



MacBook Air 13" Early 2020 Microphone Array Replacement

Use this guide to replace the microphone array...

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INTRODUCTION

Use this guide to replace the microphone array assembly in an Early 2020 MacBook Air.

To minimize risk of damage, turn on your MacBook and allow the battery to fully discharge before starting this procedure. A charged lithium-ion battery can be very dangerous if accidentally punctured. [If your battery looks puffy or swollen, take extra precautions.](#)

Do not reuse the battery if it is swollen or was deformed in any way during the procedure. The battery is likely damaged and can be very dangerous to reuse—it should be replaced.

This guide involves removing the speakers and battery. You will need new adhesive to properly reinstall the speakers and battery.

TOOLS:


T3 Torx Screwdriver (1)
P5 Pentalobe Screwdriver Retina MacBook Pro and Air (1)
Spudger (1)
Tweezers (1)
T4 Torx Screwdriver (1)
iFixit Opening Picks (Set of 6) (1)

PARTS:

MacBook Air 13" (A2179, A2337 2020)
Microphone (1)
Tesa 61395 Tape (1)

Step 1 — Remove the screws securing the lower case



 Before starting this procedure, you should disable your Mac's **Auto Boot** feature. Auto Boot powers on your Mac when you open the lid, and may be accidentally triggered during disassembly. [Use this guide](#) to disable Auto Boot.

- If your MacBook is running Big Sur v11.1 or later, disabling Auto Boot may not work. You can proceed normally, but make sure to disconnect the battery as soon as you're inside.

⚠ Completely power off and unplug your MacBook Air before you start. Close the display and flip the entire laptop upside-down.

- Use a P5 driver to remove the following screws:

- Two 7.9 mm screws

- Two 7.1 mm screws

- Six 2.6 mm screws

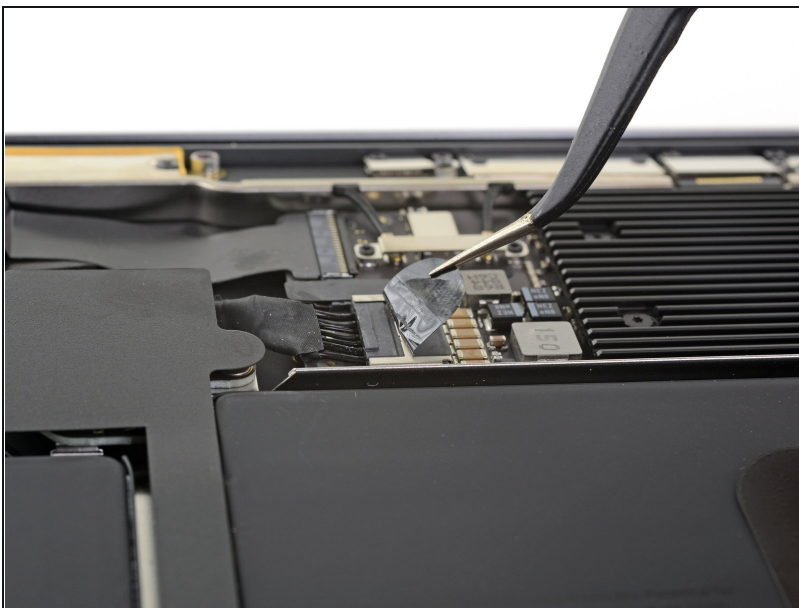
- ① Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your MacBook.

Step 2 — Remove the lower case



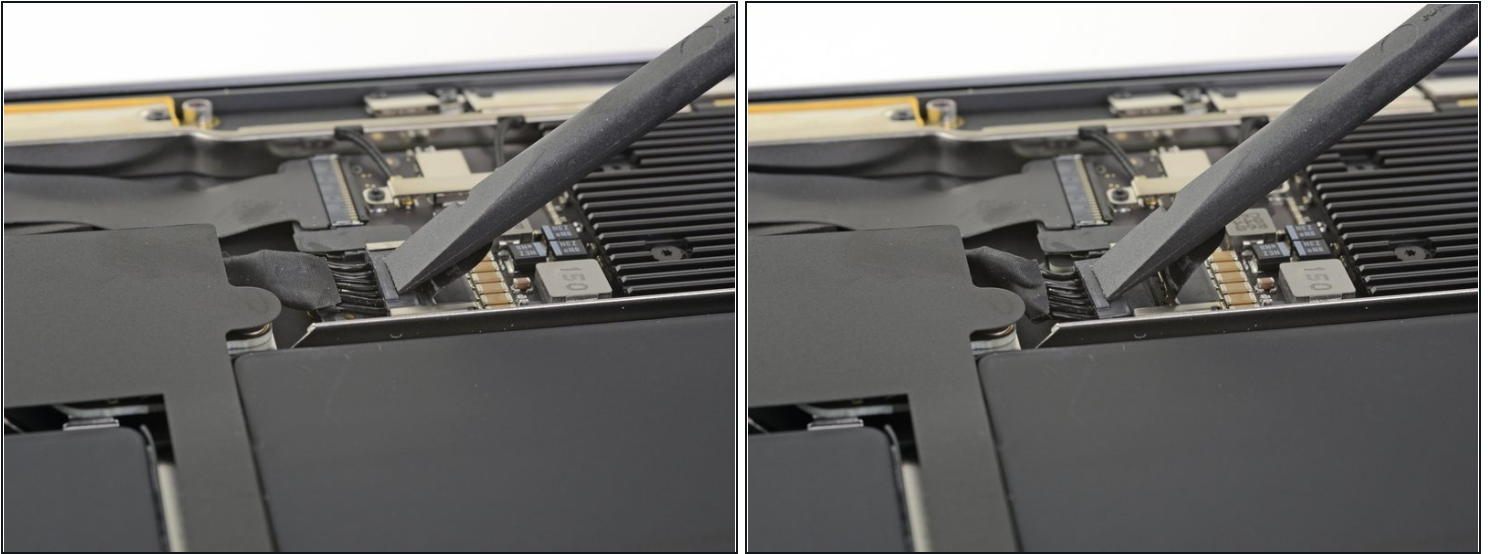
- Wedge your fingers between the display and the lower case and pull upward to pop the lower case off the Air.
 - Remove the lower case.
- ☒ To reinstall the lower case:
- Set it in place and press firmly to engage the two hidden clips underneath. You should feel and hear them snap into place.

Step 3 — Disconnect the battery



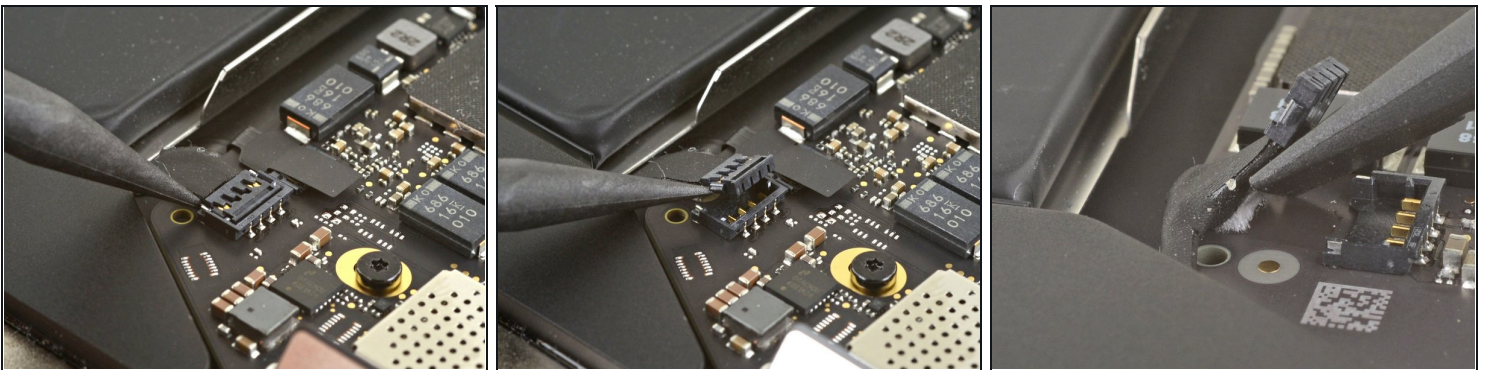
- Peel back the tape covering the battery connector enough to reveal the connector underneath.

Step 4



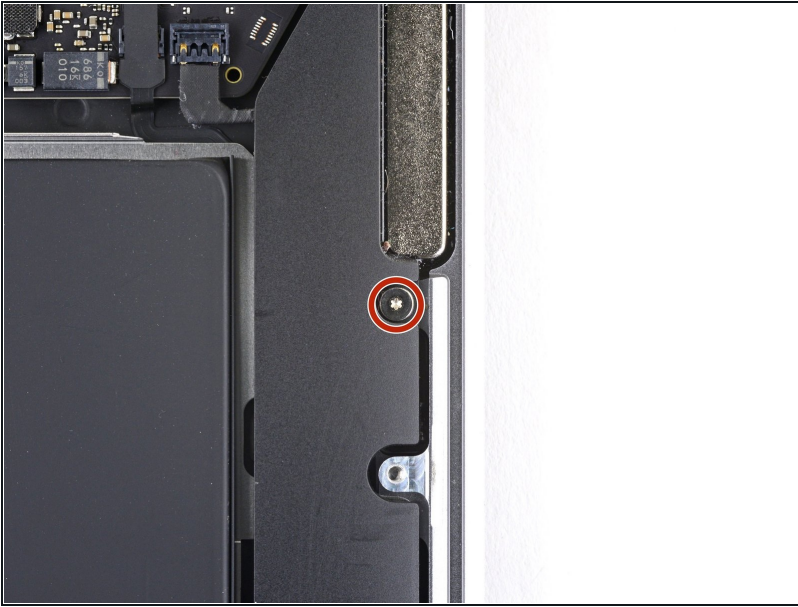
- Use a spudger to slide the battery connector parallel to the logic board and out of its socket on the logic board.

Step 5 — Disconnect the left speaker connector



- ① The **left** speaker will be on your **righthand side** when working on the MacBook, as it's laying upside down.
- Slide the pointed end of a spudger underneath the left speaker cable and pry straight up to disconnect it from the logic board.
- With the connector disconnected, slide the flat end of a spudger under the cable to separate the adhesive securing the cable to the logic board.

Step 6 — Remove the left speaker screw



- Use a T3 Torx driver to remove the 4.2 mm screw securing the left speaker to the case.

Step 7 — Remove the speaker's stretch-release adhesive



- Use a pair of [tweezers](#) to peel back the black pull tab on the speaker's stretch-release adhesive until you can grip it with your fingers.
- Grab the adhesive strip's pull tab and slowly pull the adhesive strip out from underneath the speaker.
 - ⓘ Keep the angle of the adhesive strip as parallel to the laptop as you can. Try to avoid dragging it across the inside of the case.
- Pull the adhesive strip until it's freed from under the speaker.
- ⓘ If the adhesive strip breaks, use a [heated iOpener](#), a heat gun, or a hair dryer to help remove the adhesive:
 - Apply heat to the speaker to soften the adhesive underneath.
 - Carefully slide a spudger or opening pick underneath the speaker to separate the adhesive.

Step 8 — Remove the left speaker



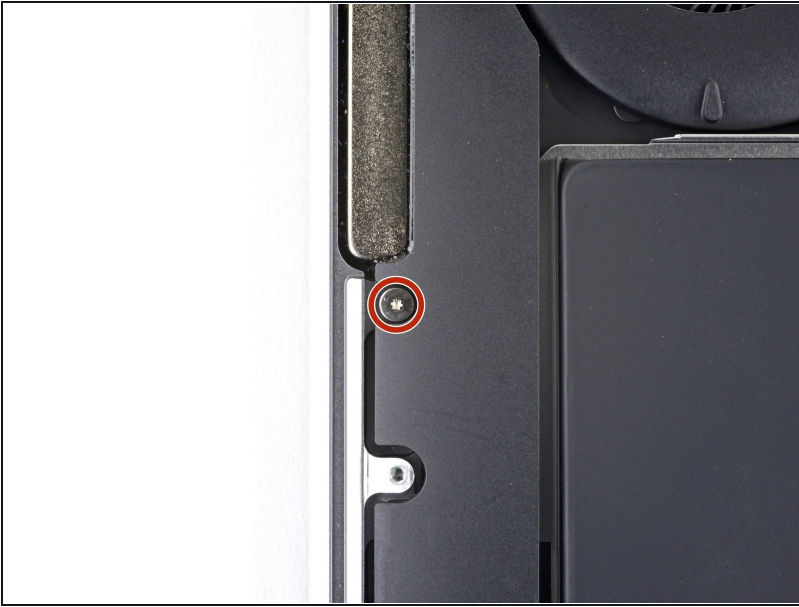
- Remove the left speaker.
- ☑ During reassembly, to ensure the speaker performs as expected, install a strip of [replacement adhesive](#) on its underside before placing it back into the case.

Step 9 — Disconnect the right speaker connector



- ① The **right** speaker will be on your **lefthand side** when working on the MacBook, as it's laying upside down.
- Slide the pointed end of a spudger underneath the right speaker cable and pry straight up to disconnect it from the audio board.

Step 10 — Remove the right speaker screw



- Use a T3 Torx driver to remove the 4.2 mm screw securing the right speaker to the case.

Step 11 — Remove the right speaker adhesive



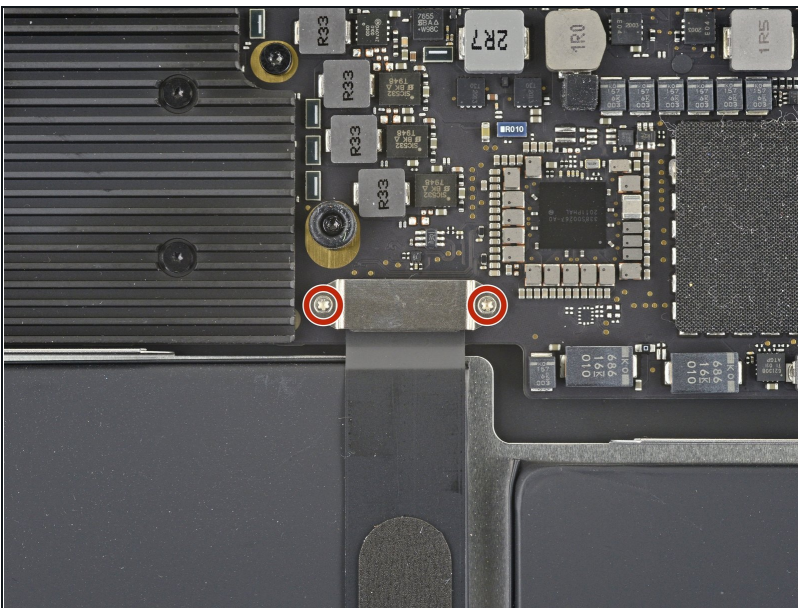
- Use a pair of [tweezers](#) to lift up the black adhesive pull tab at the bottom of the right speaker, enough so you can grab it with your fingers.
- Grab the adhesive strip's pull tab and slowly pull the adhesive strip out from underneath the speaker.
 - ⓘ Keep the angle of the adhesive strip as parallel to the laptop as you can. Try to avoid dragging it across the inside of the case.
- Pull the adhesive strip until it's freed from under the speaker.
- ⓘ If the adhesive strip breaks, use a [heated iOpener](#), a heat gun, or a hair dryer to help remove the adhesive:
 - Apply heat to the speaker to soften the adhesive underneath.
 - Carefully slide a spudger or opening pick underneath the speaker to separate the adhesive.

Step 12 — Remove the right speaker



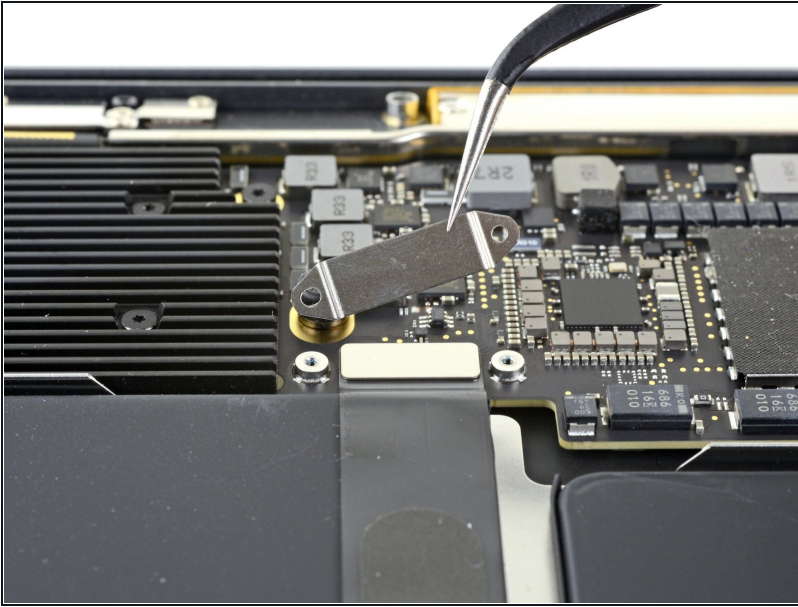
- Remove the right speaker.
- ☑ During reassembly, to ensure the speaker performs as expected, install a strip of [replacement adhesive](#) on its underside before placing it back into the case.

Step 13 — Remove the trackpad cable cover



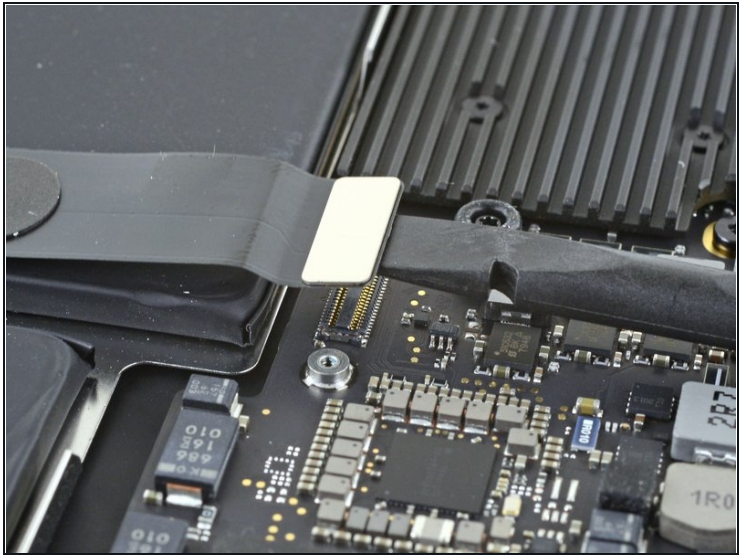
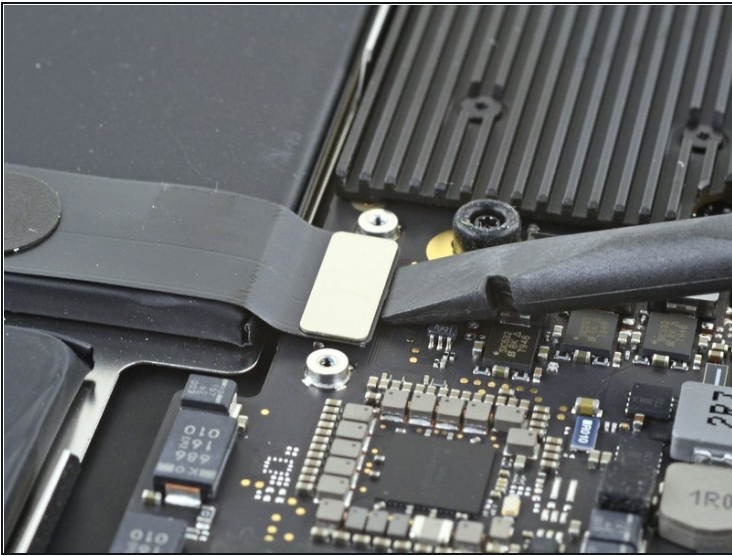
- Use a T3 Torx driver to remove the two 1.4 mm screws securing the trackpad cable cover.

Step 14



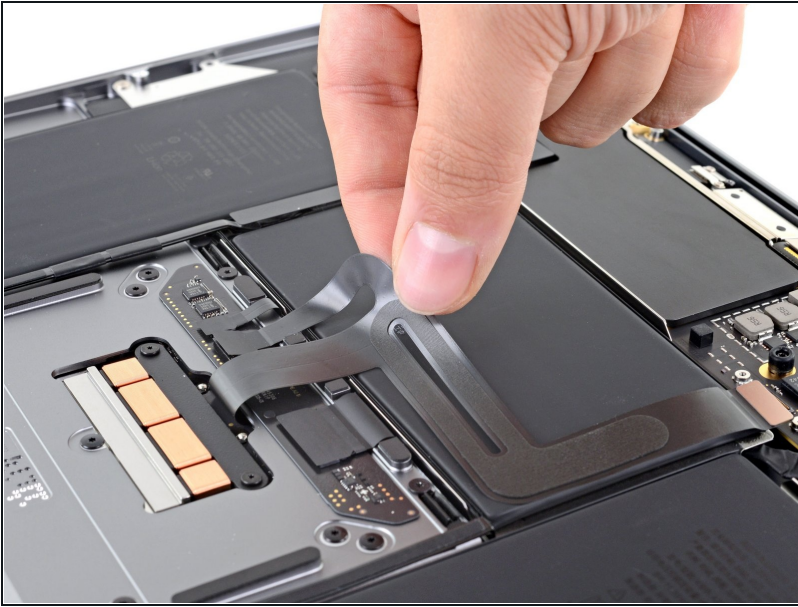
- Remove the trackpad cable cover.

Step 15 — Disconnect the trackpad cable



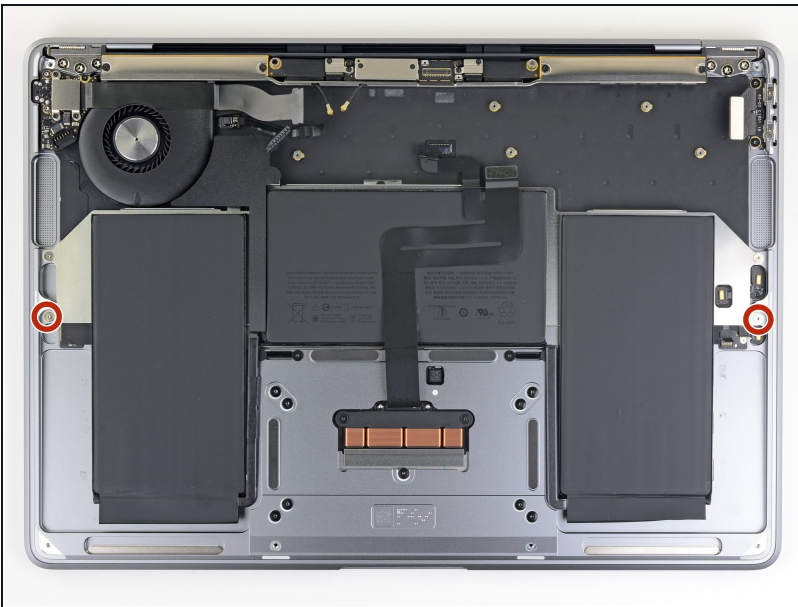
- Use the flat end of a spudger to pry the trackpad cable connector up and out of its socket.

Step 16



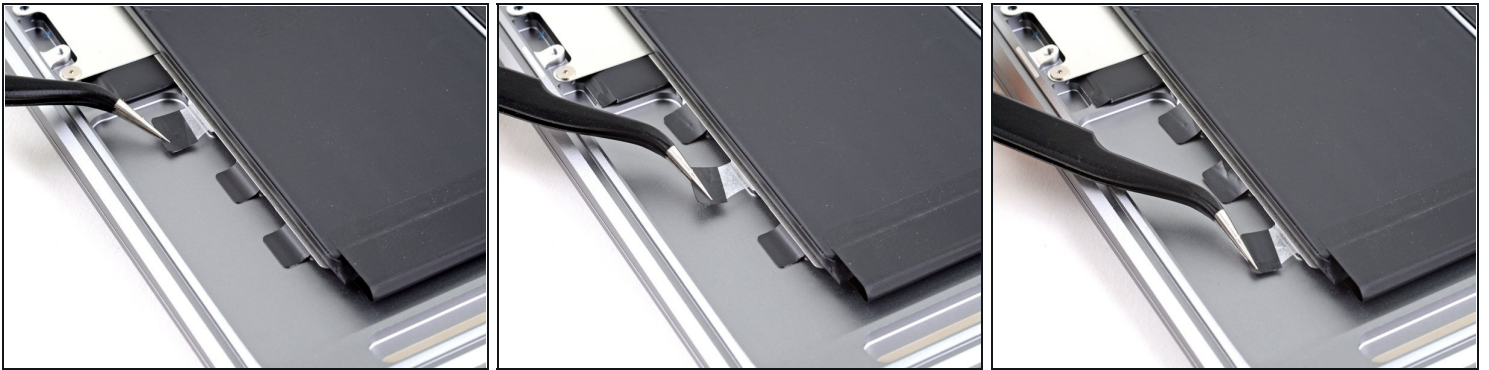
- Carefully peel the trackpad cable off of the battery.
- ① The trackpad cable is secured to the battery with some light adhesive.

Step 17 — Remove the battery tray screws



- Use a T3 Torx driver to remove two 2.5 mm screws securing the battery tray to the case.

Step 18 — Remove the battery tray adhesive strips



ⓘ The MacBook's battery cells are attached to a metal tray as a complete assembly, which is adhered to the case with a total of six stretch-release adhesive strips.

⚠ Do not attempt to remove the battery cells from their metal backing tray.

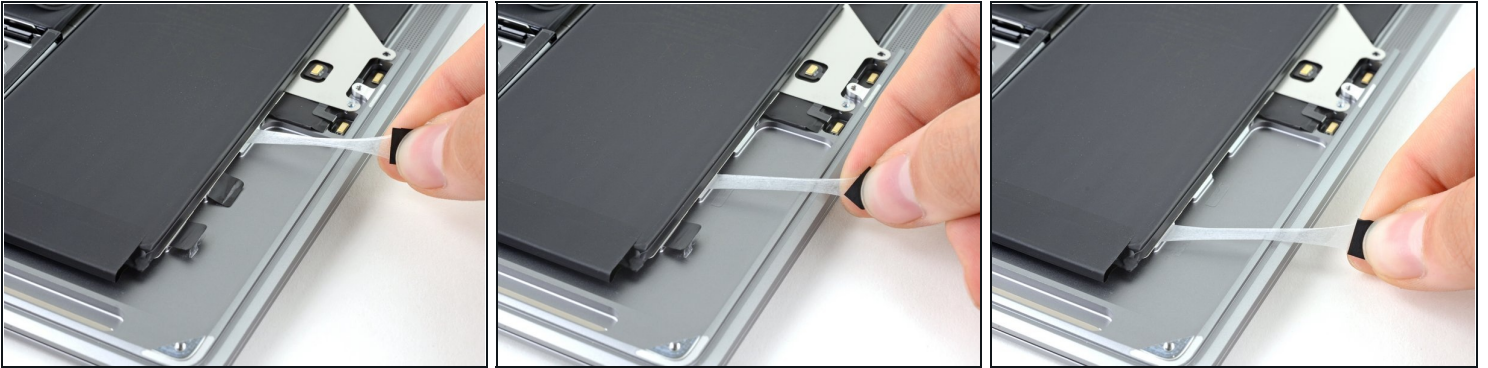
- On the left side of the MacBook, use a pair of [tweezers](#) to peel back the three black pull tabs on the battery's stretch-release adhesive strips until you can grip them with your fingers.

Step 19



- Grab an adhesive strip's pull tab and slowly pull it out from underneath the battery.
 - ⓘ Keep the angle of the adhesive strip as parallel to the laptop as you can. Try to avoid dragging it across the inside of the case.
- Pull the adhesive strip until it's freed from under the battery.
- Repeat for the two remaining adhesive strips on the battery's left side.

Step 20



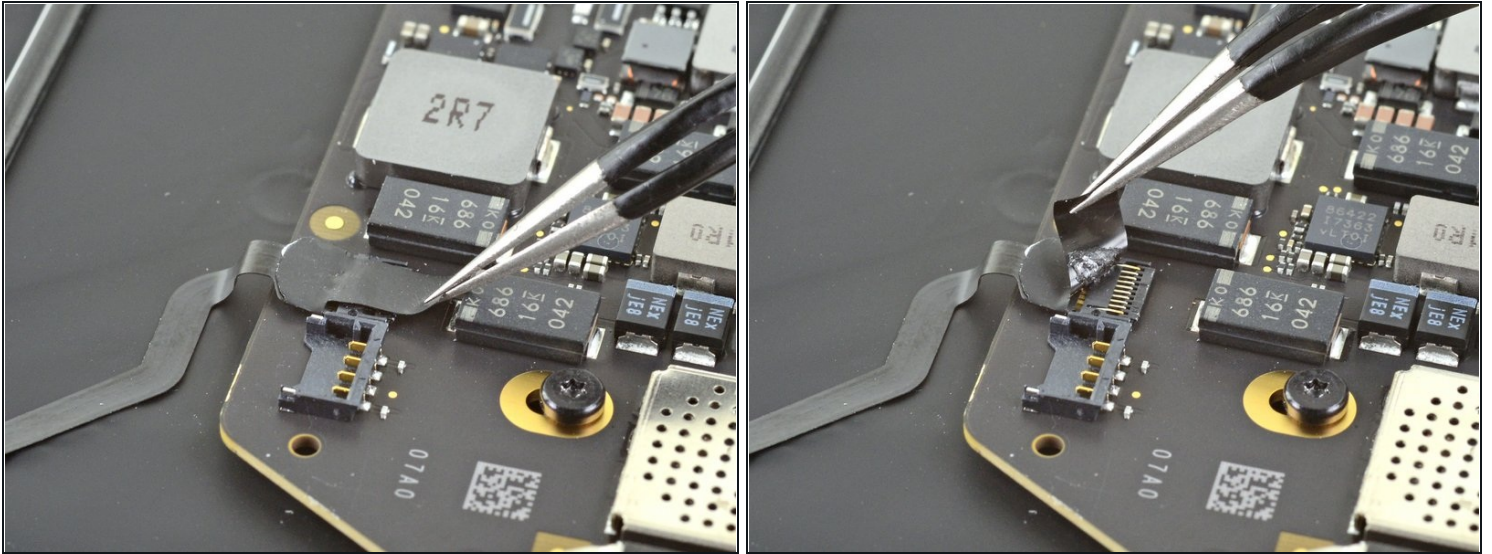
- Repeat and remove the three adhesive strips from the right side of the battery.
- ⓘ If any of the six adhesive strips broke during removal, you can use a [plastic card](#) to finish separating the battery tray from the case.

Step 21 — Remove the battery



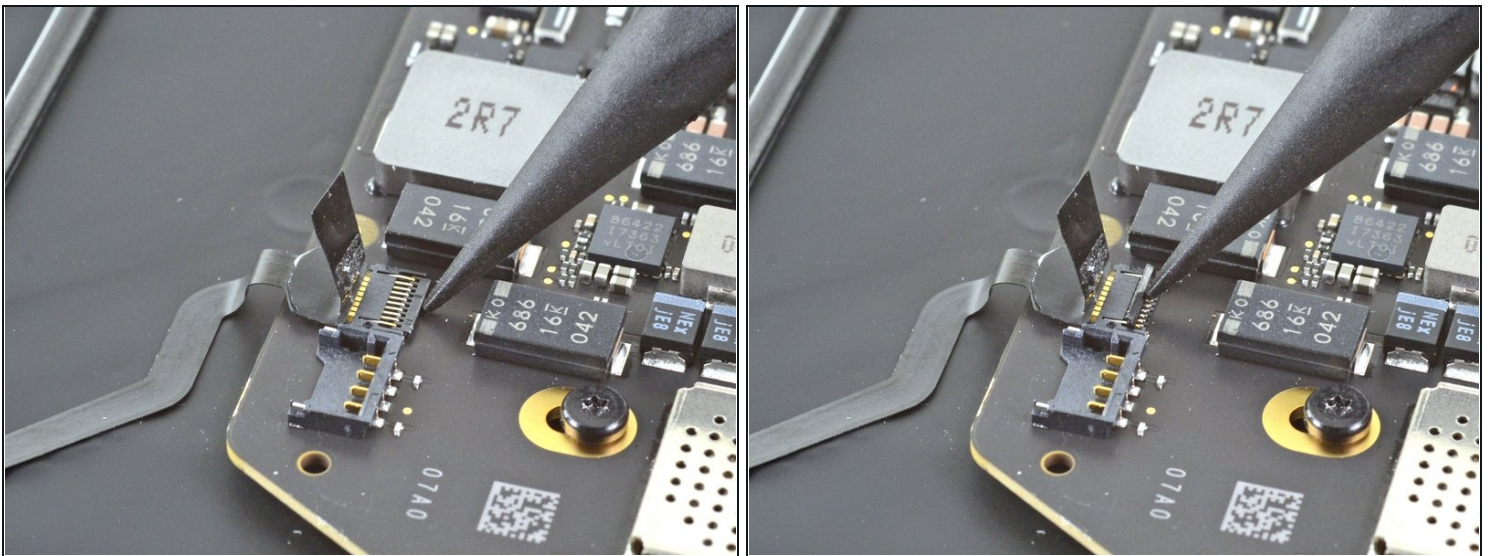
- Remove the battery assembly.
- ✦ During reassembly, secure the battery tray with strips of [Tesa tape](#) if your replacement battery doesn't come with pre-applied adhesive.
- If you're installing a new battery, follow the [calibration](#) procedure:
 - Charge it to 100%, and keep charging it for at least 2 more hours.
 - Unplug and use it normally to drain the battery.
 - When you see the low battery warning, save your work, and keep your laptop on until it goes to sleep due to low battery.
 - Wait at least 5 hours, then charge your laptop uninterrupted to 100%.
- ⓘ If you notice any unusual behavior or problems after installing your new battery, you may need to [reset your MacBook's SMC](#).

Step 22 — Disconnect the microphone cable



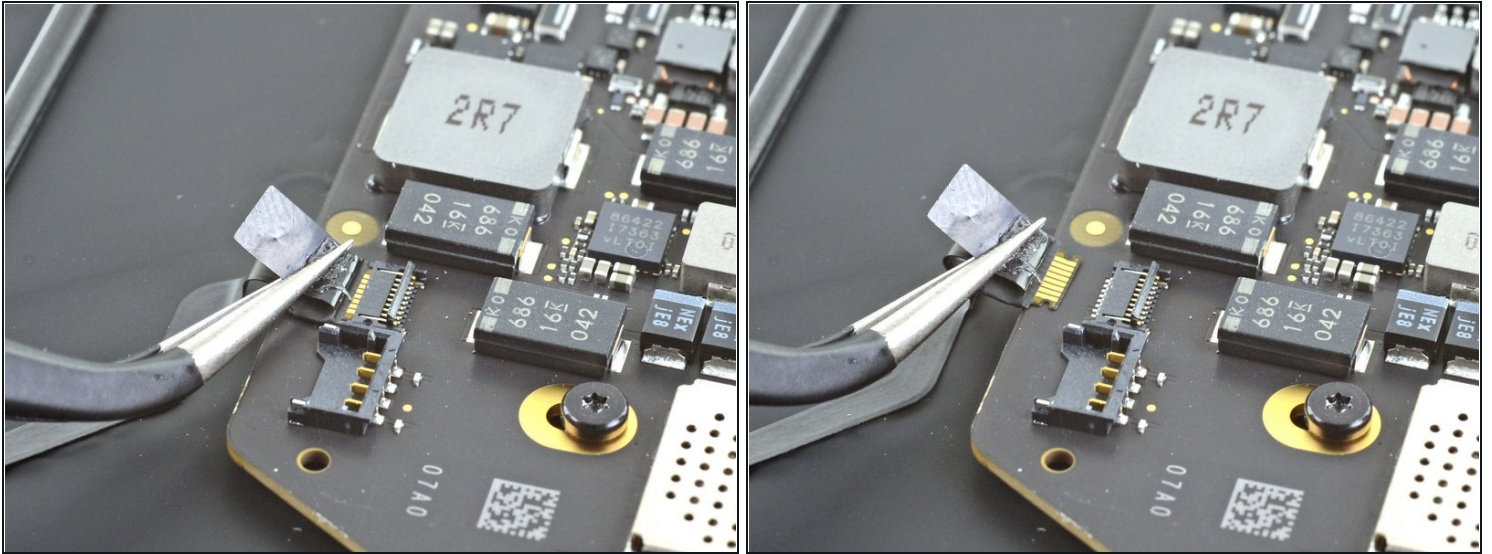
- Use a pair of [tweezers](#) to peel back the tape covering the microphone cable connector.

Step 23



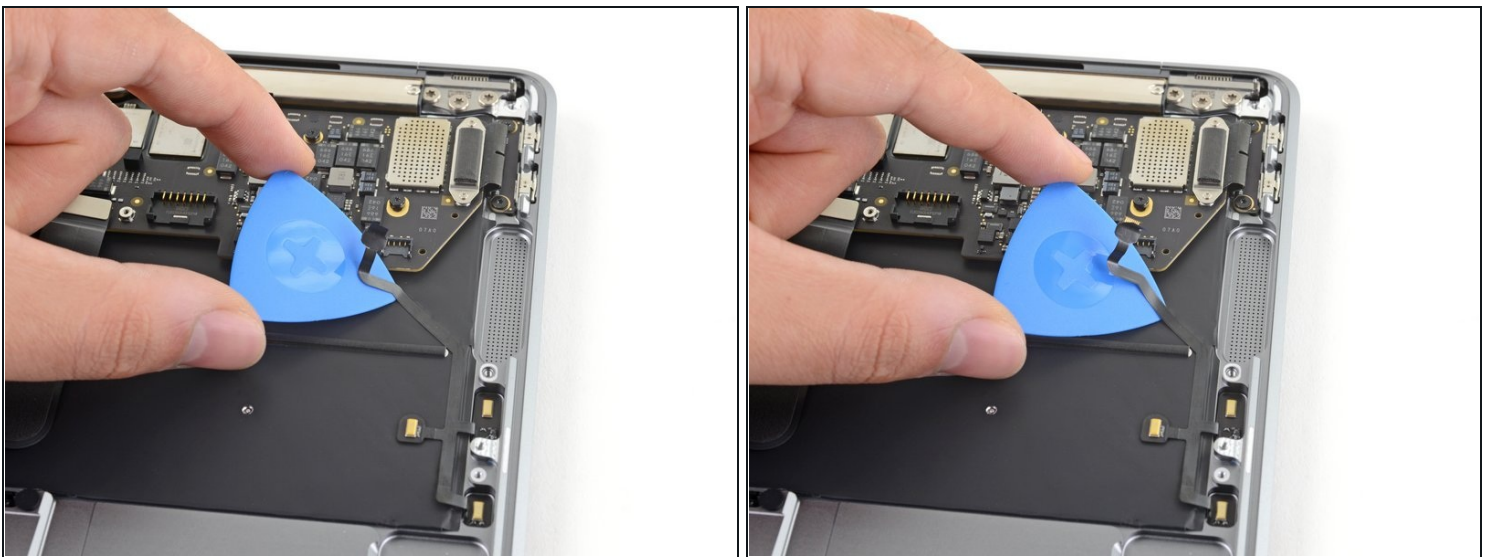
- Use the pointed end of a spudger to lift up the small locking flap on the microphone cable's [ZIF connector](#).

Step 24



- Slide the microphone cable out of its connector.
 - ① If possible, grip the cable by the tape, not by the cable itself.

Step 25



- Slide an opening pick underneath the microphone cable to separate it from the upper case.
 - ① The cable is secured with some light adhesive.
 - ① If the adhesive is stubborn, do not force the pick. Lightly heat the microphone assembly using an [iOpener](#) or a hair dryer to soften the adhesive.

Step 26



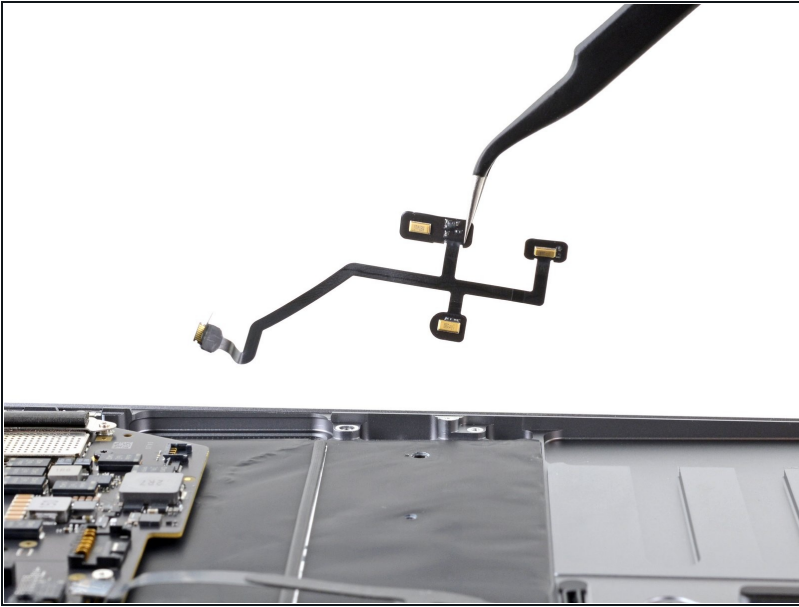
- Slide an opening pick underneath the microphone closest to the center of the MacBook to slice through the adhesive securing it to the upper case.
- Lift up to pry the microphone out of its recess in the case.

Step 27



- Use the pointed end of a spudger to carefully pry one of the remaining microphones out of its recess in the upper case.
 - ⓘ If the adhesive is stubborn, apply heat to the microphone to soften the adhesive.
- ⚠ **Don't force the spudger under the microphone or you risk ripping the cable.**
- Remove the third and final microphone from the case.

Step 28



- Remove the microphone array.

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 [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Check out our [Answers community](#) for troubleshooting help.