



# Steam Deck Motherboard Replacement

Use this guide to replace the motherboard in...

Written By: Carsten Frauenheim



# INTRODUCTION

Use this guide to replace the motherboard in your Steam Deck LCD.

Remember: follow general [electrostatic discharge \(ESD\) safety procedures](#) while repairing your device.

These steps only describe how to physically remove and replace your console's motherboard. **You may need additional software tools and calibration procedures** to get the replacement motherboard to function as intended.



## TOOLS:

[Arctic Silver ArctiClean](#) (1)  
[Coffee Filters or a lint-free cloth](#) (1)  
[Isopropyl Alcohol](#) (1)  
[Phillips #1 Screwdriver](#) (1)  
[iFixit Opening Picks \(Set of 6\)](#) (1)  
[Tweezers](#) (1)  
[Phillips #0 Screwdriver](#) (1)  
[Spudger](#) (1)



## PARTS:

[iFixit Thermal Paste](#) (1)

---

## Step 1 — Prepare your Steam Deck for disassembly



- ⚠ Turn on your Steam Deck and allow the battery to discharge below 25% before starting your repairs, as a charged lithium-ion polymer battery can be dangerous if accidentally punctured.
- ⓘ As an extra precaution, Valve recommends putting your Steam Deck into **battery storage mode** within the BIOS before starting any internal repairs. [Read how to do that here.](#)
- Power down your Steam Deck and unplug any cables.
- ⚠ If you have a microSD card installed, **make sure to remove it** before opening the Steam Deck. If you attempt to remove the back cover with it still installed, [it could snap right in half.](#)
- ⓘ During your repair, it can be helpful at times to lay the Steam Deck face-down into its case to protect the thumbsticks and prevent wobble.

## Step 2 — Remove the back cover screws



- Use a Phillips driver to remove the eight screws securing the back cover:
  - Four coarse thread 9.5 mm-long screws
  - Four fine thread 5.8 mm-long screws
- ⓘ Despite the standards, Phillips screwdrivers can vary in size and shape—two drivers labeled as the same size may fit differently in the same screw. Use the size that fits the snugest into the screw head.
- ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from to avoid damaging your Steam Deck.

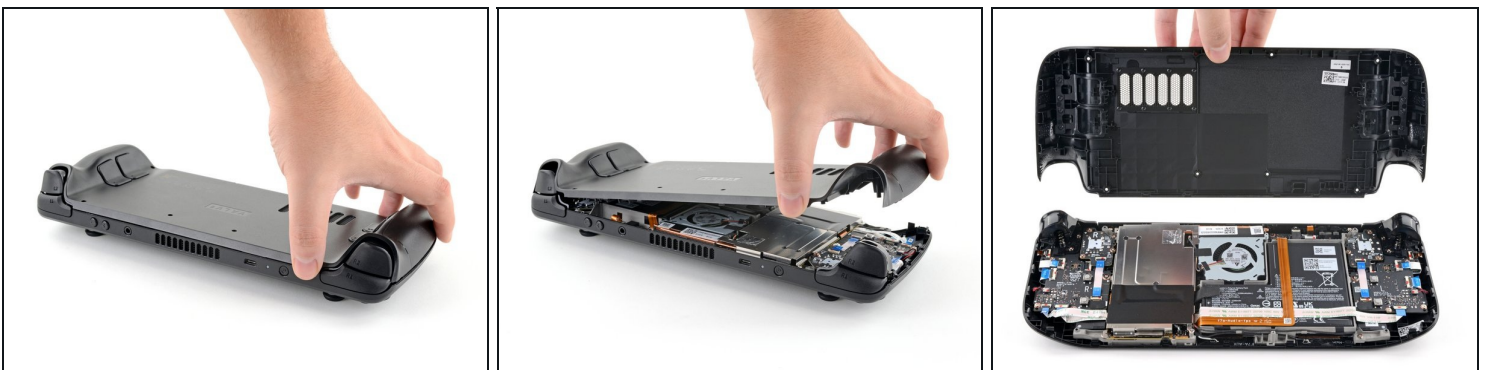


### Step 3 — Unclip the back cover



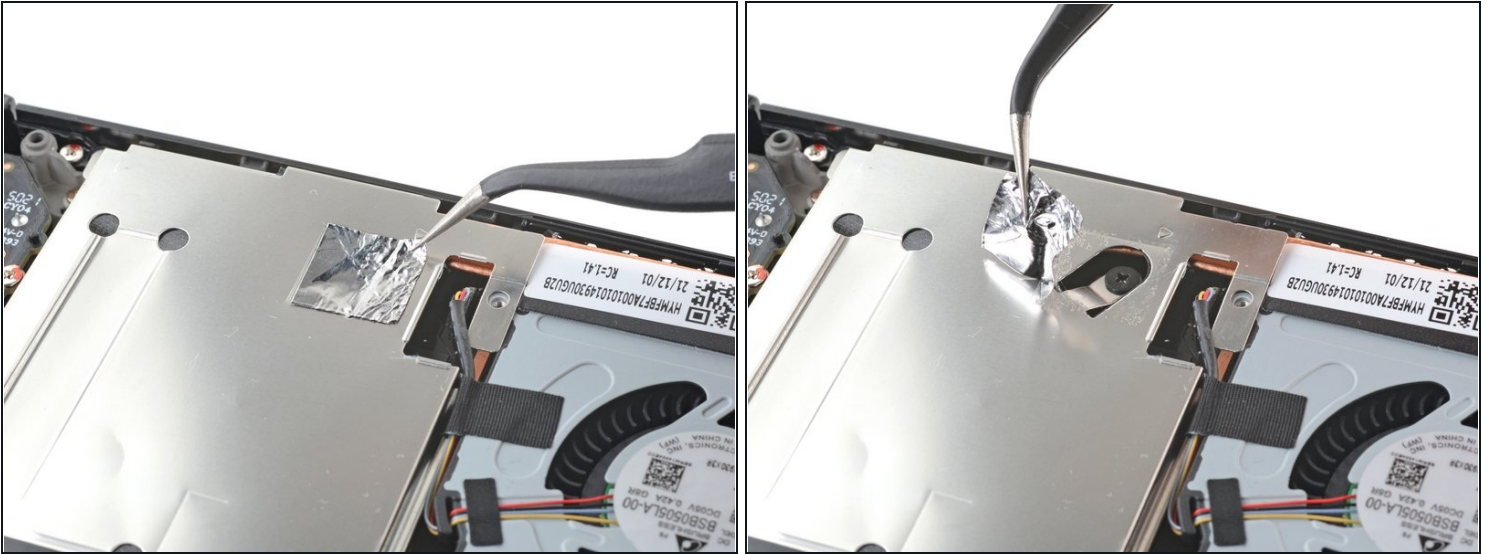
- Insert an opening pick into the thin gap between the back cover and the front shell, along the edge of the right grip.
  - ① If you're having trouble inserting your pick at the grip seam, try starting at either the top or bottom long edges first, then slide the pick towards the grip.
- Pry up on the back cover to release it from the locking clips.

### Step 4 — Remove the back cover



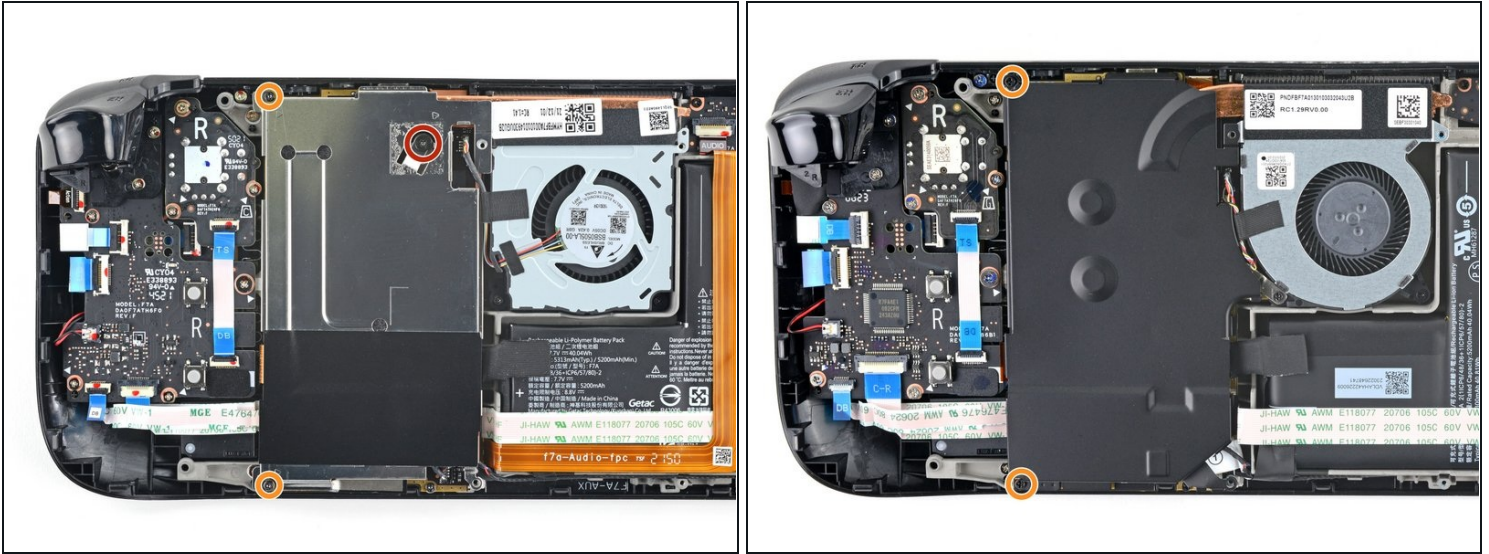
- ① Once the clips are disconnected from one edge, the rest disconnect easily.
- Grip the back cover at the opening you just created and pull it up and away from the device to unclip the long edges.
- Remove the back cover.

## Step 5 — Uncover the hidden shield screw



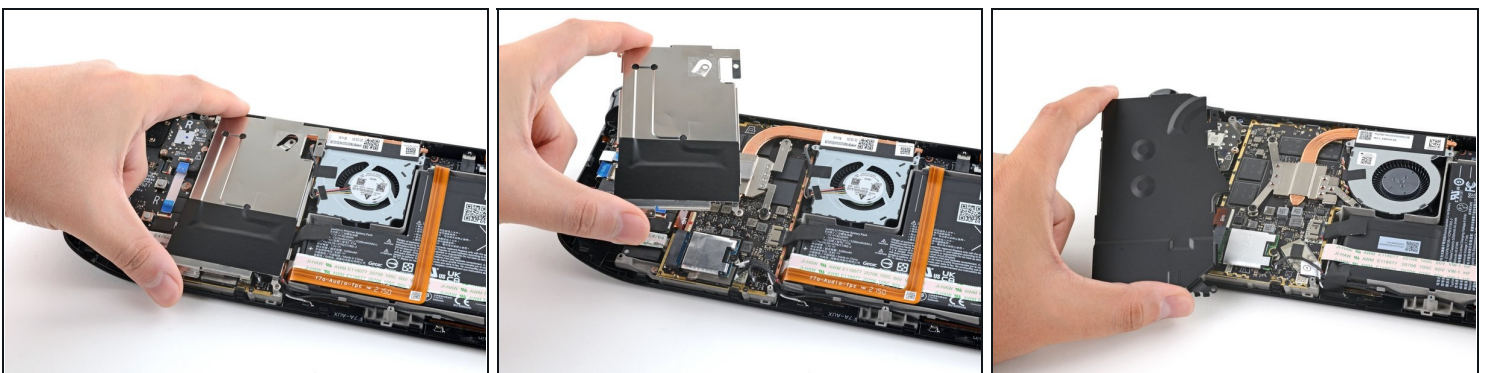
- ① If you have a [refreshed Steam Deck version](#) with the black motherboard cover, skip this step.
- Use a pair of tweezers to remove the piece of foil tape covering the hidden screw on the board shield.
  - ① If possible, try not to rip or tear this tape so it can be reused. If necessary, you can fashion a replacement by cutting a piece of aluminum foil tape to fit.

## Step 6 — Remove the shield screws



- Use a Phillips driver to remove the three screws securing the board shield:
  - One 3.4 mm screw
  - Two 3.7 mm screws
- ① Only the two 3.7 mm screws along the left edge are present in refreshed Steam Decks.

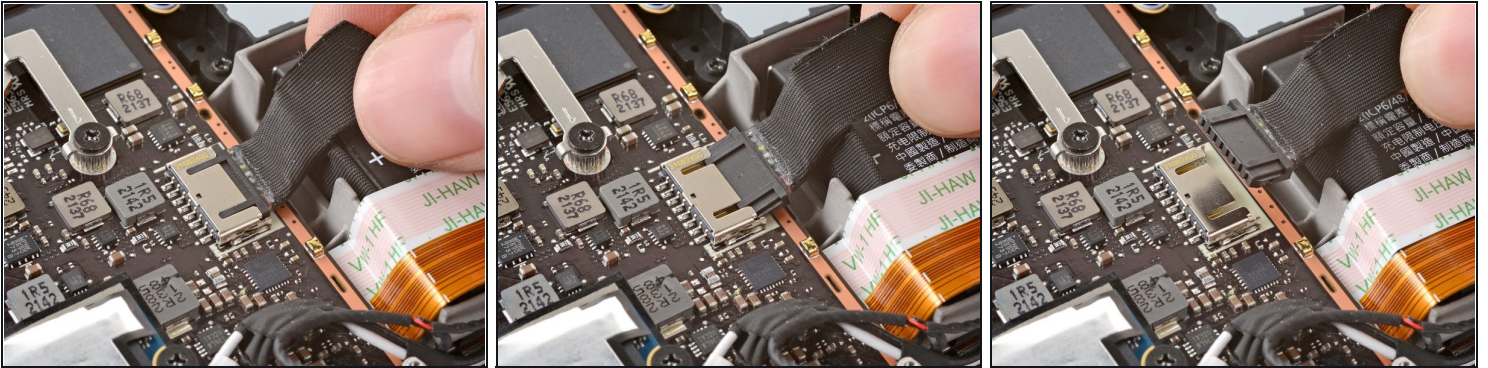
## Step 7 — Remove the shield



- Remove the board shield.
- ① Depending on the age of your Steam Deck, this shield may stick to the thermal pads underneath.
- ★ During reassembly, ensure that the fan cable [lays on the side of the board shield](#) and isn't pinched underneath.

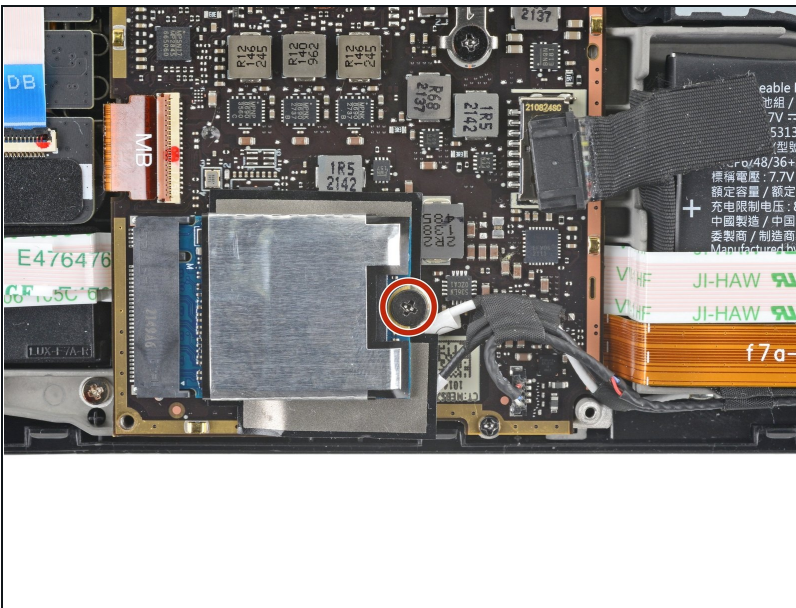


## Step 8 — Disconnect the battery



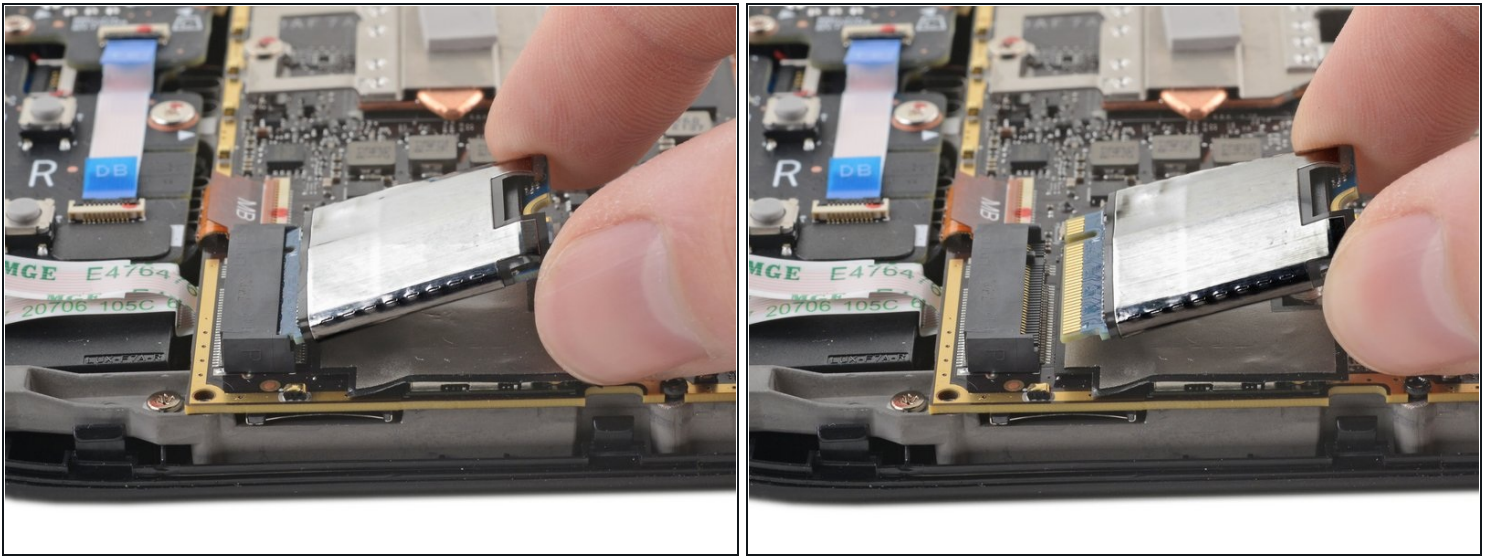
- Grip the battery cable by its pull tab and pull it directly away from the motherboard to disconnect it.
  - ① Alternatively, use the flat end of a spudger or a clean fingernail to gently push the connector out of its socket, then disconnect it completely by hand.

## Step 9 — Remove the SSD screw



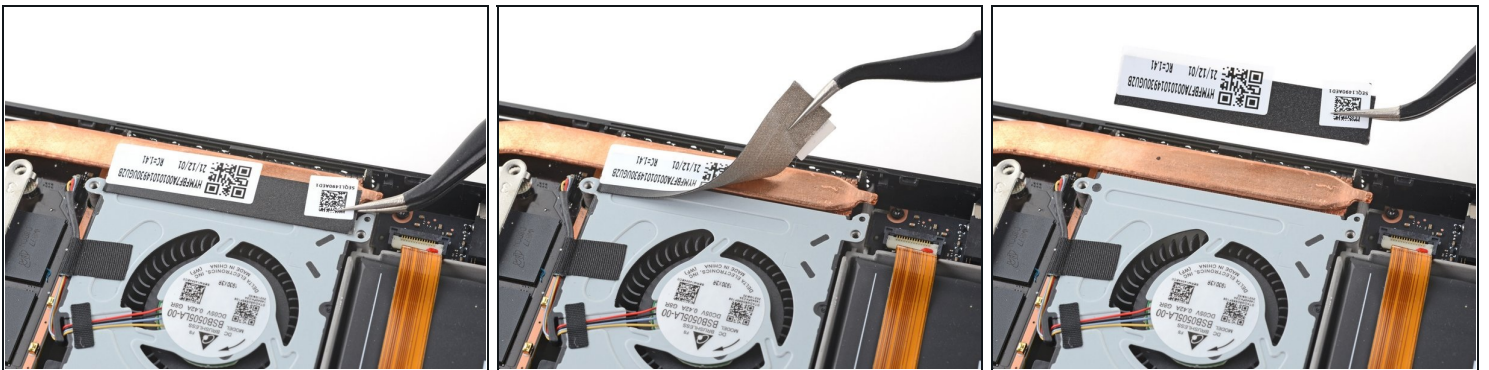
- Use a Phillips driver to remove the 3.4 mm screw securing the SSD.

## Step 10 — Remove the SSD



- ① With the SSD screw removed, the SSD will pop up at a shallow angle.
- Grip the end of the SSD and pull it away from its M.2 board connector to remove it.
  - ☑ During reassembly, insert the SSD at a shallow angle into its board connector, and secure it back into its horizontal position with the SSD screw.

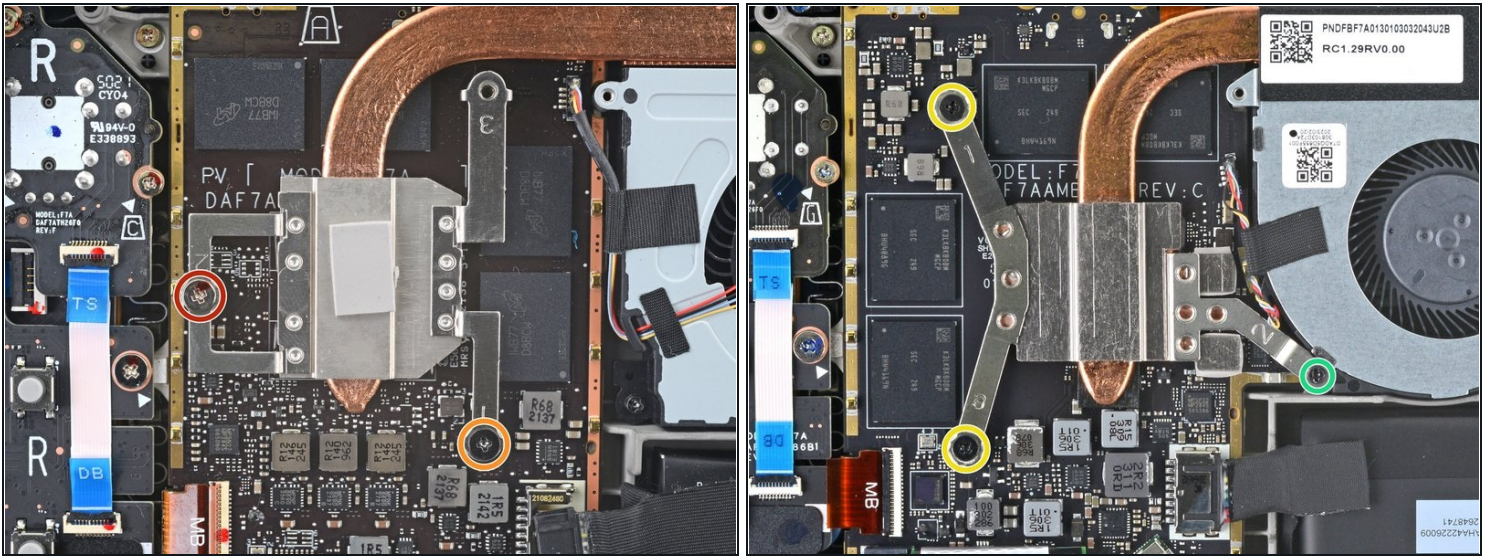
## Step 11 — Remove the heatsink sticker



- Use a pair of tweezers to remove the sticker from the top edge of the fan.
  - ① If possible, try not to rip or tear this sticker so it can be reused. Use a little bit of heat if necessary to soften the adhesive.
  - ① If the sticker feels like it might tear, use tweezers to peel up one edge just until you can grip it with your fingers, then remove the rest by hand.



## Step 12 — Remove the heatsink screws



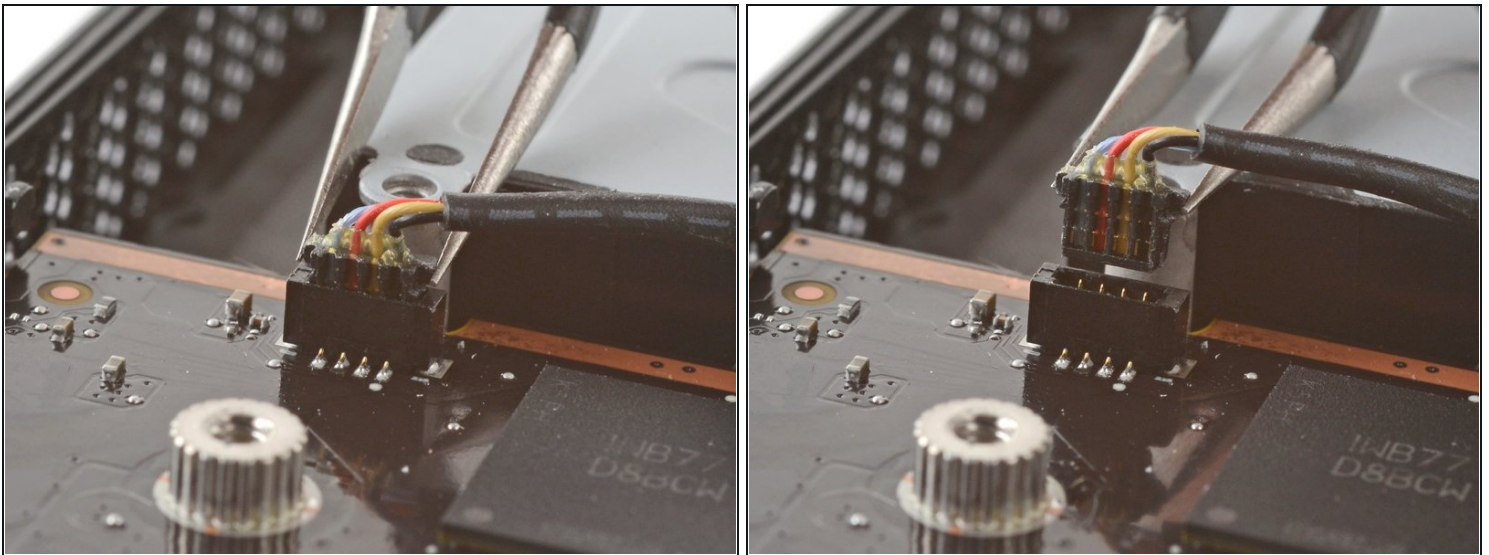
- **For original Steam Decks:** Use a Phillips driver to loosen and remove the two screws securing the heatsink to the motherboard:
    - One **captive** 3.5 mm screw
    - One 3.4 mm screw
  - ❗ No, your eyes don't deceive you! The third heatsink screw was removed earlier in the disassembly: it doubles as [the hidden board shield screw](#).
  - **For refreshed Steam Decks:** Use a Phillips driver to remove the three screws securing the heatsink to the motherboard:
    - Two 2.9 mm screws
    - One 3.7 mm screw
- ☑ During reassembly on both versions, tighten these screws in order **(1, 2, 3)** as stamped into the heatsink.

## Step 13 — Remove the heatsink



- Lift and remove the heatsink.
- ☑ Before reinstalling the heatsink, follow [this guide](#) to clean the heatsink and APU and reapply thermal paste.

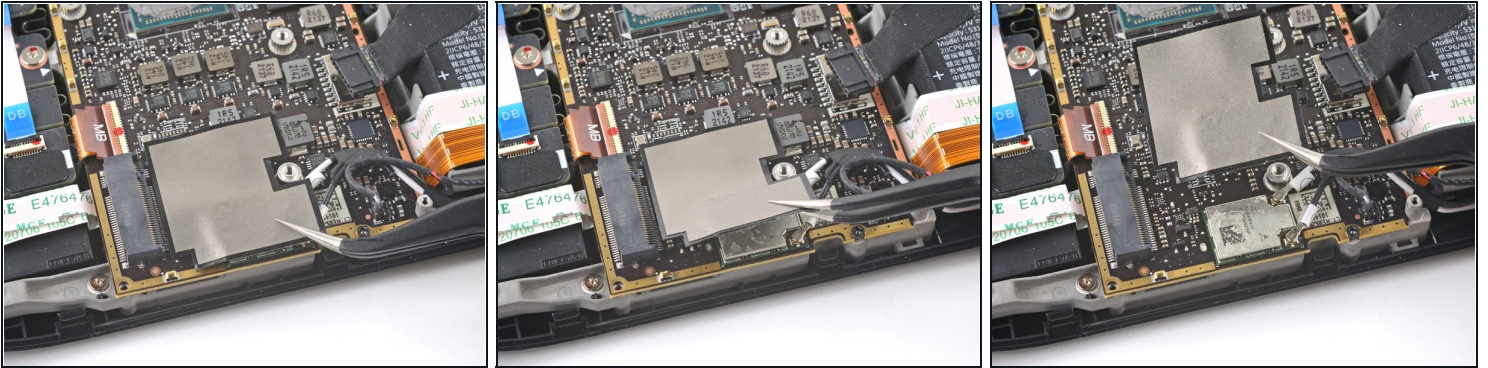
## Step 14 — Disconnect the fan



- Use a pair of tweezers to grip the edges of the fan connector and pull up to disconnect it from the motherboard.
- ⚠ Pull the fan cable by its connector, not the wires themselves.

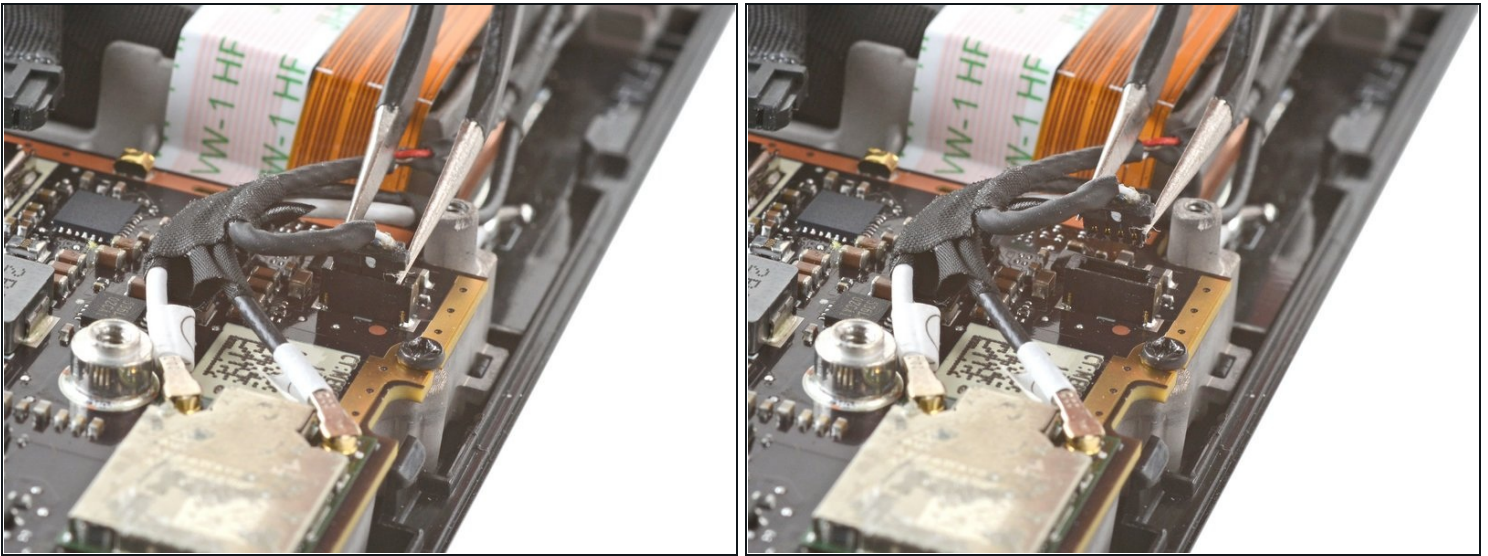


## Step 15 — Remove the Wi-Fi shield tape



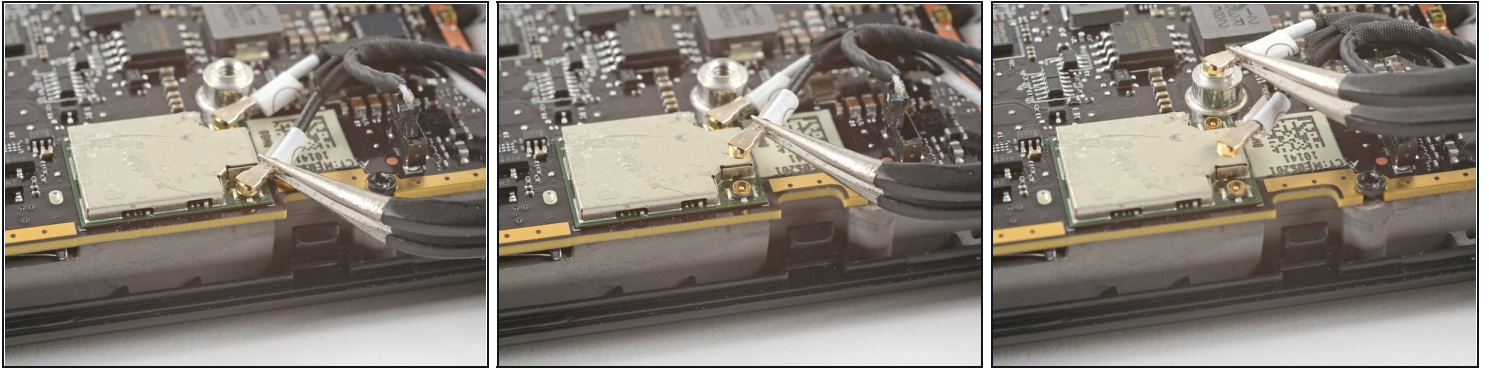
- Use a pair of tweezers to peel up and remove the Wi-Fi shield tape.
  - ① If possible, try not to rip or tear this sticker so it can be reused. Use a little bit of heat if necessary to soften the adhesive.

## Step 16 — Disconnect the speakers



- Use a pair of tweezers to grip the edges of the speaker connector and pull up to disconnect it from the motherboard.
  - ⚠ Pull the speaker cable by its connector, not the wires themselves.

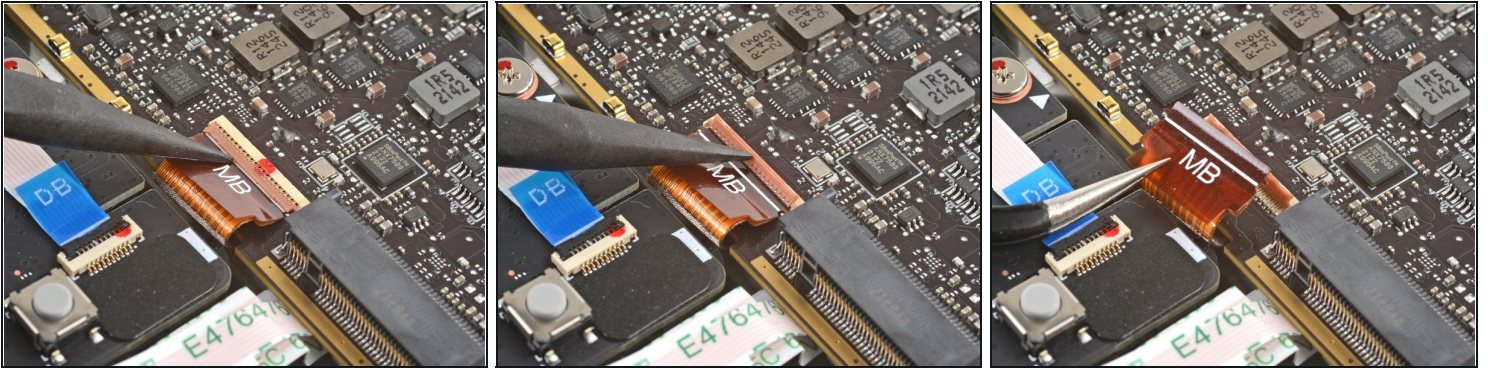
## Step 17 — Disconnect the Wi-Fi



- ❗ The Wi-Fi module is located next to the SSD on refreshed Steam Decks.
- Use a pair of tweezers to grip the [antenna connector](#) close to its base.
- Pull **straight up** to disconnect the cable.
- Repeat for the second antenna cable.
- ☑ During reassembly, ensure that both antenna cables are reconnected at their appropriate connectors. The labels on the cables match the markings on the Wi-Fi module.
- ☑ To reconnect each cable, align the connector directly over its socket, and then press down so it snaps into place.

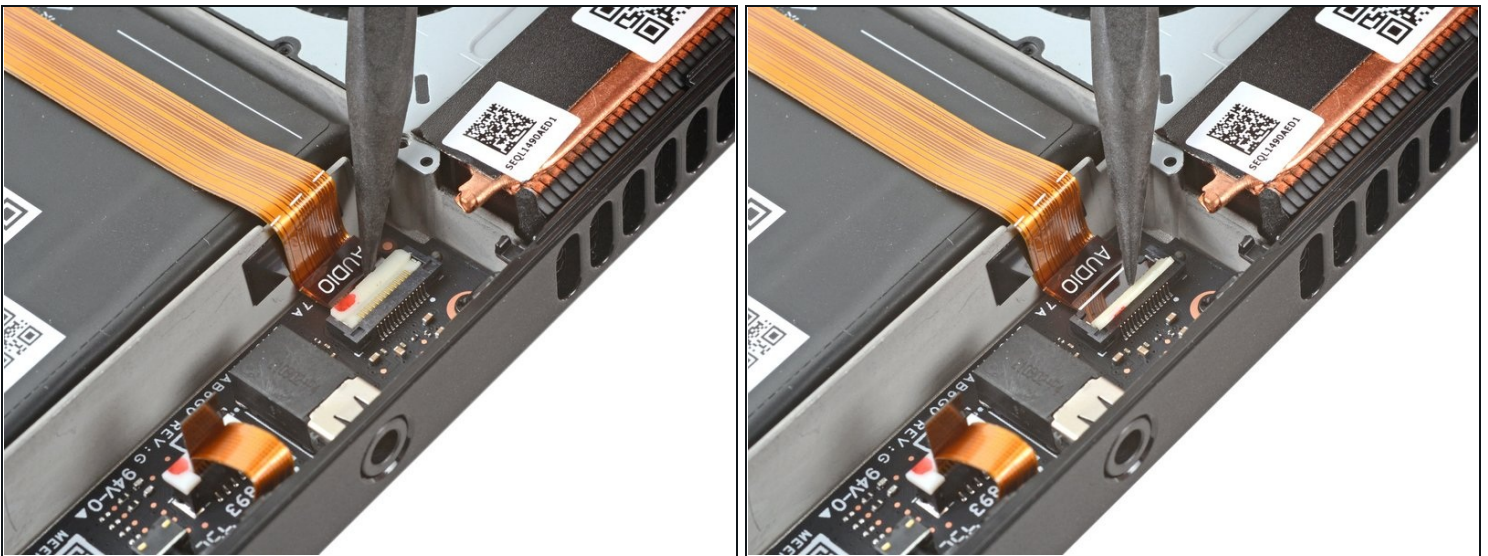


## Step 18 — Disconnect the display



- Use the pointed end of a spudger to lift up the small locking flap on the display cable's [ZIF connector](#).
- Use a pair of tweezers to slide the cable out of its connector.
  - ① Grip the cable by the pull tab, not by the cable itself.

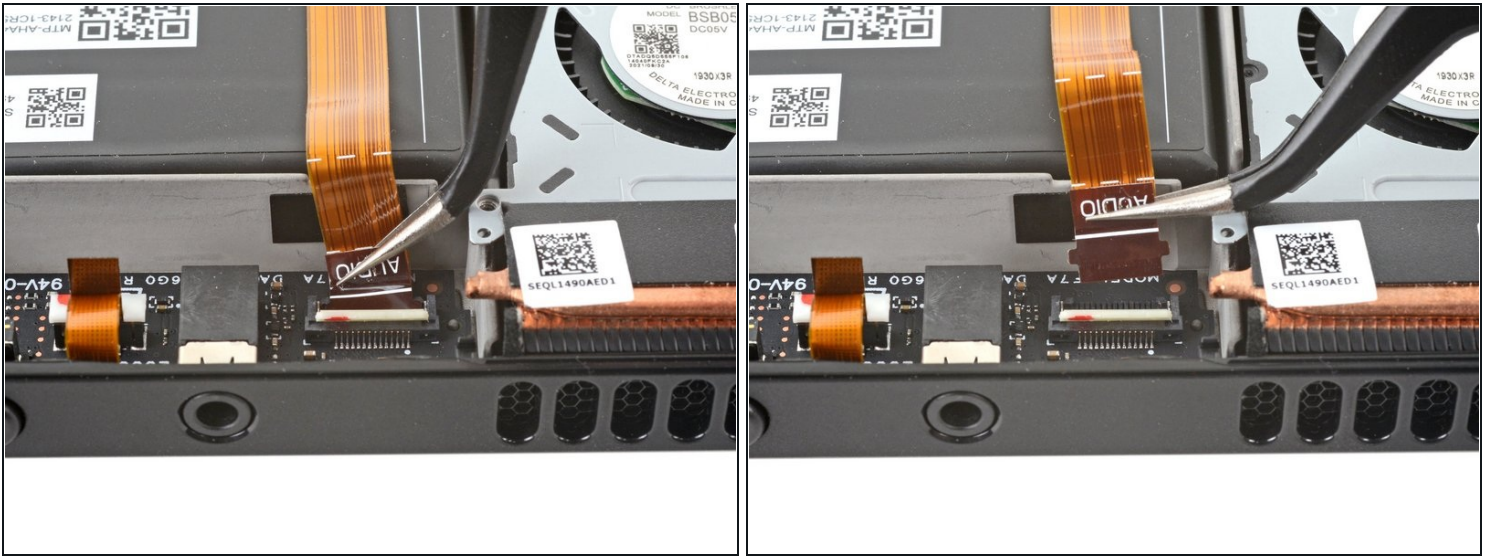
## Step 19 — Disconnect the audio cable



- ① Refreshed Steam Decks don't have this audio cable. If you have a refreshed version, skip the next three steps.
- Use the pointed end of a spudger to lift up the small locking flap on the audio cable's ZIF connector.



## Step 20



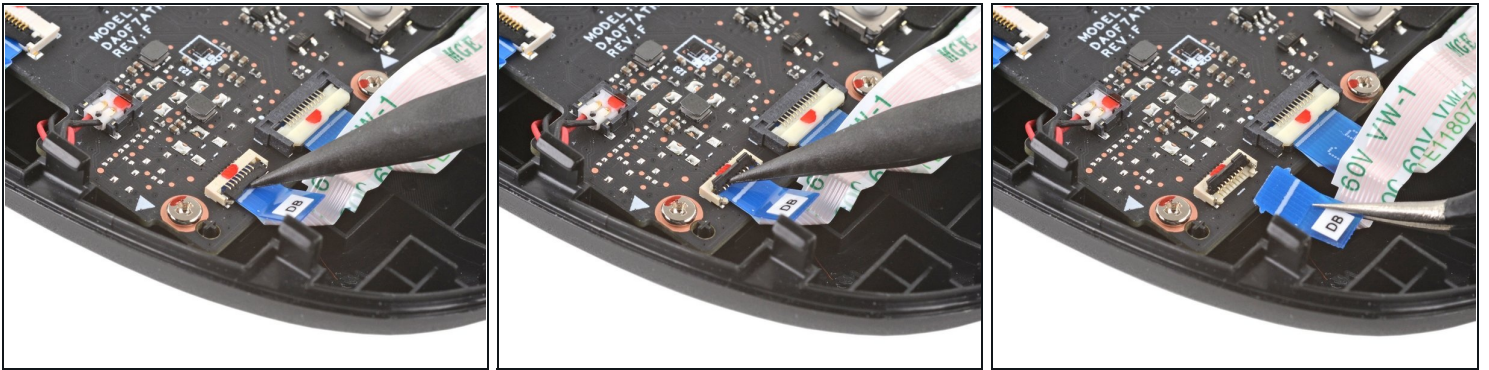
- Use a pair of tweezers to slide the cable out of its connector.
  - ① Grip the cable by its pull tab, not by the cable itself.

## Step 21



- Carefully peel the audio cable off of the battery.
  - ① The audio cable is secured to the battery with some light adhesive.
  - ① If the adhesive is stubborn, don't force the cable. Lightly heat the audio cable using an iOpener or a hair dryer to soften the adhesive.

## Step 22 — Disconnect the button board



- Use the pointed end of a spudger to lift up the small locking flap on the button board cable's ZIF connector.
- Use a pair of tweezers to slide the cable out of its connector.
  - ⓘ Grip the cable by the blue pull tab, not by the cable itself.

## Step 23 — Remove the motherboard screws



- Use a Phillips driver to remove the three 3.7 mm screws securing the motherboard.

## Step 24 — Remove the motherboard



- Remove the motherboard.
  - ① The audio and button board cables attach to the underside of the motherboard with ZIF connectors.
- 

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

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Try some [basic troubleshooting](#), or ask our [Steam Deck answers community](#) for help.