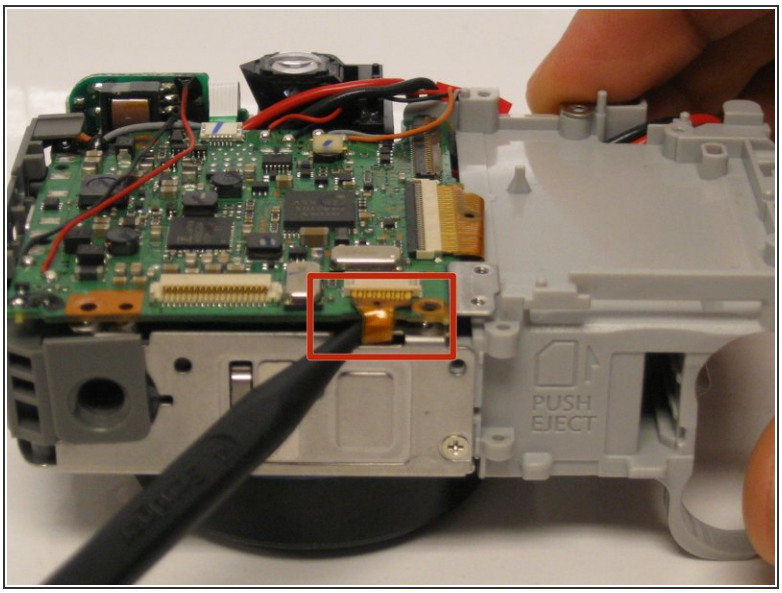
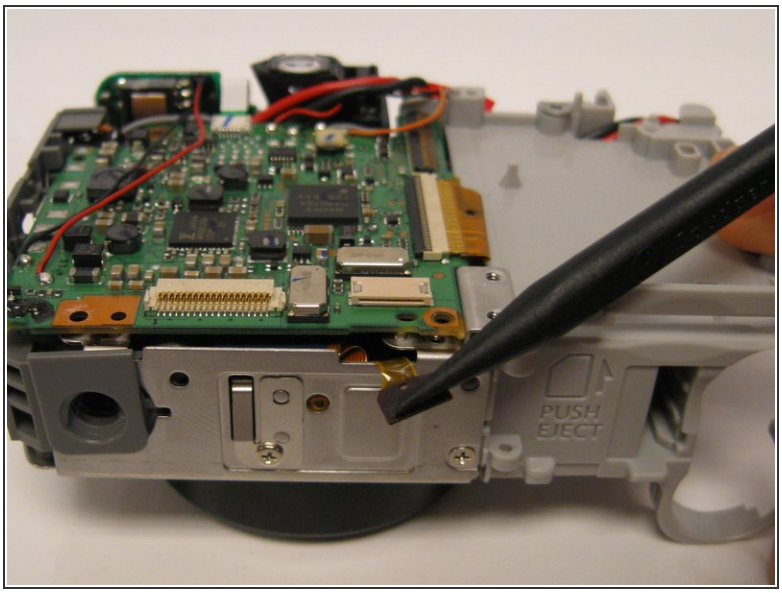
Step 11





- Use the spudger to carefully remove the attached ribbon cable.

Alternate applying pressure on both sides of the ribbon cable to remove it evenly from the ZIF connector.

Be careful not to rip the ribbon cable attached to motherboard out of the ZIF connector.

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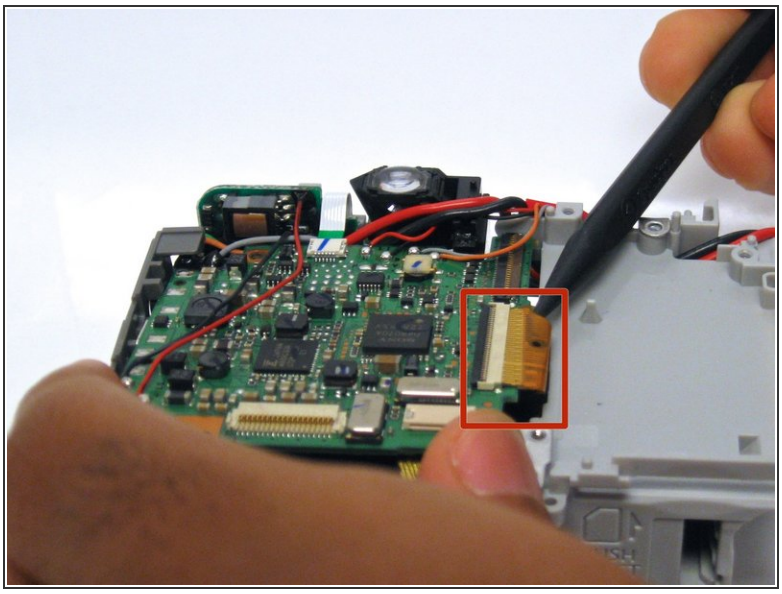
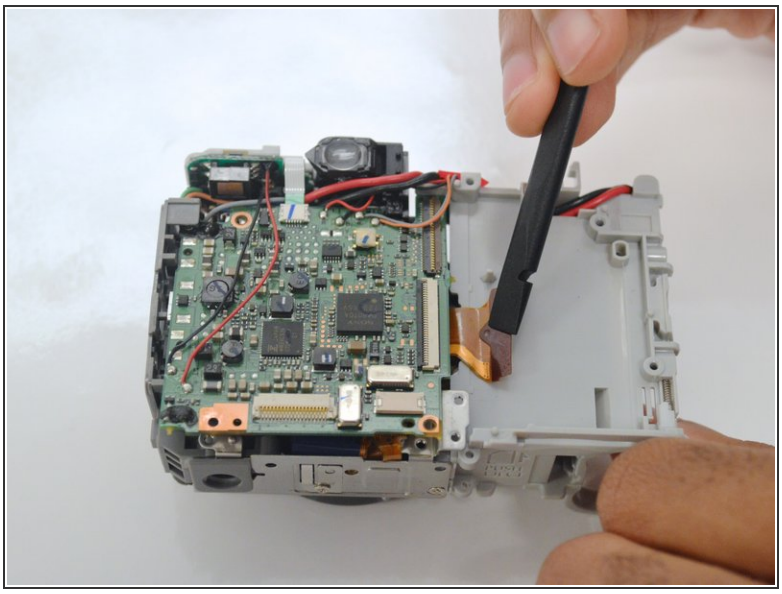
Step 12

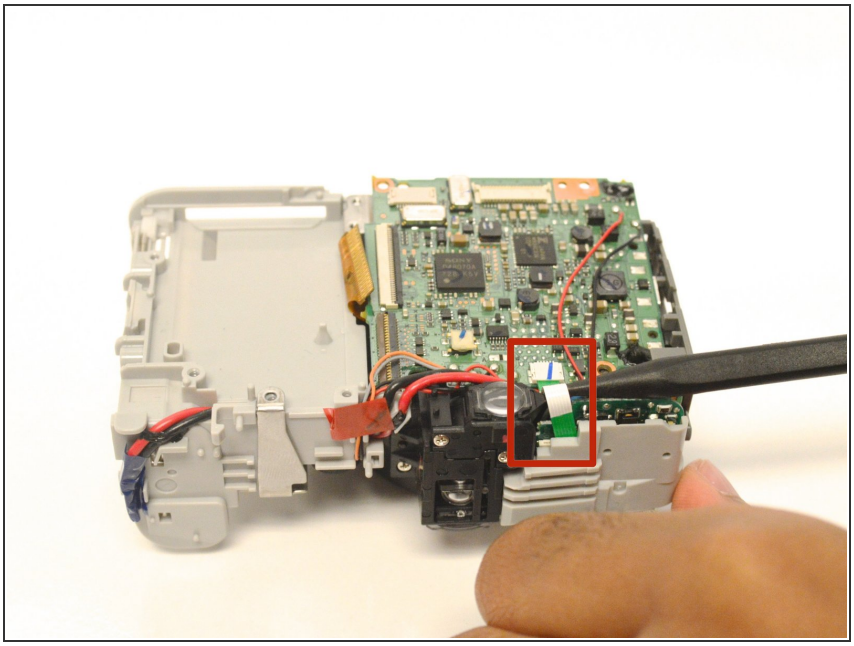




- Use the spudger to remove the ribbon cable from the ZIF connector.

Apply pressure evenly between each side of the ribbon cable to avoid tearing the cable.

Step 13



- Use the spudger to remove the green ribbon from the attached ZIF connector.

Due to the size of the cable, it is very important to be gentle with the cable when removing it from the connector.

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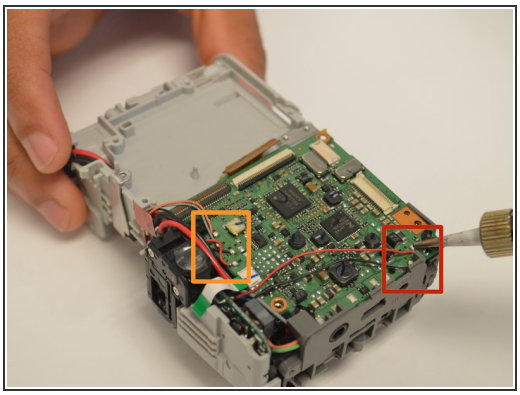
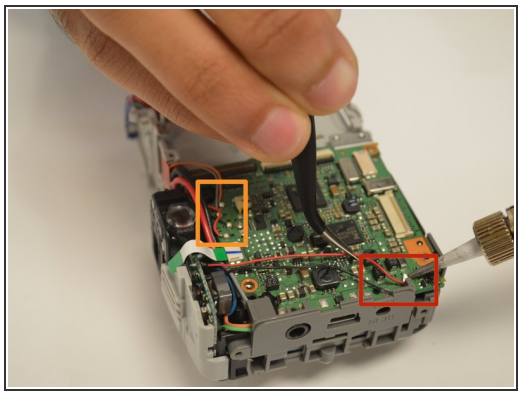
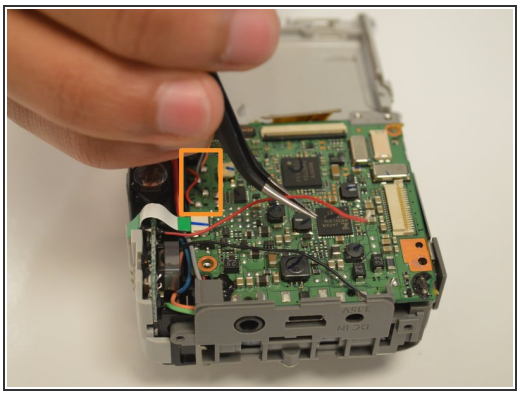
Step 14

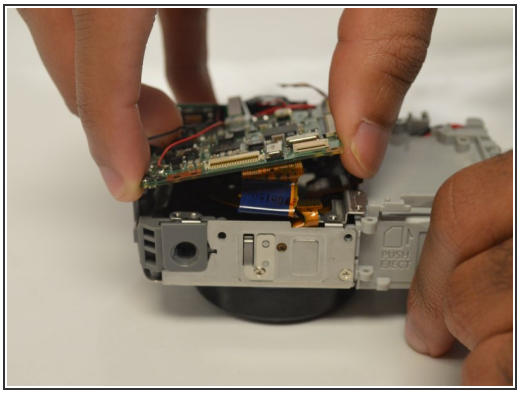
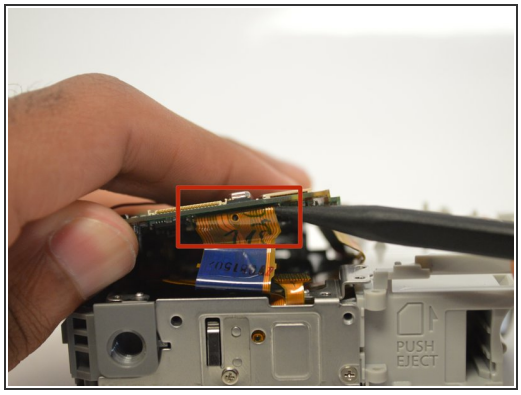
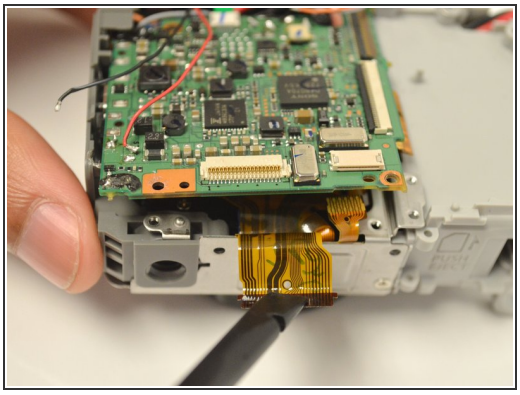




- Desolder all of the wires attached to the motherboard and move them aside with the tweezers.

⚠ Be observant of where you are soldering because you can easily disrupt the power distribution.

⚠ Be mindful about not touching the board with the soldering iron. It is usually best to apply the tip of the soldering iron to the leads or the arms of the component.

Step 15

- After all of the ribbons have been disconnected, gently lift the motherboard to expose the ribbon cable that connects the motherboard to the lens.
- Use the spudger to remove the the ribbon cable attached to the motherboard. Be sure to alternate pressure to both sides of ribbon cable to evenly remove.

⚠ Double check that all cables are disconnected and free from the board.

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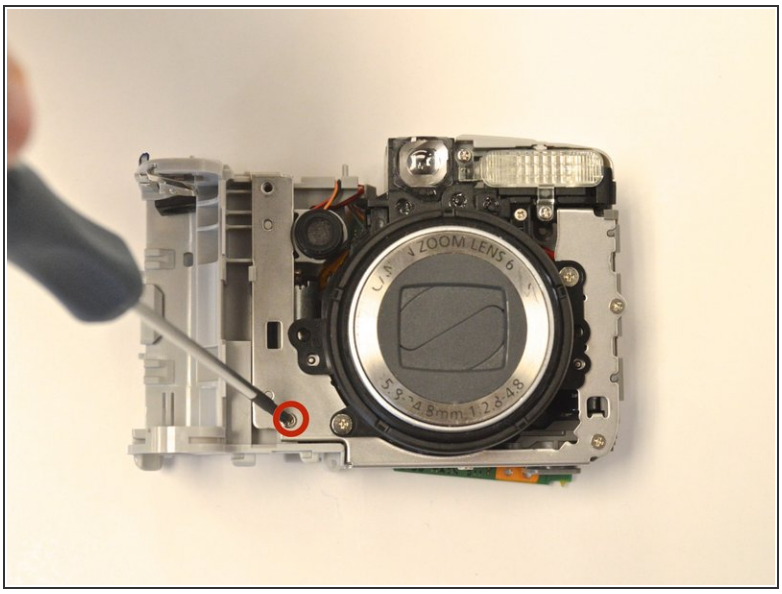
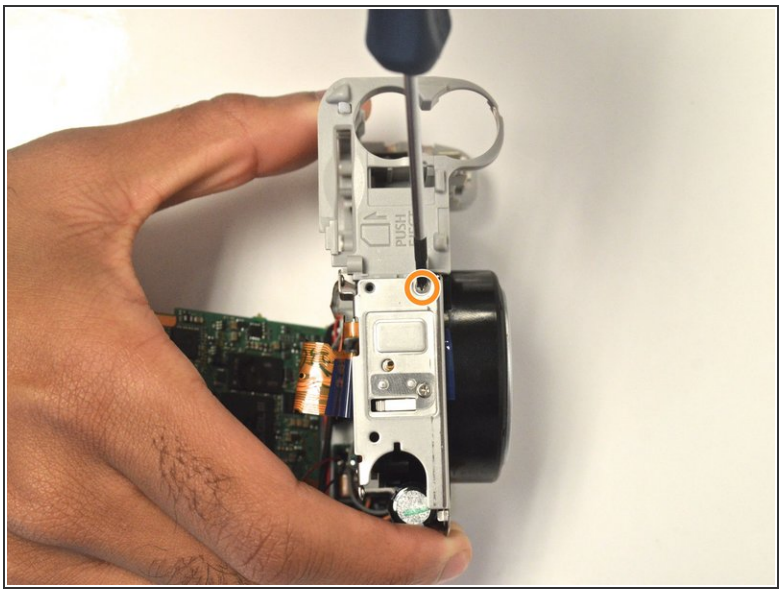
Step 16





- With the lens facing up, remove the 3 mm screw that attaches the bottom of the battery housing unit to the lens using a Phillips #00 screwdriver.
- Turn the camera over so the bottom is now facing up.
- Remove the 3 mm screw to disassemble the battery housing unit from the camera using a Phillips #00 screwdriver.

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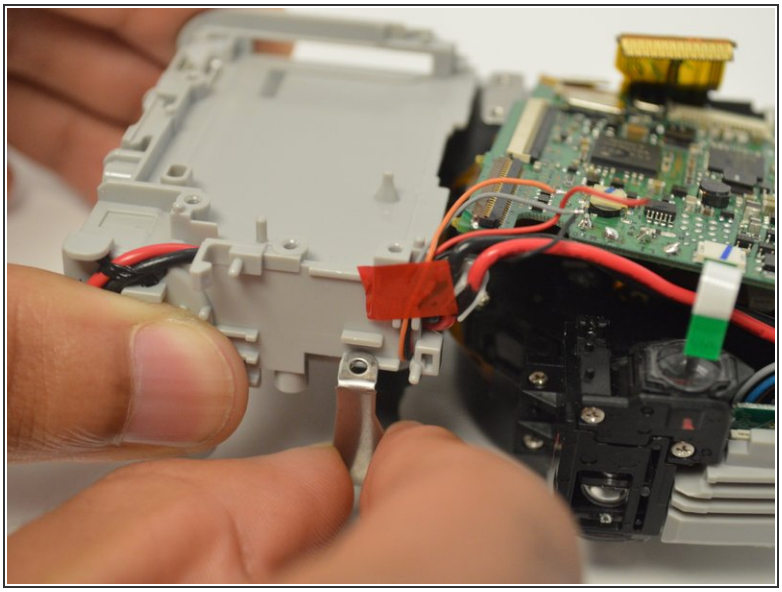
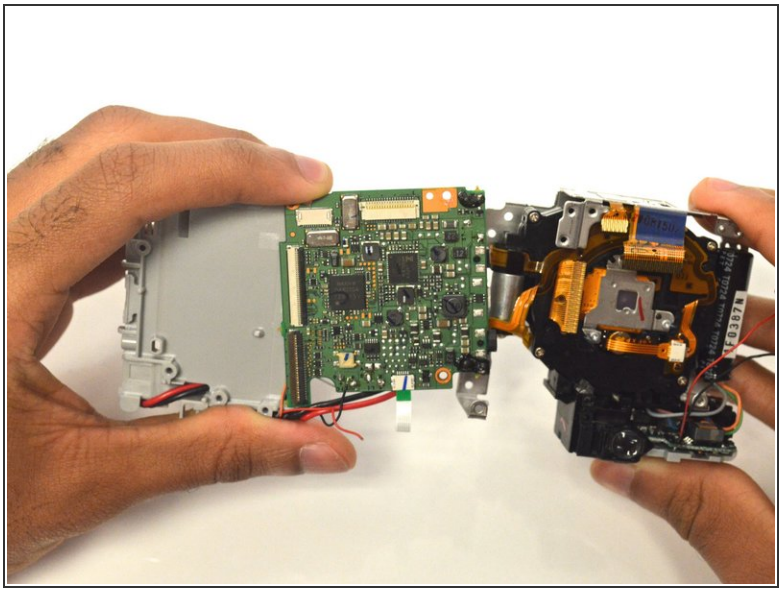
Step 17





- Remove the metal frame from battery housing unit.
- Separate the lens from the body, being careful to keep all of the parts together. Set aside in a safe location.

Take a picture of how the lens is attached to the rest of the camera so that it is easy to put back on when re-assembling the camera.

Be careful not to apply too much force when pulling apart the metal frame. You may cause damage to nearby wires and/or stretch the metal frame.

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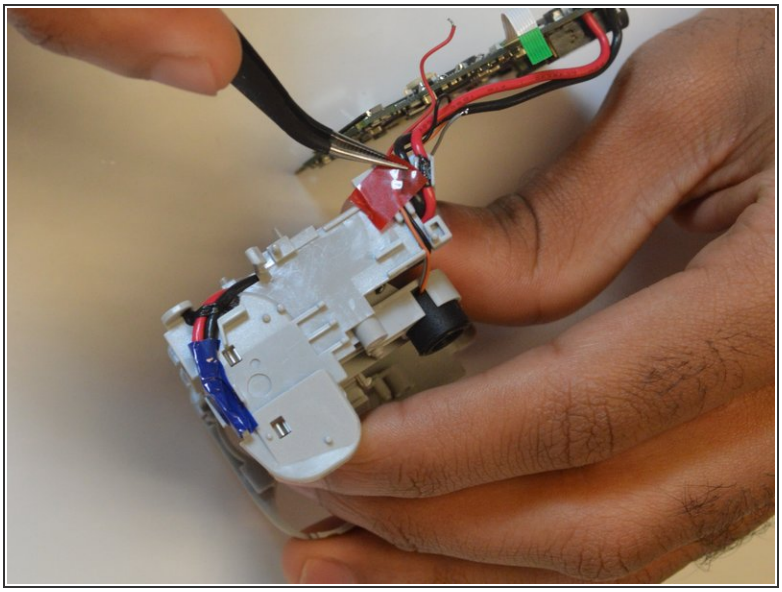
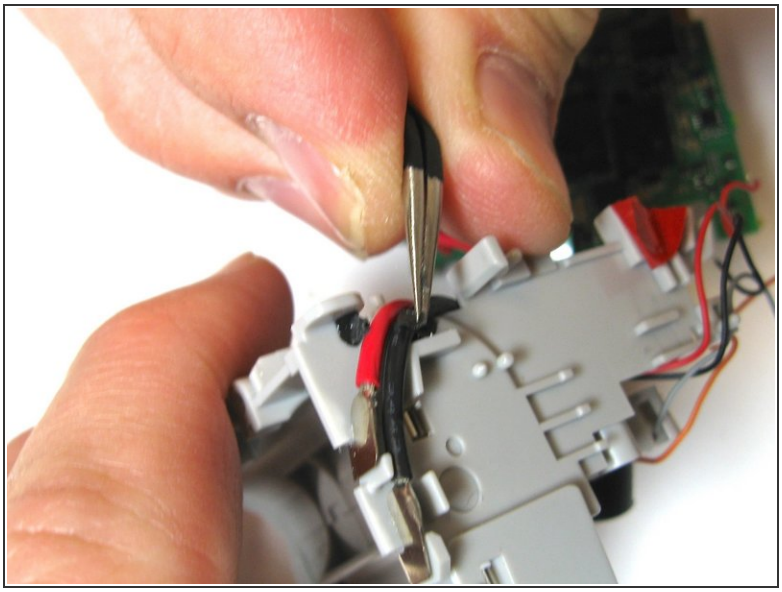
Step 18

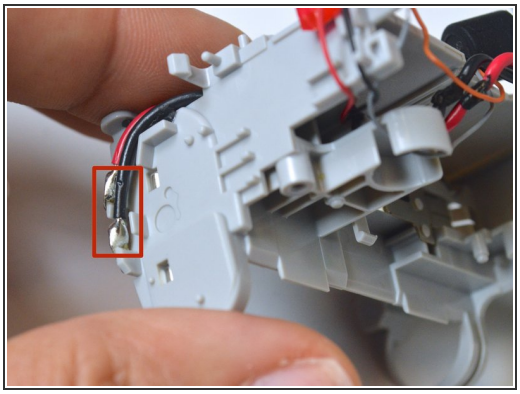


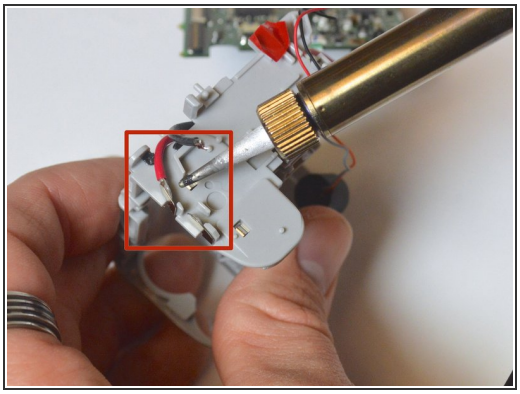


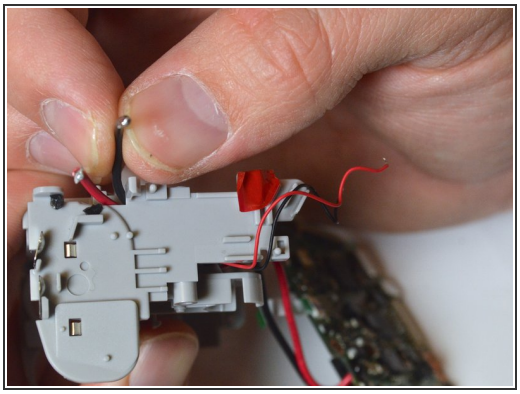
- Use the tweezers to remove the red tape and rubber strap to begin removing the wires from the plastic hooks.

⚠ Be very careful when removing the wires; too much force can cause damage to the wires or the plastic hooks.

Step 19







- Use the soldering iron to remove the red and black wires from the battery contacts.

Be aware of the placement of the red and black power wires during re-assembly. Misplacement can cause damage to the camera.

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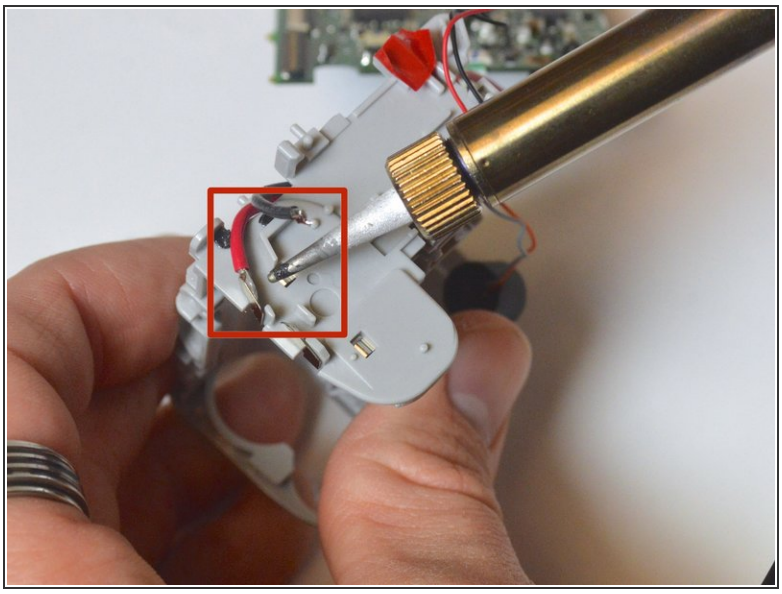
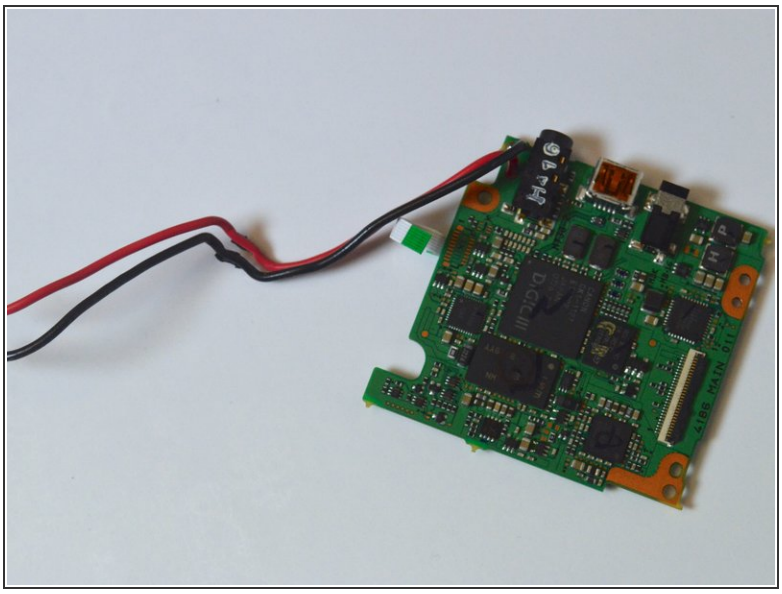
Step 20





- Use the soldering iron to melt the wire contact points and detach the motherboard.

⚠ Set aside in a place for later disposal and reference when re-assembling the camera.

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

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