



# Retina MacBook 2016 Dual Microphone Assembly Replacement

Use this guide to replace the dual microphone...

Written By: Adam O'Camb



## INTRODUCTION

Use this guide to replace the dual microphone assembly in your Retina MacBook 2016.

### TOOLS:

Battery Blocker (1)

P5 Pentalobe Screwdriver Retina MacBook Pro and Air (1)

Spudger (1)

T5 Torx Screwdriver (1)

Tweezers (1)

iOpener (1)

Probe and Pick Set (1)

Phillips #00 Screwdriver (1)

### Step 1 — Unfasten the lower case



 Before proceeding, unplug and power down your MacBook. Close the display and lay it on a soft surface, top-side down.

- Remove the following eight screws securing the lower case:
  - Two 1.8 mm P5 Pentalobe screws
  - Four 2.9 mm P5 Pentalobe screws
  - Two 6.1 mm P5 Pentalobe screws
- ☞ Note the orientation of the screws as you remove them—they need to be reinstalled at a slight angle.
- ☞ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your device.

## Step 2



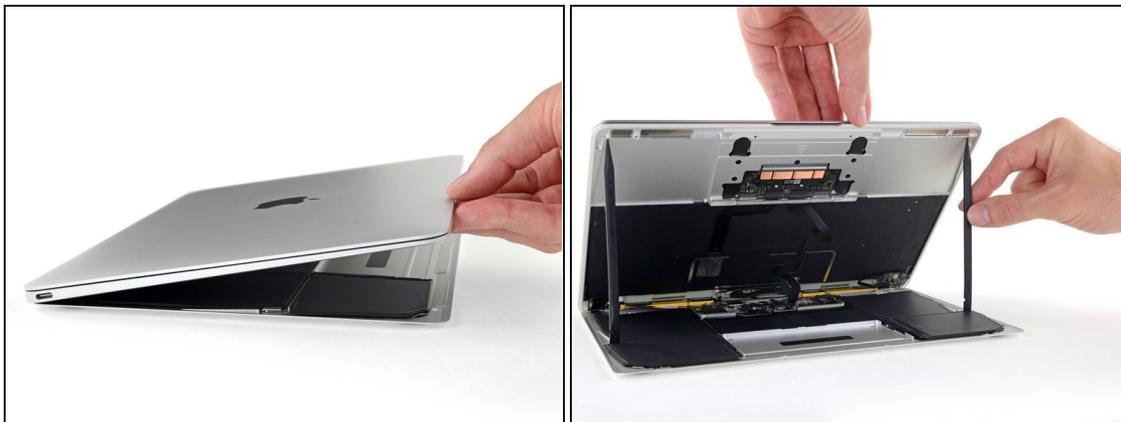
- Wedge your fingers between the upper case and the lower case, starting from the rear of the MacBook between the hinges.
- ⚠ Lift the lower case only slightly to avoid damaging the cables that connect the lower case to the upper case.**
- Keeping a firm grip, lift steadily until the lower case separates slightly from the upper case.
  - ⓘ You may experience a lot of resistance when lifting the lower case. If necessary, slide an opening pick or other ESD-safe pry tool down the side edges of the lower case to pop the two hidden retaining clips free.
  - ✦ During reassembly, to re-engage the clips, press firmly near both side edges of the lower case (near where the pick is inserted in the third image) until you hear the clips snap into place.

## Step 3



- While holding the lower case in place, carefully flip the MacBook over so the Apple logo faces up.

## Step 4



- Lift the upper case and display together from the front edge and raise it to about a 45° angle.

 It may be helpful to prop the MacBook open in this position for the next step.

## Step 5



- Use the flat end of a spudger to press and hold the small gold 'battery disconnect' button.
  - If the power LED is lit up, continue holding the button until the LED goes dark, and then release. This may take up to 10 seconds.
  - If the LED does not light, release the button after 5-10 seconds. Press and hold it again for 5-10 seconds, and release. Finally, press and hold it a third time for 5-10 seconds, and release.

 This step ensures the MacBook is fully powered down and safe to work on.

## Step 6



- Close the MacBook and carefully flip it upside-down.

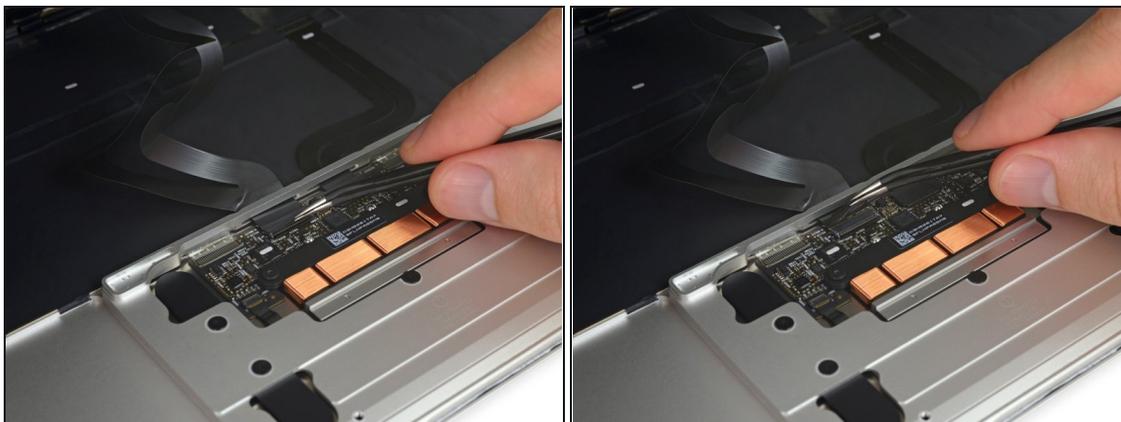
## Step 7



- Lifting from the front edge, open the lower case to an angle of about 45°.

⚠ Take care not to damage the ribbon cables that still attach the lower case to the MacBook.

## Step 8



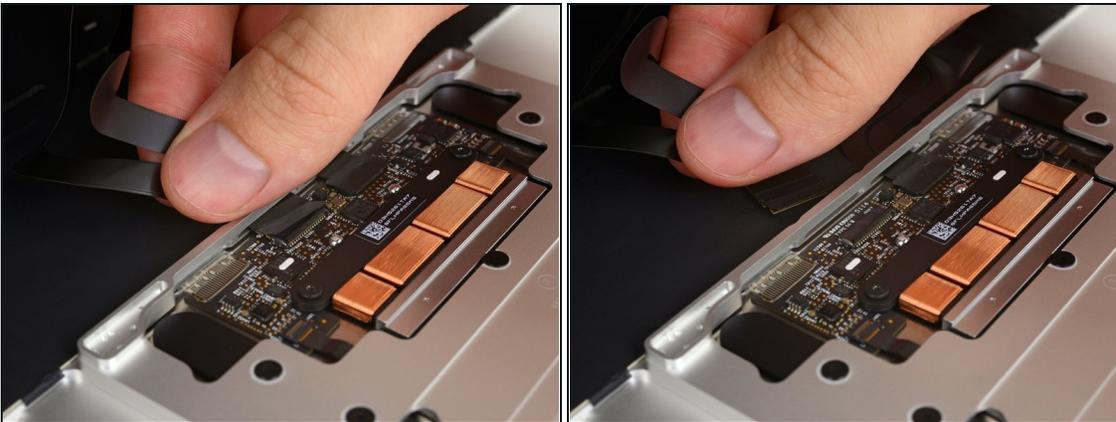
- Use tweezers to peel back the tape covering the trackpad cable ZIF connector.

## Step 9



- Use a spudger to carefully flip up the retaining flap on the trackpad cable [ZIF connector](#).

## Step 10



- Disconnect the trackpad ribbon cable from the trackpad by pulling it gently through its slot in the frame.

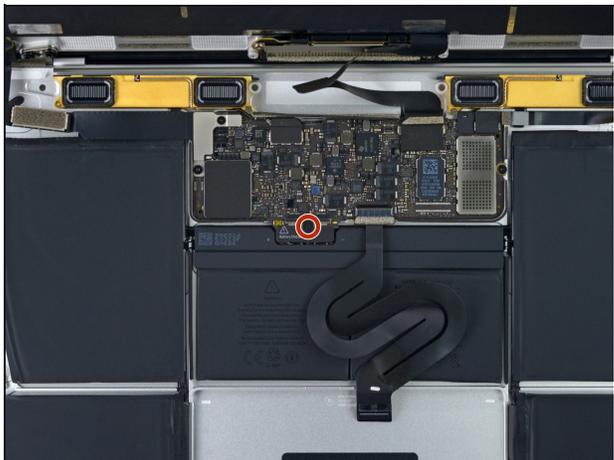
## Step 11



- Carefully close the MacBook and flip it over once again, so that the Apple logo faces up.
- Lifting from the front edge, raise the upper case/display assembly to about a 90° angle, and prop it up against something sturdy so you don't have to hold it.
  - Add a piece of tape near the track pad to secure the upper case and prevent accidental movement.

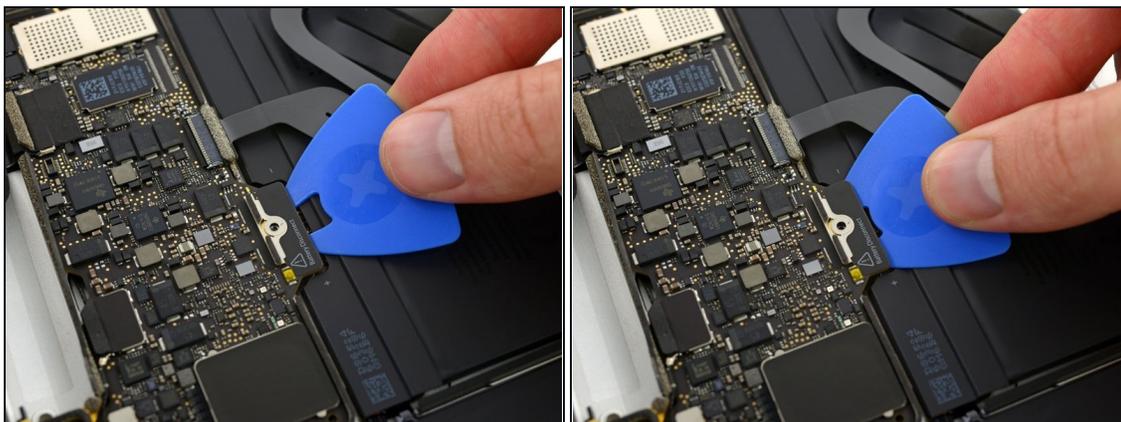
**⚠** It's possible to open the MacBook all the way and lay both sides down flat, but this may damage the flex cables and is not recommended.

## Step 12



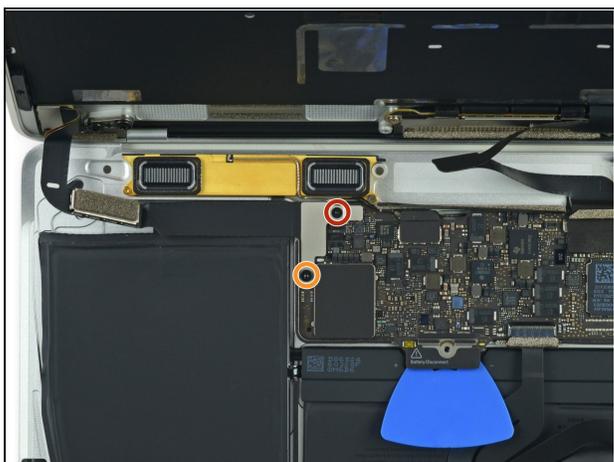
- Remove the single 2.9 mm T5 Torx screw securing the battery connector to the logic board.

## Step 13



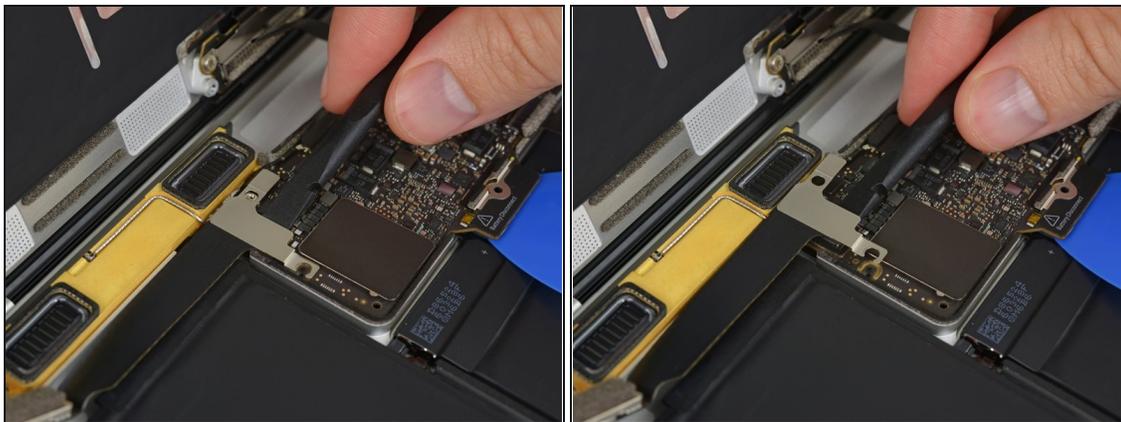
- As an added precaution, you may physically disconnect the battery by inserting a [battery isolation pick](#) between the logic board and the battery connector.

## Step 14 — USB-C and Audio Jack Disconnect



- Remove the two screws securing the USB-C port cable bracket:
  - 1.1 mm Phillips #00 screw
    - ⓘ Some variations of this model may use a Tri-point Y00 screw.
  - 3.5 mm T5 Torx screw

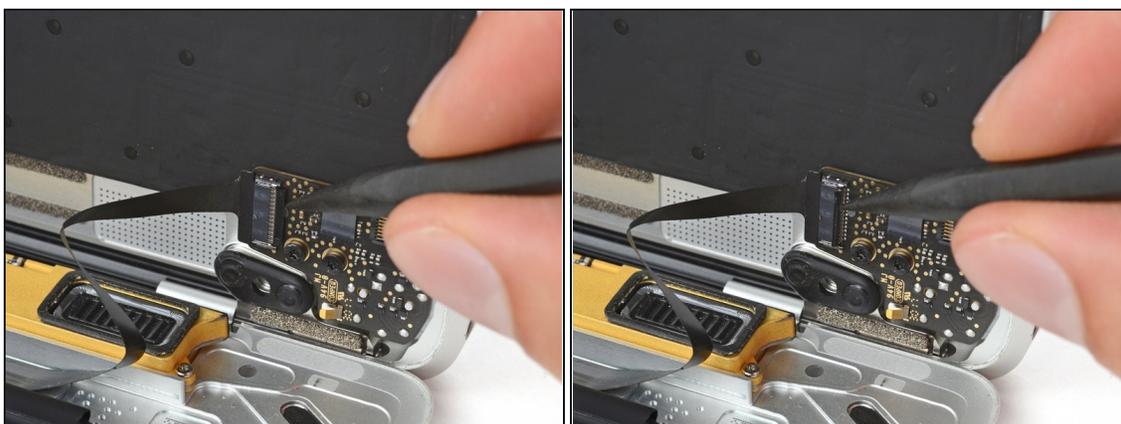
## Step 15



- Use the flat end of a spudger to disconnect the USB-C port cable bracket by prying it straight up from the logic board.

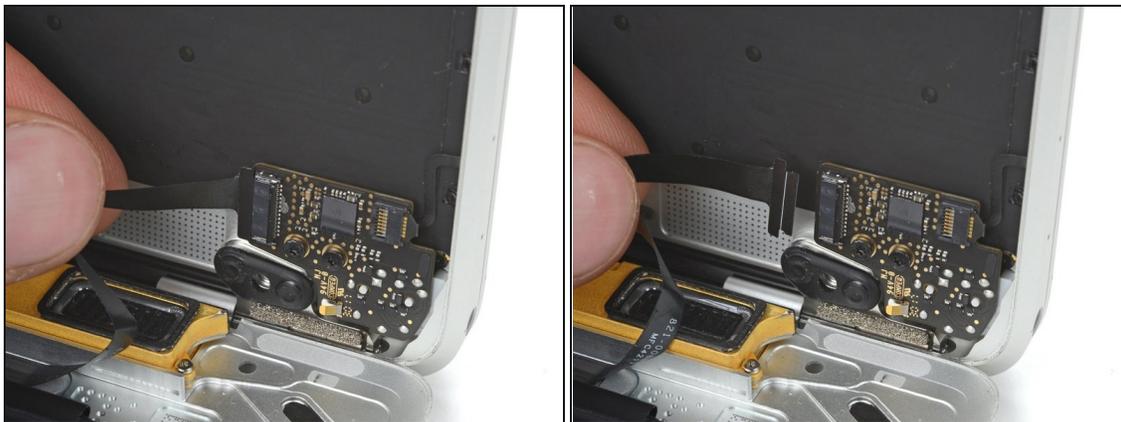
To reconnect this cable, first line up the metal bracket over the screw holes, then press down on the middle of the bracket. Make sure it's aligned correctly, or you may damage the connector.

## Step 16



- Use a spudger to flip open the retaining flap on the audio jack board cable ZIF connector.

## Step 17



- Disconnect the audio jack board ribbon cable by pulling it straight back out of the ZIF connector.
- ✚ During reassembly, orient the ribbon cable so the white stripe faces you. Insert the cable until the white line disappears under the socket.
- ⓘ At this point it is possible to open the macbook all the way and to lay it flat on a table without causing any damage to the flex cables.

## Step 18 — Audio Jack Board



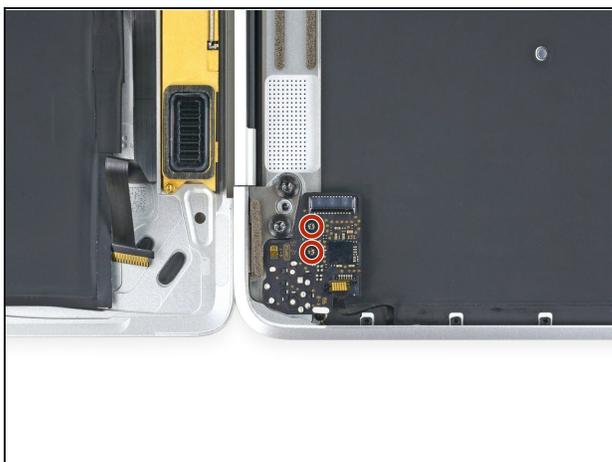
- Use a spudger to flip open the ZIF connector retaining flap for the dual microphone assembly ribbon cable.

## Step 19



- Disconnect the microphone assembly ribbon cable by pulling it straight out of its connector.

## Step 20



- Remove the two 3.2 mm T5 Torx screws securing the audio jack board to the case.

## Step 21



- Remove the audio jack board.

## Step 22 — Dual Microphone Assembly



- [Prepare an iOpener](#) and apply heat to the upper case directly behind the microphone assembly.

## Step 23



- Use a fine-tip probe or pick to gently peel the dual microphone assembly away from the case.

## Step 24



- Remove the dual microphone assembly.

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