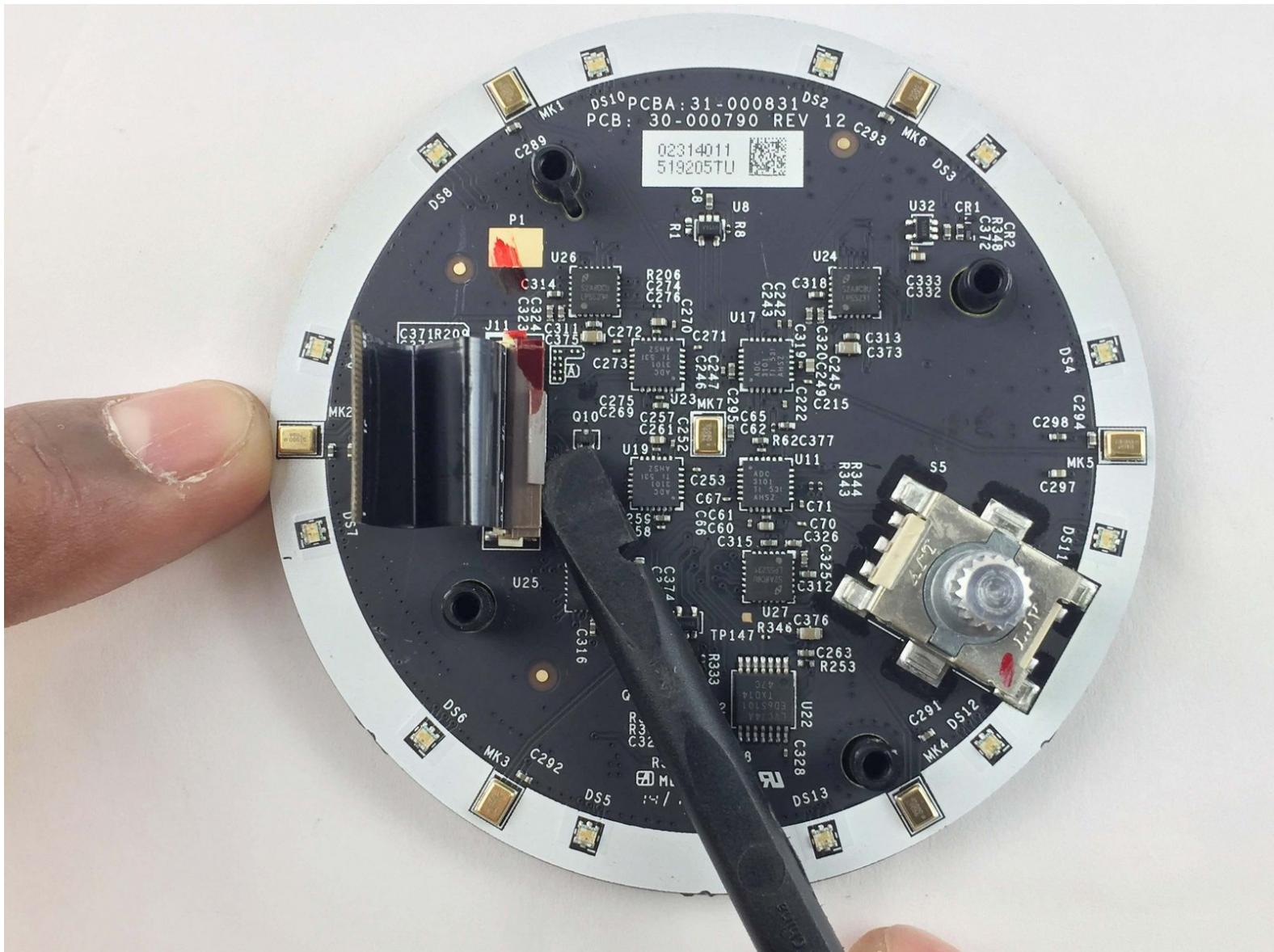




Amazon Echo LED/Microphone Board Replacement

Replace the circuit board that controls the LED ring and the microphones in the Amazon Echo.

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INTRODUCTION

This guide demonstrates how to remove the LED/Microphone board. This board contains the LED indication ring at the top of the Echo, as well as the seven microphone array. This guide should assist you if the LED ring is malfunctioning or if the Echo has issues hearing you.

TOOLS:

- [Heavy-Duty Spudger](#) (1)
 - [T10 Torx Screwdriver](#) (1)
 - [T9 Torx Screwdriver](#) (1)
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Step 1 — Power and Speaker Driver Board

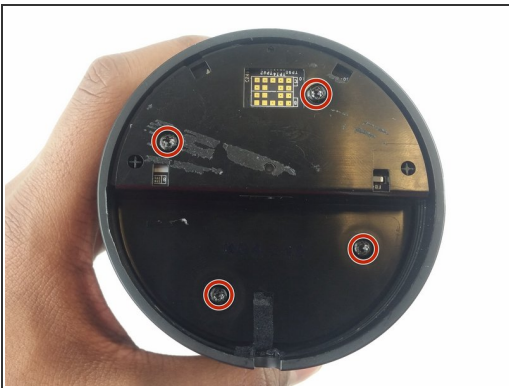


⚠ Power off and unplug your Echo before disassembly. Failure to do so could result in injury or damage to the device.

- Peel off the rubber footing from the bottom of the Echo.

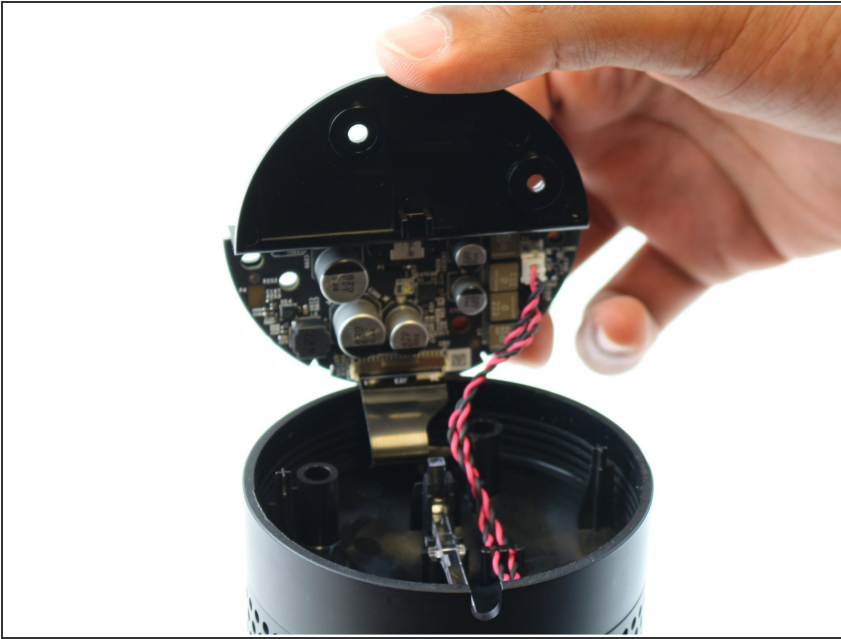
⚠ Do not pull the rubber footing too hard, as it could stretch out of shape. Use a spudger to help remove the foot if you have any trouble.

Step 2



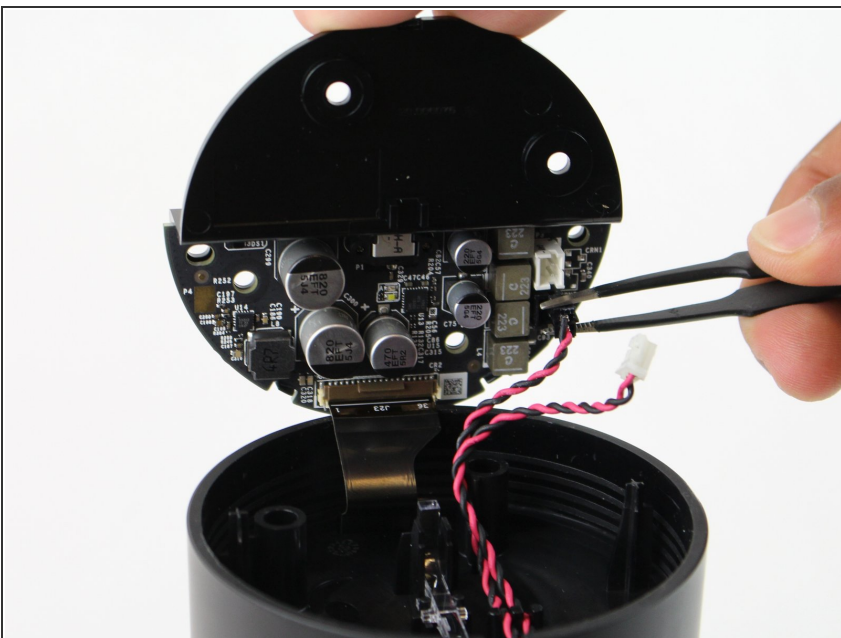
- Remove the four 42.8 mm T10 Torx screws from the bottom of the Echo.

Step 3



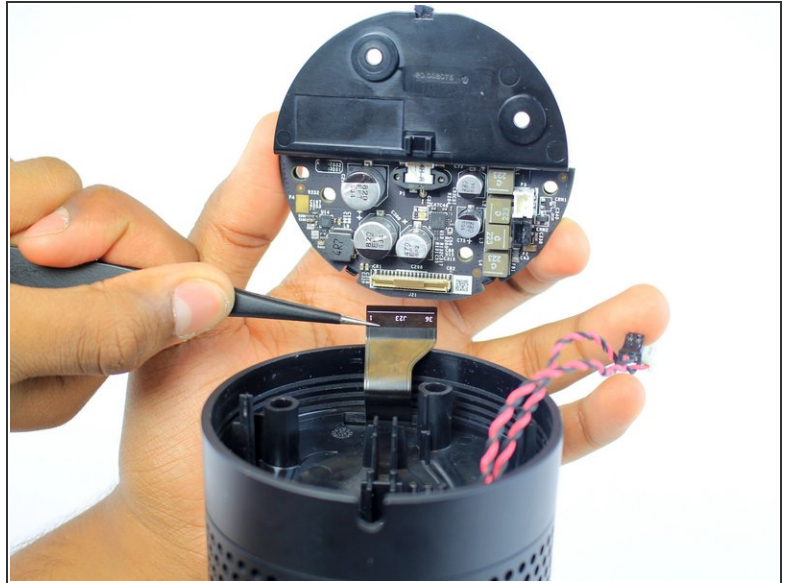
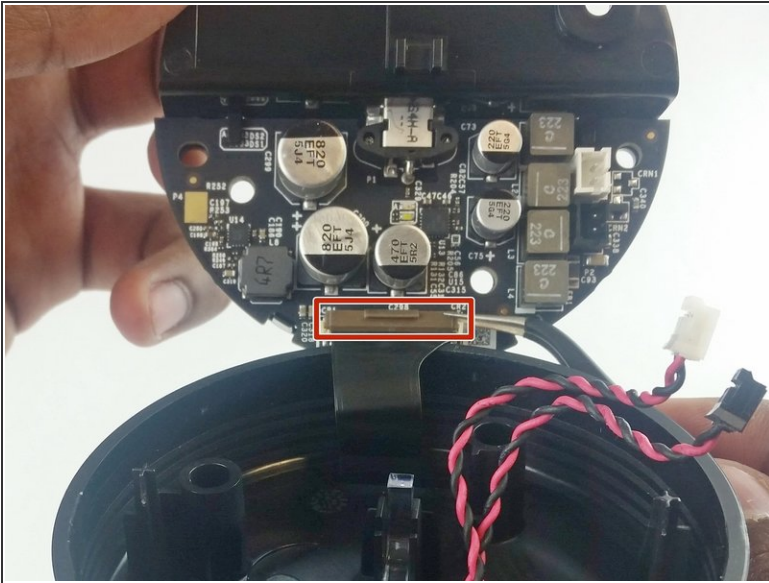
- Slowly lift the plate containing the board. Be careful not to disconnect any of the wires.

Step 4



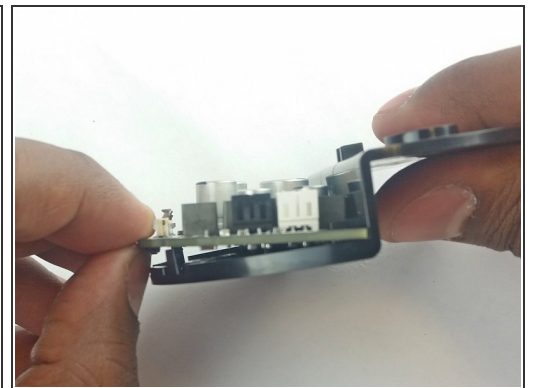
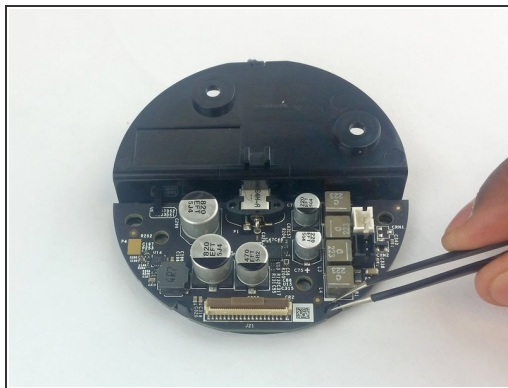
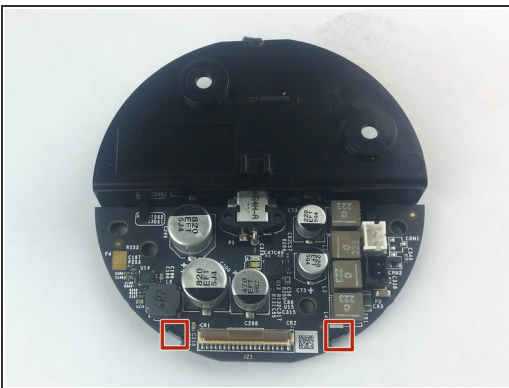
- Using tweezers, carefully disconnect the two red and black cables from their sockets on the board.
- ⚠ Tugging on the wires may damage the device. Pull from the plastic connectors instead.

Step 5



- Lift the brown plastic latch on the ZIF connector securing the driver board ribbon cable.
- Pull the ribbon cable from its connector. The plate and board should now be free from the Echo.

Step 6



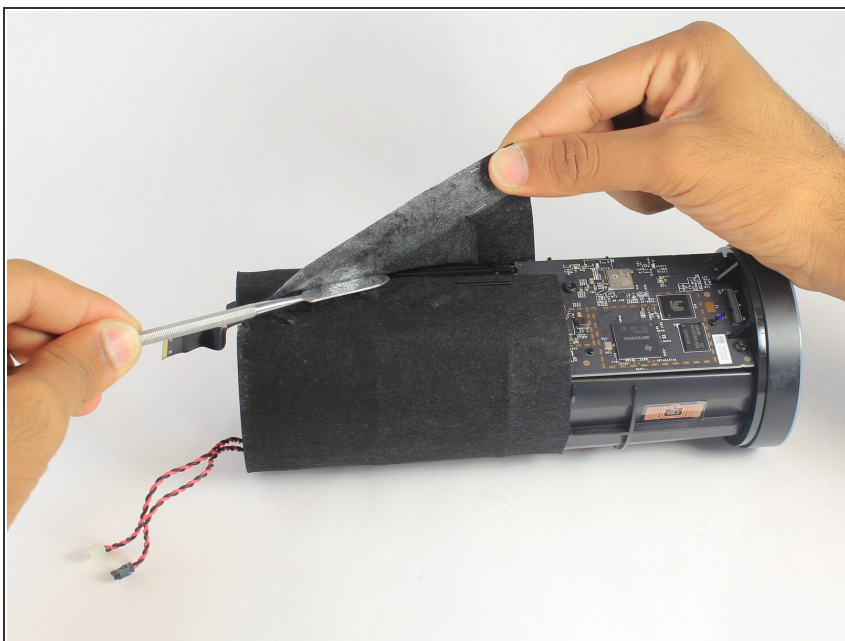
- Using the spudger, pull back the two plastic clips on the plate.
- Lift the board up and pull it away from the plate.

Step 7 — Motherboard



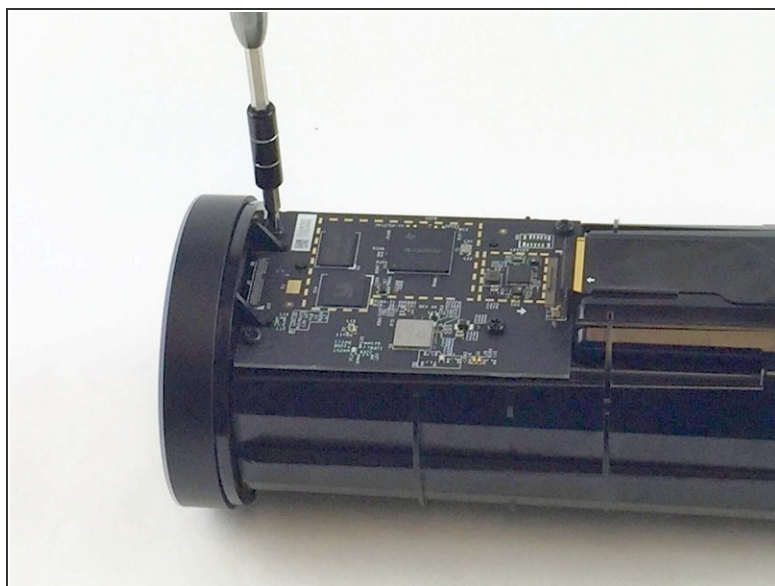
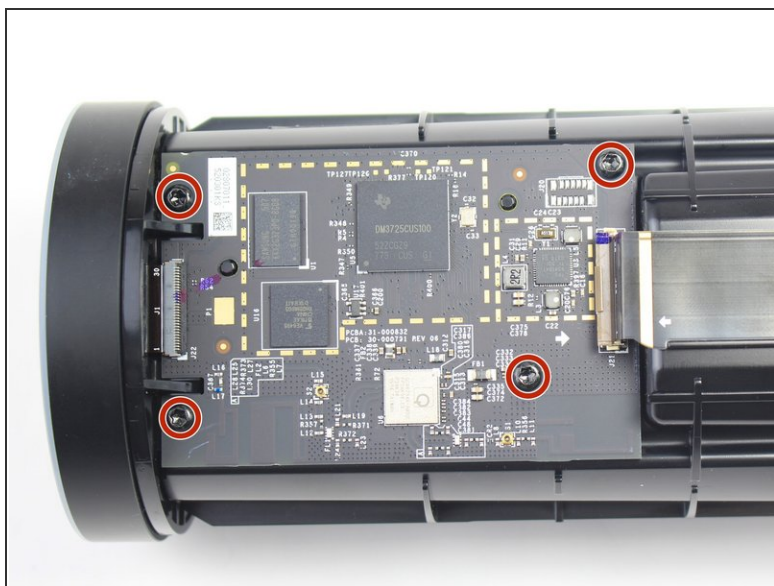
- Remove the plastic plate from the bottom of the device. Then remove the plastic shrouding.

Step 8



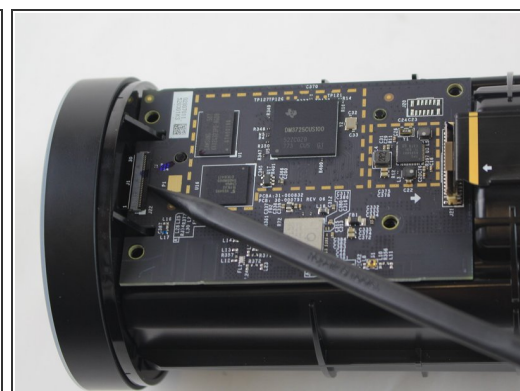
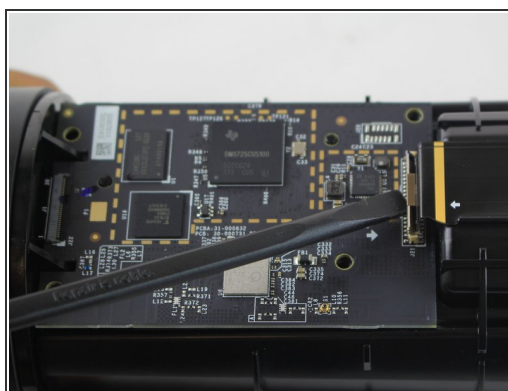
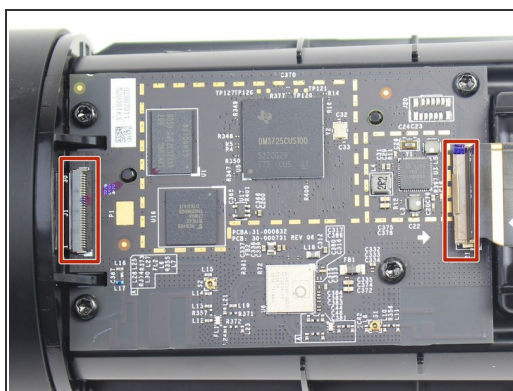
- Peel off the black fabric wrapped around the device.
 - ⚠ Be careful not to rip the fabric. Use a spudger to help remove the adhesive if you have any trouble.

Step 9



- Remove the four 9.7 mm T10 screws.

Step 10



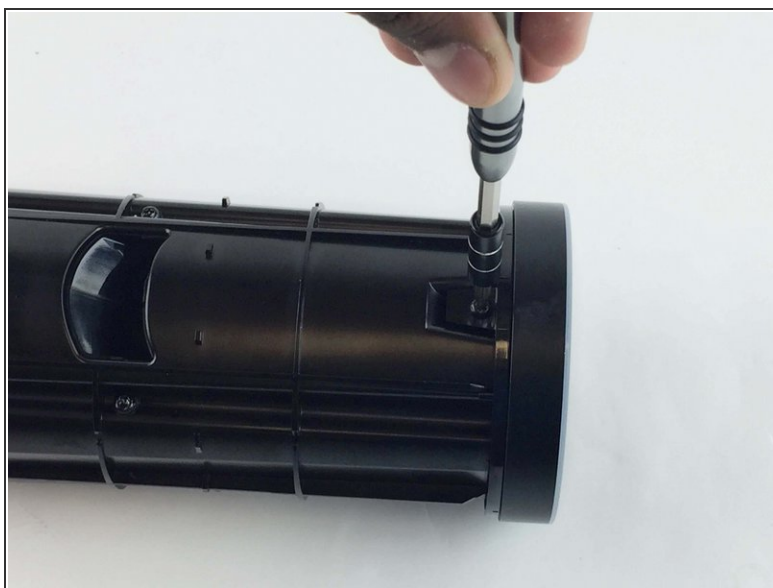
- Lift the brown and black plastic latches securing the ZIF connectors at each end of the motherboard.
- Pull the two ribbon cables from their connectors on the motherboard.

Step 11



- Lift the motherboard up from the Echo.

Step 12 — LED/Microphone Board



- Remove the 9.7 mm T10 Torx screw from the opposite side of the Echo.

Step 13



- Unclip and remove the top volume ring assembly from the Echo.

Step 14



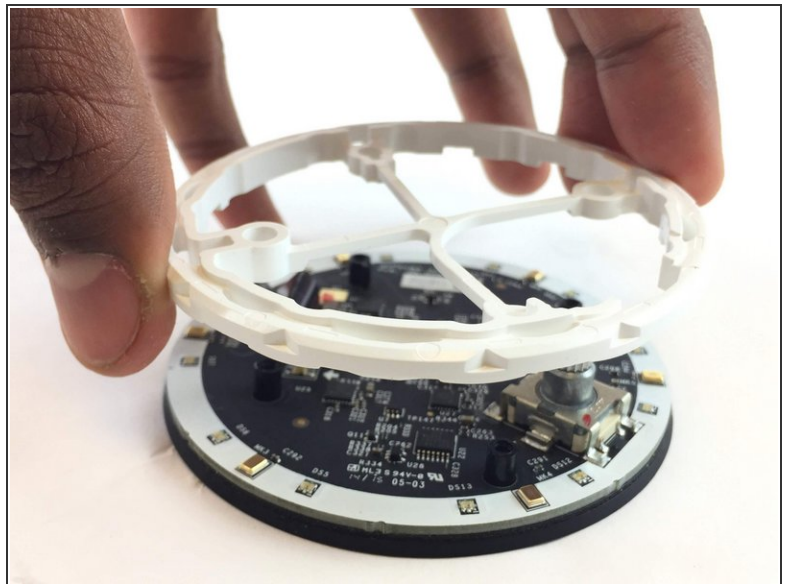
- Unscrew the four 9.7 mm T9 torx screws from the bottom of the volume ring assembly.

Step 15



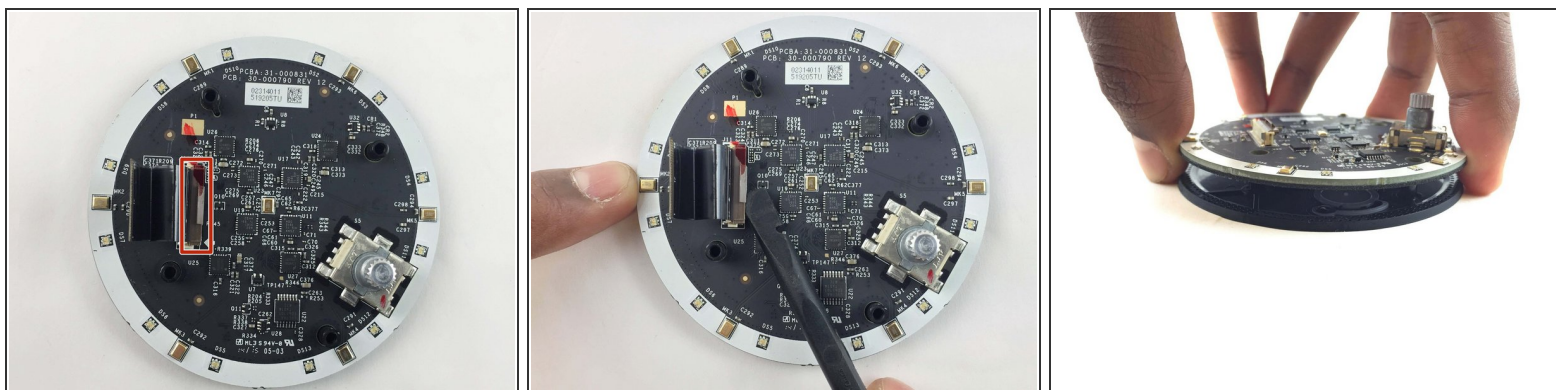
- Turn the assembly over and lift up the plate with the buttons.

Step 16



- Turn the plate over, then lift and remove black gear and the white plastic ring.

Step 17



- Remove the ribbon cable by lifting the brown latch on the ZIF connector.
- Lift the LED/Microphone board from the plate.

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