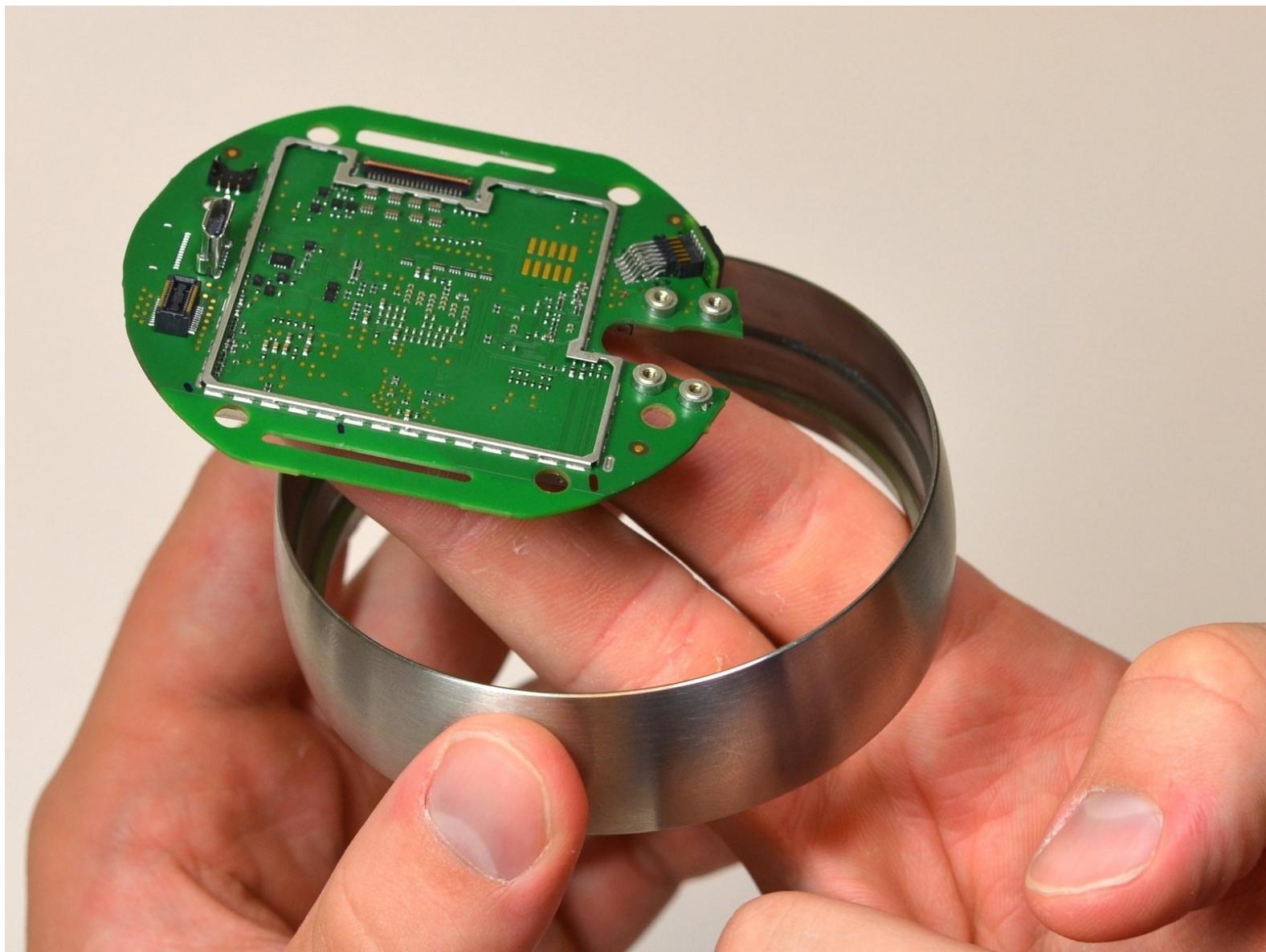




Nest Learning Thermostat 2nd Generation Motherboard Replacement

In this guide, you will learn how to access, remove, and replace the motherboard inside the main unit of the Nest Learning Thermostat.

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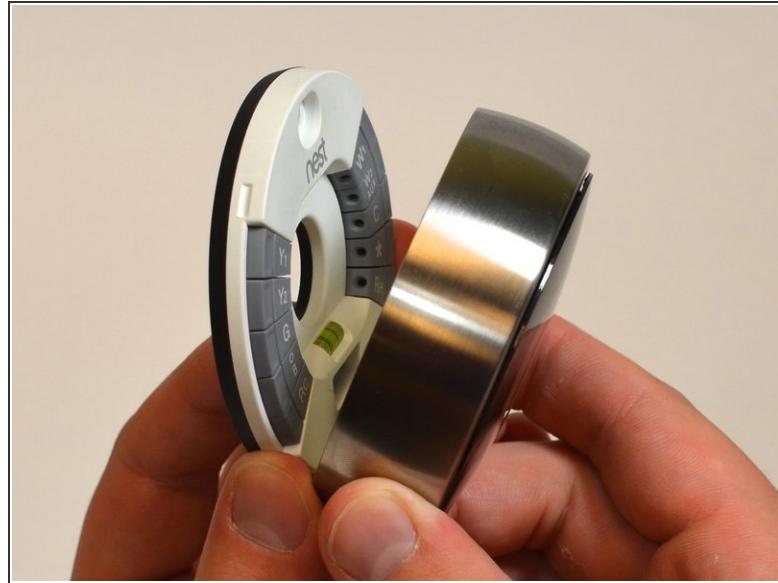
INTRODUCTION

Replacing the main motherboard in the display is not difficult as long as the prerequisite guides are followed. The tools needed access the motherboard are a #0 Phillips Screwdriver, tweezers, and the plastic opening tools.

TOOLS:

- [Phillips #0 Screwdriver \(1\)](#)
- [Tweezers \(1\)](#)
- [iFixit Opening Tools \(1\)](#)

Step 1 — Removal from Wall



- Grasp the display's metal outer ring with your fingers and pull directly away from the wall.

Step 2 — Open Display



- Turn the display over.
- Remove the four 6 mm screws from the back of the display using a Phillips #0 screwdriver.

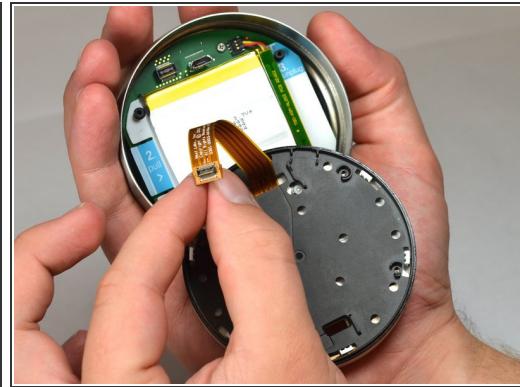
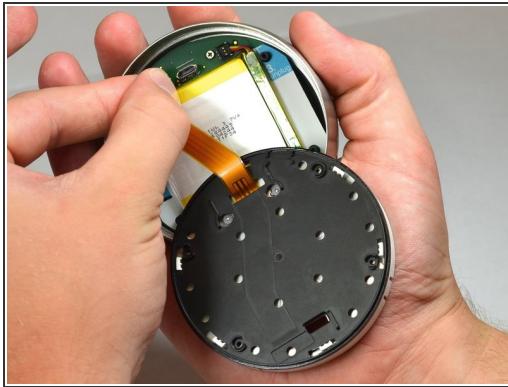
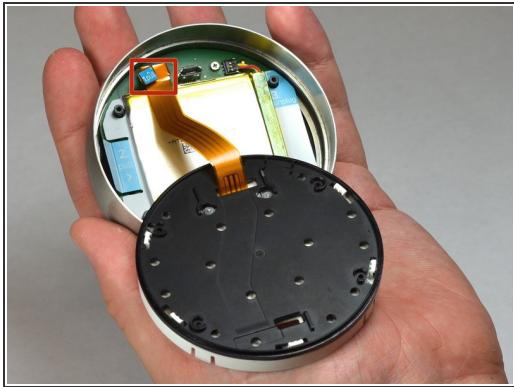
Step 3 — Remove the back of the display



- Pinch the gray 20-pin connector with your fingers and pull directly away from the display.

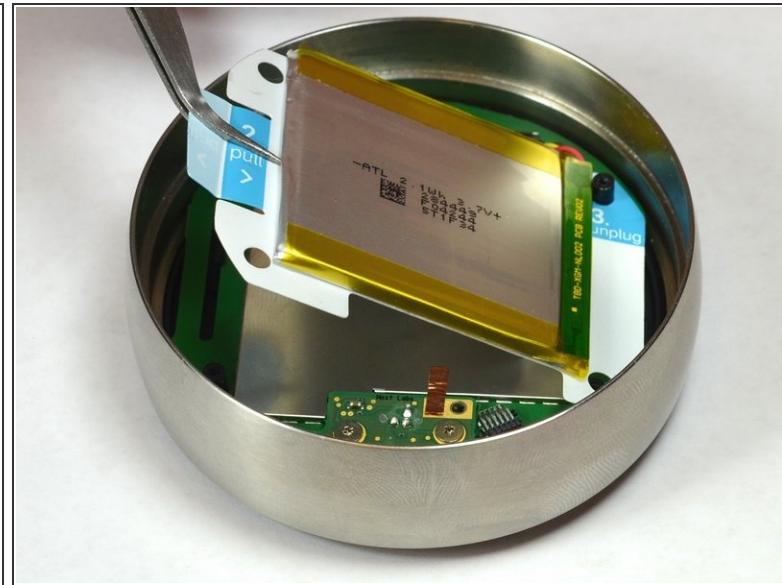
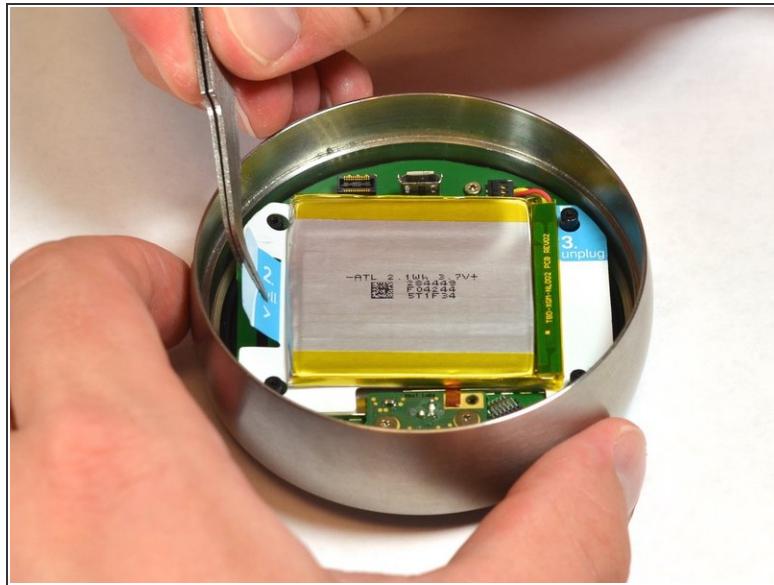
 Do NOT pull too far as there is a ribbon on the back panel connecting the 20-pin connector to the display.

Step 4 — Disconnect the base connection ribbon cable.



- Locate the blue pull tab at the end of the ribbon which says, "1. Pull".
- Grasp the tab with your fingers and pull directly away from the motherboard.

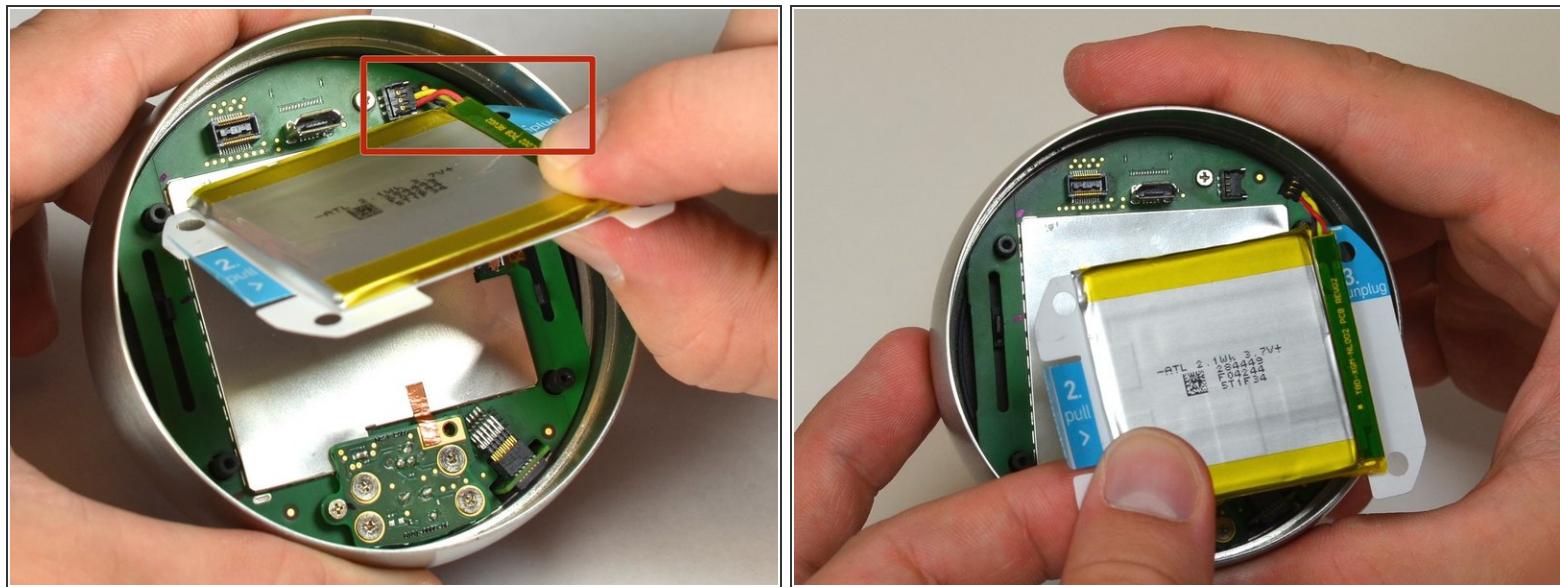
Step 5 — Lift battery from the base



- Locate the blue tab which says, "2. Pull".
- Use tweezers to pull the battery up and away from the display.

! Do NOT pull too far, as the battery is still connected to the motherboard and must be unplugged.

Step 6 — Disconnect the battery from the motherboard



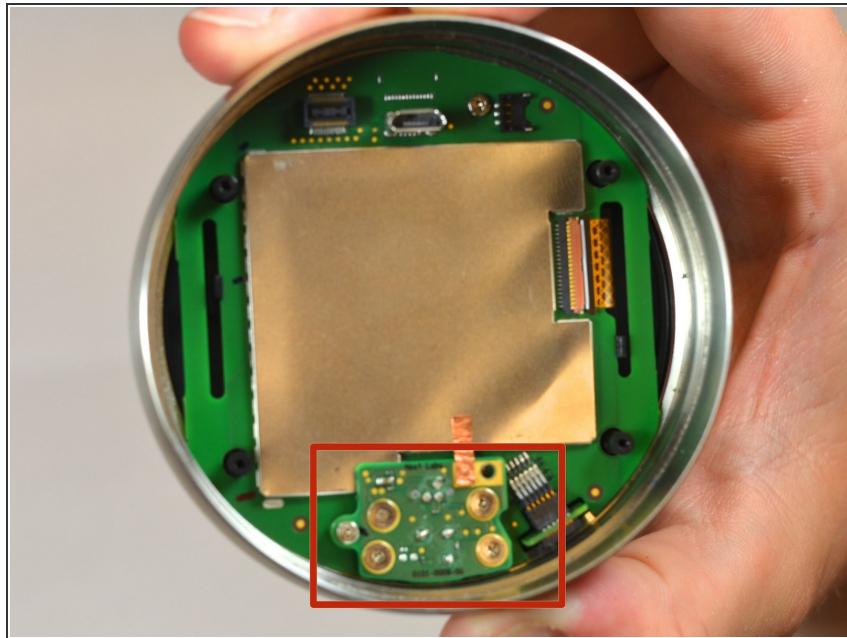
- Locate the blue tab which says "3 unplug".
- Grasp the battery with your fingers. Pull gently directly away from the display to unplug the battery from the motherboard.

Step 7 — Remove battery from the display



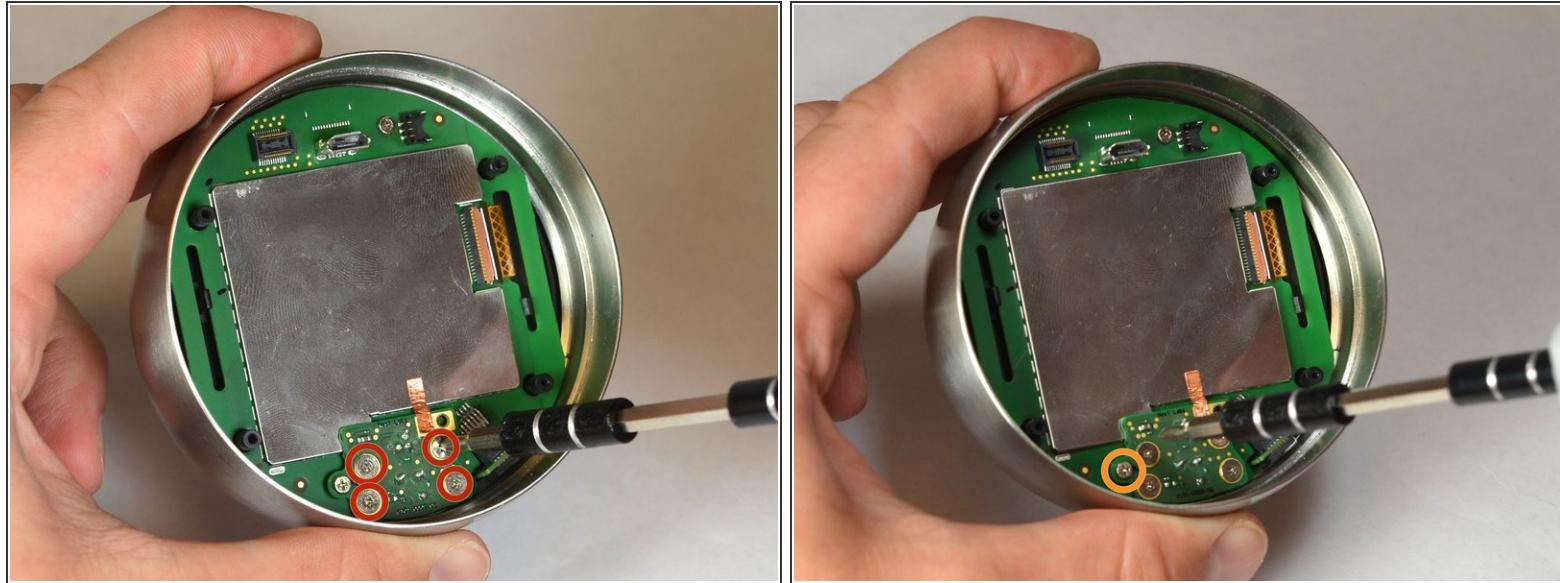
- Grasp the battery with your fingers and pull directly away from motherboard to separate the battery from the display.

Step 8 — Locate auto-away sensor



- Locate the auto-away sensor.

Step 9 — Remove screws



- Remove the four 3mm screws with a #0 Phillips screwdriver.
- Remove the one 4mm screw located at the edge of the auto-away sensor. Use a #0 Phillips screwdriver.

Step 10 — Remove auto-away sensor



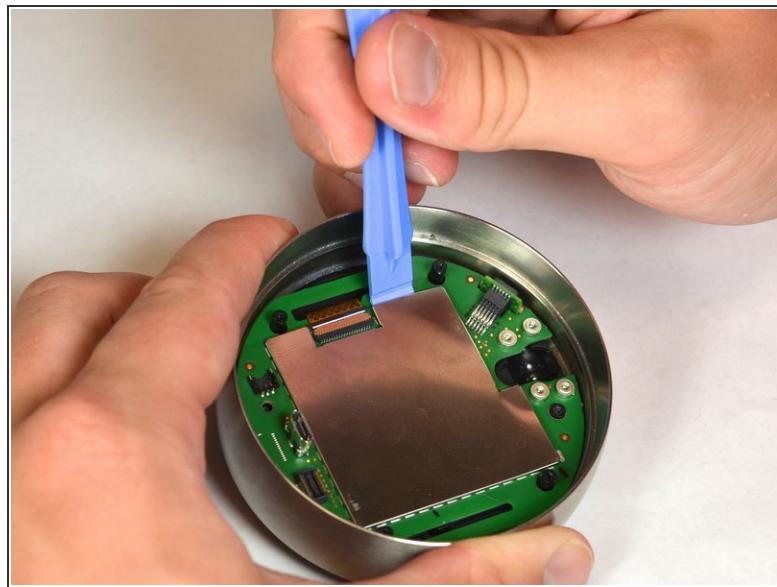
- Lift the auto-away sensor from motherboard using tweezers.
- Peel the copper foil gently from the EMI shield.

Step 11 — Remove screw from motherboard



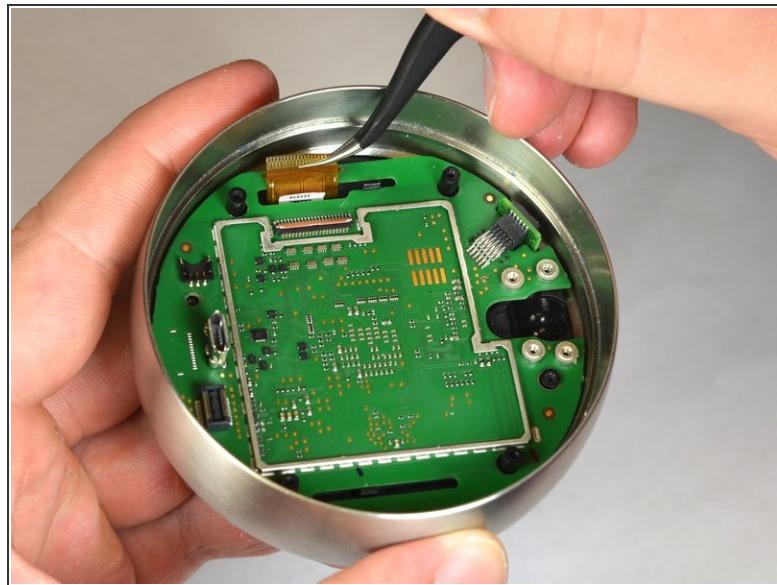
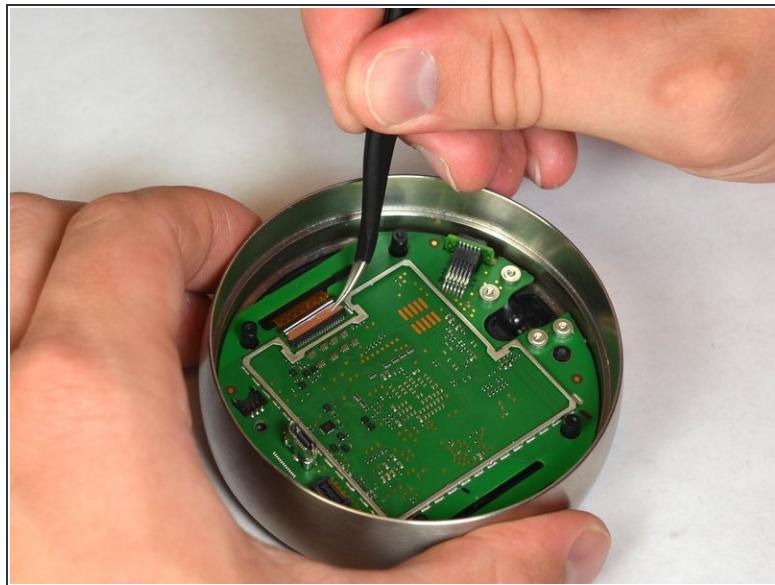
- Remove the 4 mm screw from the motherboard using a #0 Phillips screwdriver.

Step 12 — Removal of EMI Shield



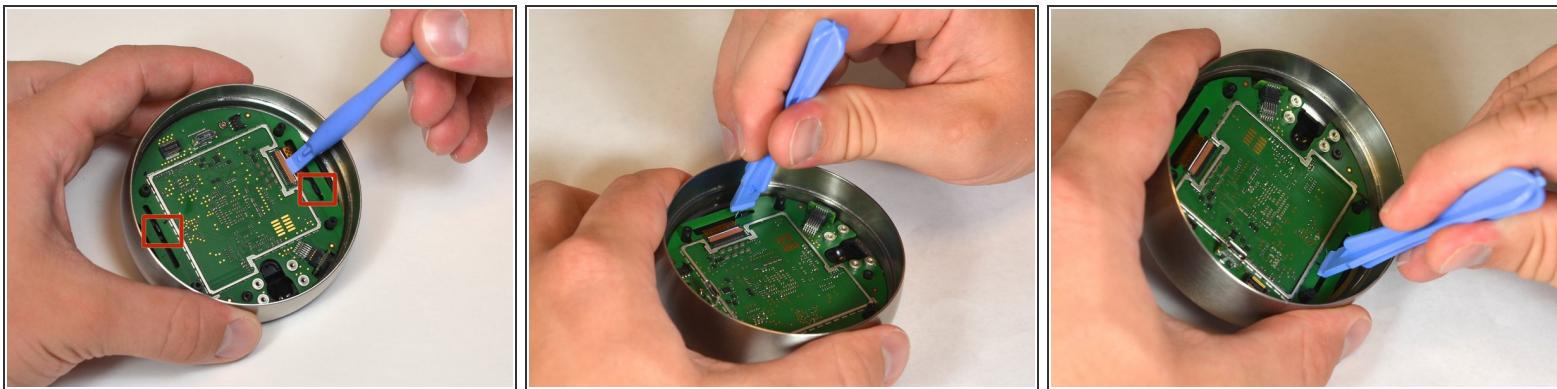
- Remove the EMI shield from the motherboard using a plastic opening tool.

Step 13 — Disconnect the LCD ribbon



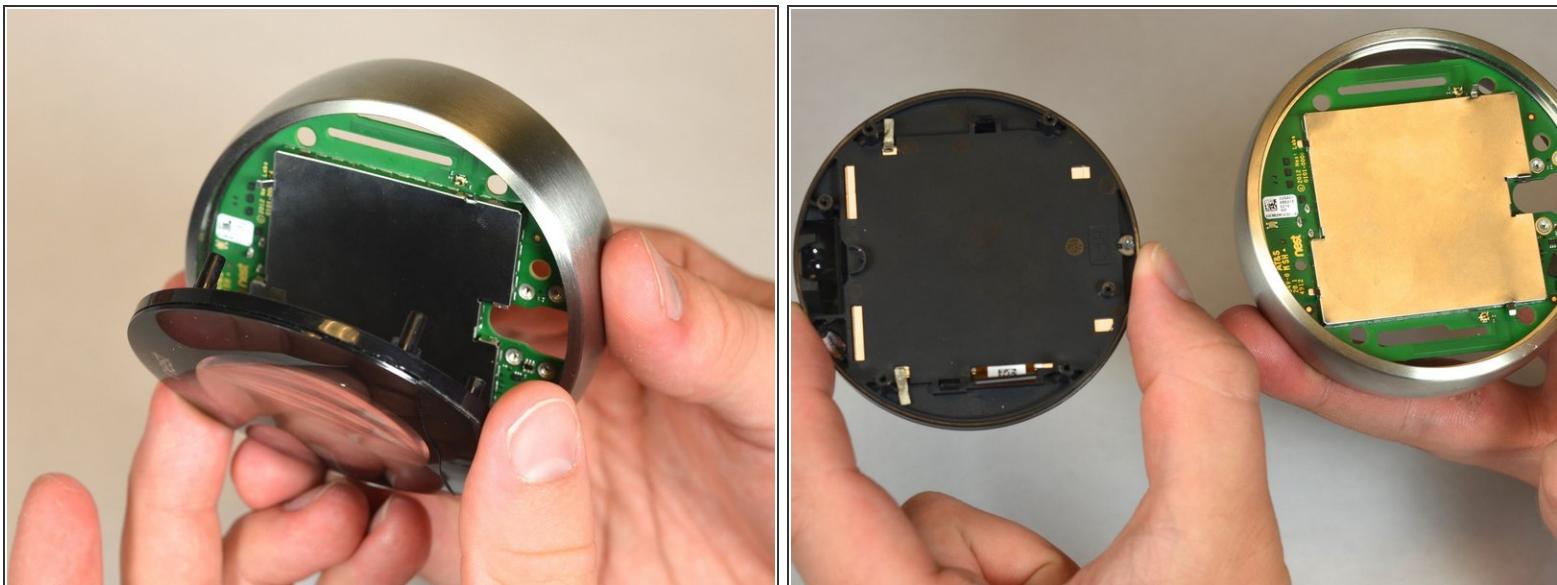
- Unsnap the LCD ribbon from the motherboard gently using tweezers.

Step 14 — Disconnect the motherboard from the display



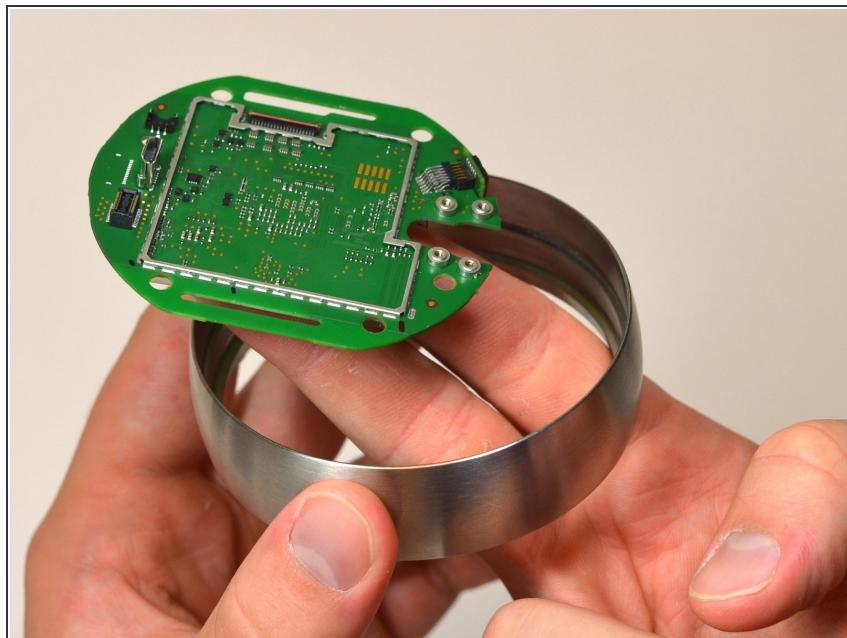
- Locate the black tabs that hold the display to the motherboard.
- Push the black tabs gently away from the motherboard using the plastic opening tools.

Step 15 — Separate the motherboard and the display



- Pull the face display gently away from the motherboard.

Step 16 — Separate motherboard from steel ring



- Using one hand to hold the steel ring, carefully lift the motherboard out of the ring using the other hand.

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