Steam Deck Screen Replacement

Use this guide to replace the screen (aka...

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INTRODUCTION

Use this guide to replace the screen (aka display) on your Steam Deck LCD. The procedure is the same for both standard and anti-glare etched glass screens.

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

Note: If you're installing a 512 GB model display onto a 64 / 256 GB device or vice versa, you'll need to ensure that a matching display flex cable is installed as well. Both types of displays come with their specific flex cables.

Note: Valve started shipping Steam Decks with refreshed internal designs in early 2023. Your Steam Deck may look different than the one depicted in the photos, but the procedures are very similar. Remove the back cover to check what version you have. An original Steam Deck will have a metallic motherboard shield and a fan with square sides, as seen here. A refreshed Steam Deck will have a black motherboard shield and a fan with curved sides, as seen here.

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)
- iOpener (1)
- Suction Handle (1)
- Thermal Paste (1)

PARTS:

- Steam Deck (512GB) Screen (1)
- Steam Deck (64GB or 256GB) Screen (1)
- Steam Deck LCD Flex Cable (1)
- Steam Deck Screen Adhesive (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 snuggest 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.

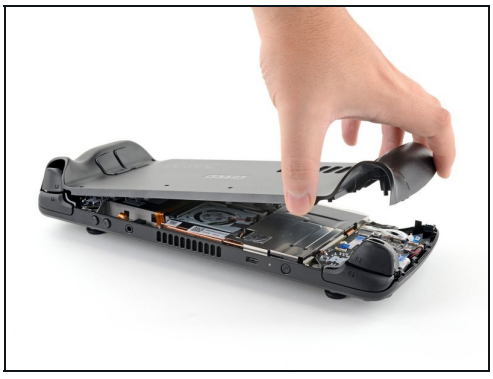
Step 3 — Unclip the back cover

- Insert an opening pick into the thin gap between the back cover and the front shell, along the edge of the right grip.

ⓘ 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

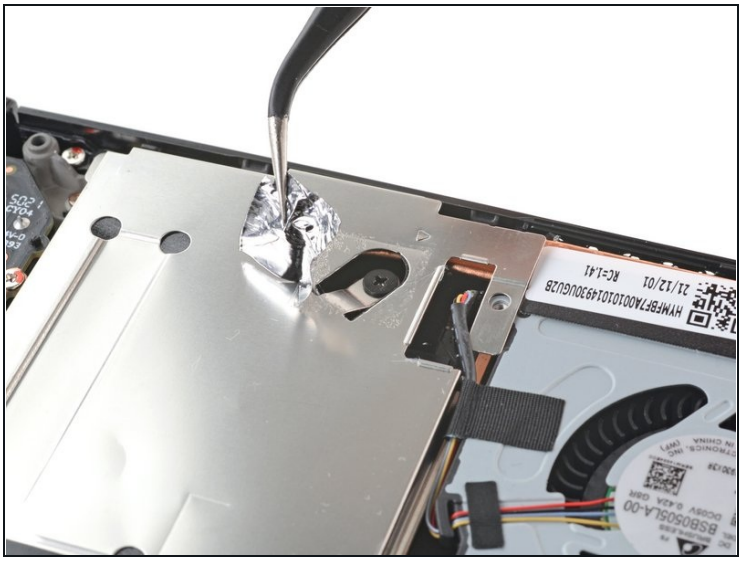




ⓘ Once the clips are disconnected from one edge, the rest disconnect easily.

- 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

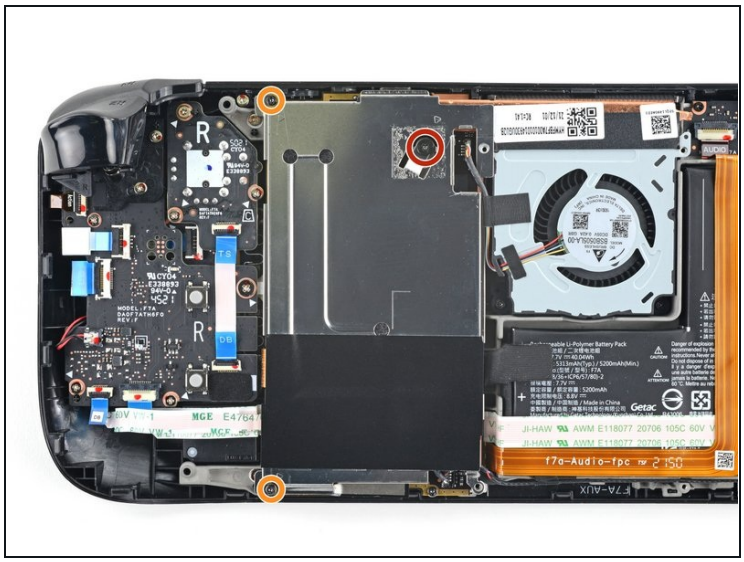


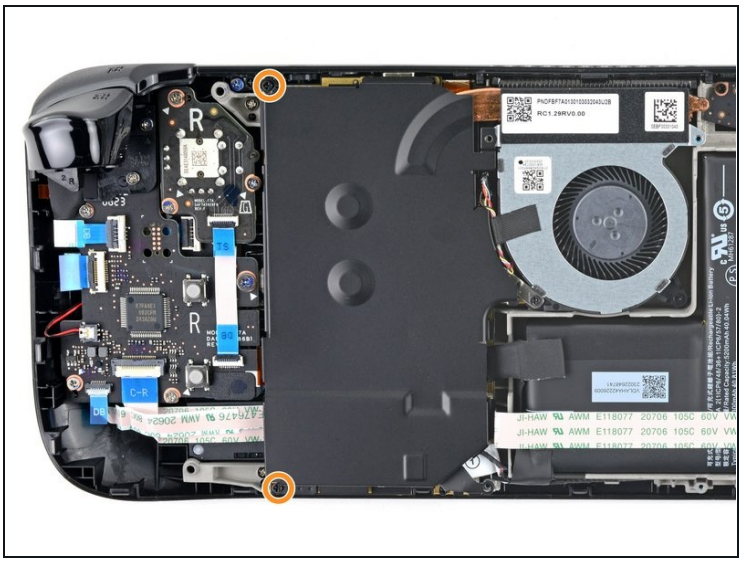
ⓘ If you have a refreshed Steam Deck version with the black motherboard cover, skip this step.

- Use a pair of tweezers to remove the piece of foil tape covering the hidden screw on the board shield.

  ⓘ 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

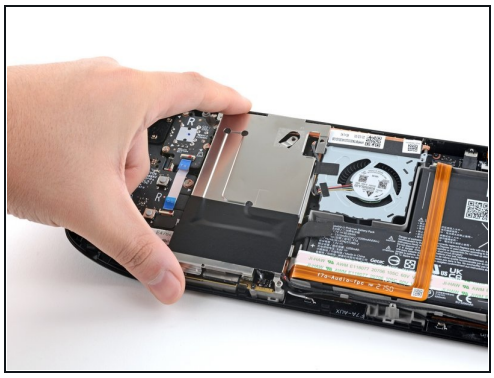


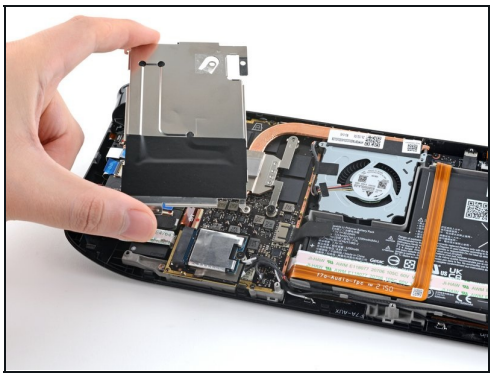


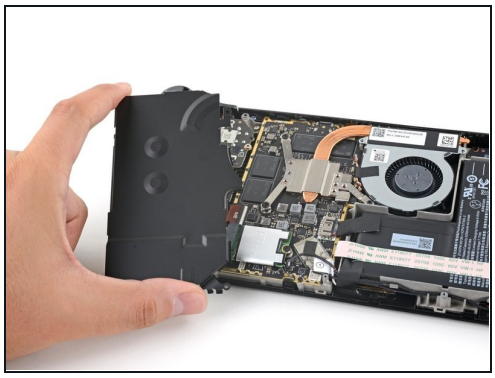
- Use a Phillips driver to remove the three screws securing the board shield:
  - One 3.4 mm screw
  - Two 3.7 mm screws

ⓘ Only the two 3.7 mm screws along the left edge are present in refreshed Steam Decks.

Step 7 — Remove the shield





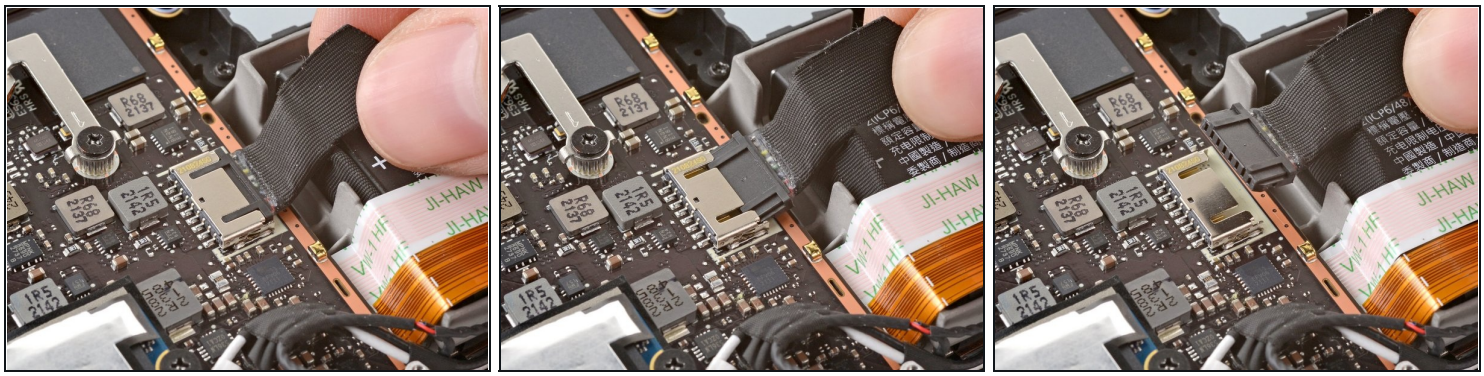


- Remove the board shield.

ⓘ 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.

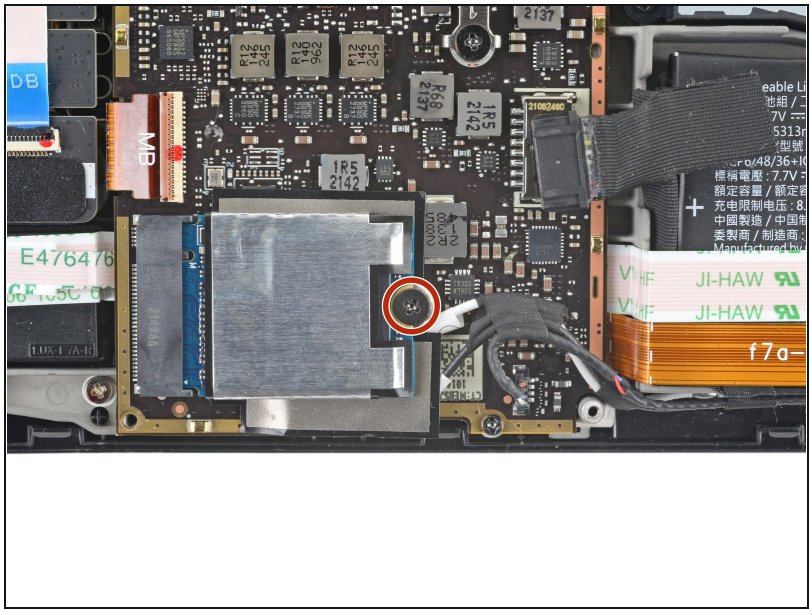
Step 8 — Disconnect the battery



- Grip the battery cable by its pull tab and pull it directly away from the motherboard to disconnect it.

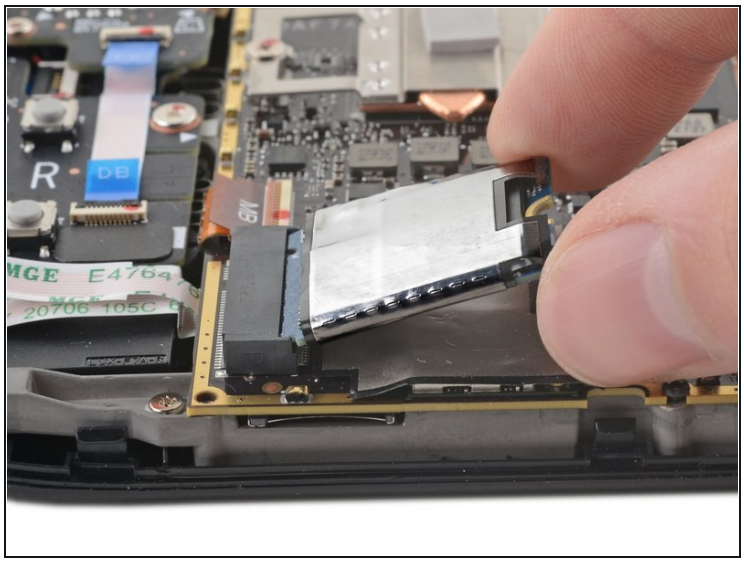
ⓘ Alternatively, use the flat end of a spudger or a clean fingernail to gently push the connector out of its socket, then disconnect it completely by hand.

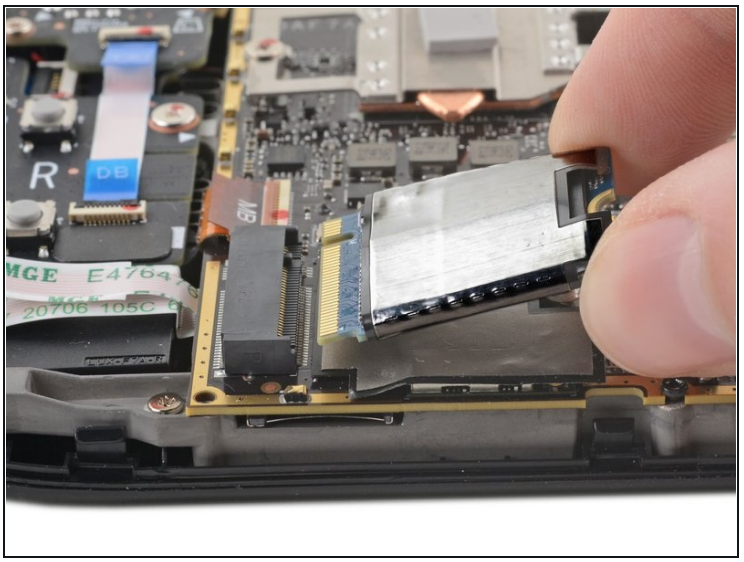
Step 9 — Remove the SSD screw



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

Step 10 — Remove the SSD



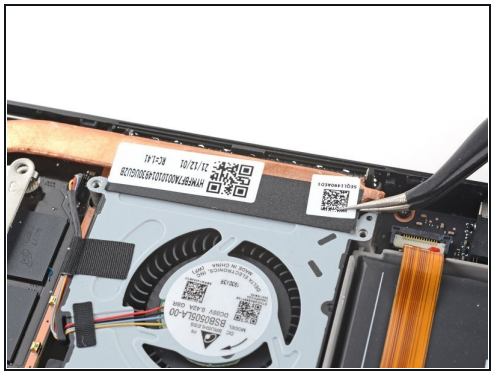


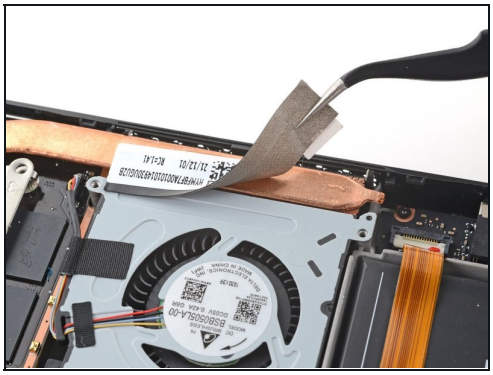
With the SSD screw removed, the SSD will pop up at a shallow angle.

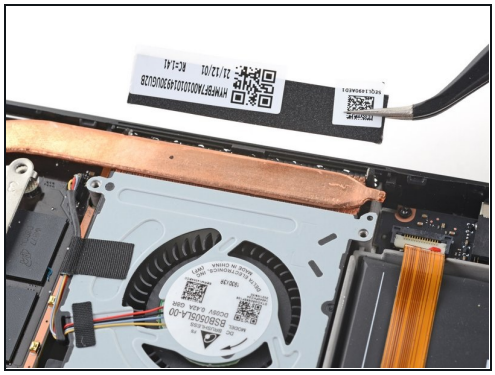
- Grip the end of the SSD and pull it away from its M.2 board connector to remove it.

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





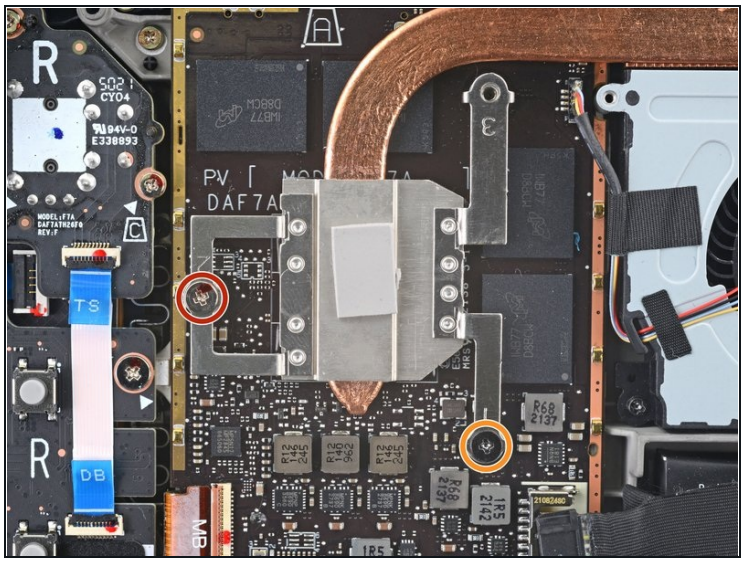


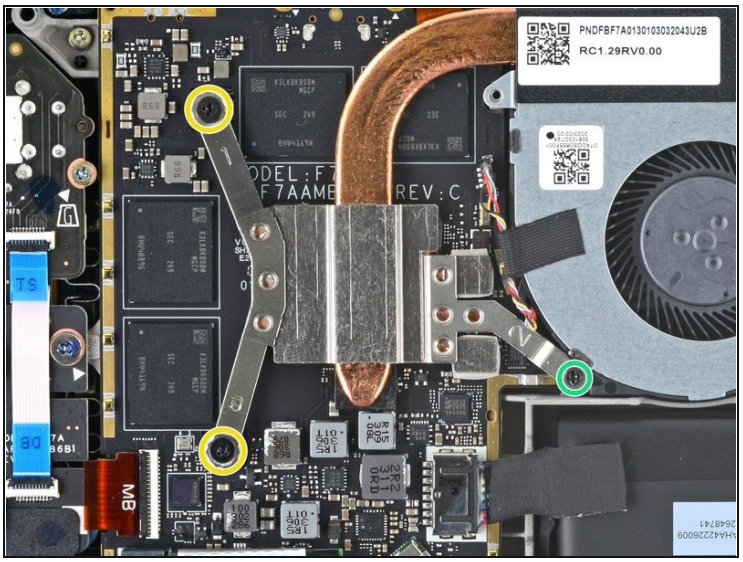
- Use a pair of tweezers to remove the sticker from the top edge of the fan.

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.

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





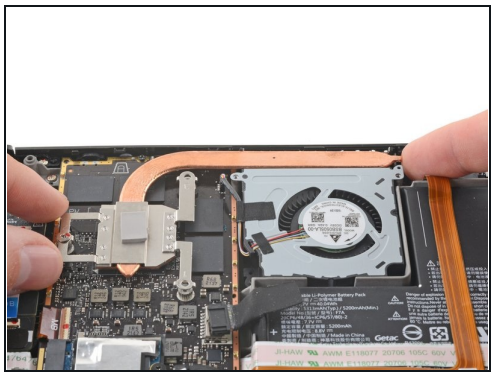
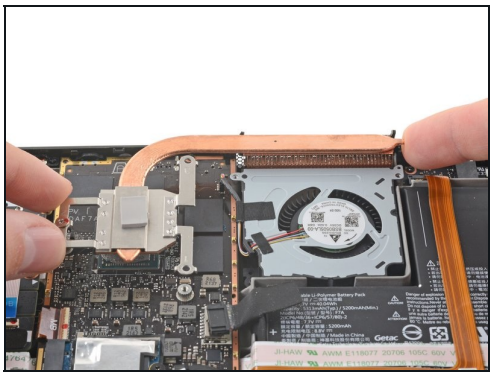
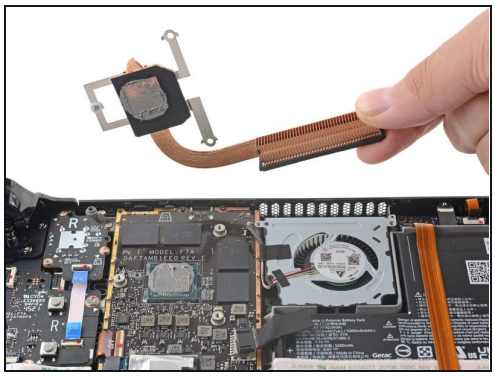
- **For original Steam Decks:** Use a Phillips driver to loosen and remove the two screws securing the heatsink to the motherboard:
  - One **captive** 3.5 mm screw
  - One 3.4 mm screw

ⓘ 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.

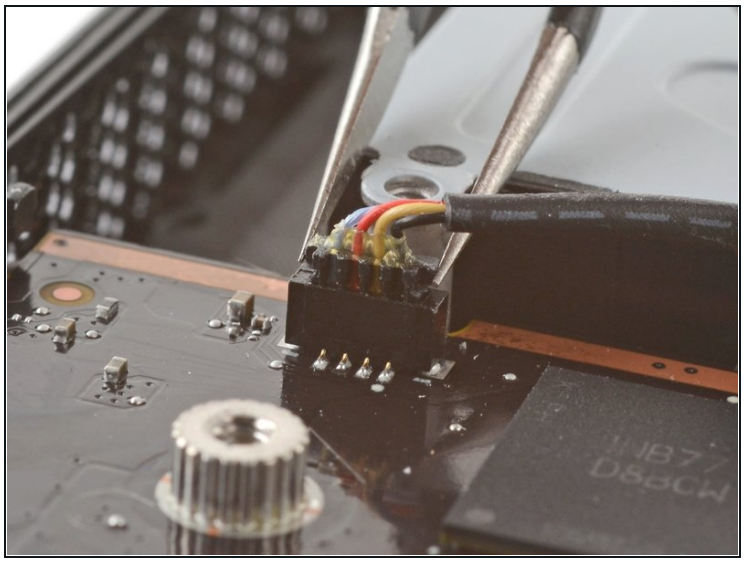
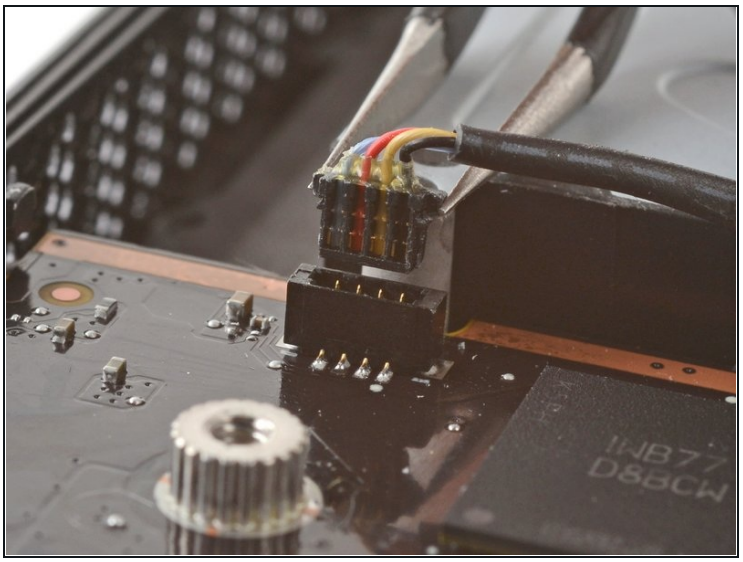
Step 13 — Remove the heatsink

- Lift and remove the heatsink.

Before reinstalling the heatsink, follow this guide to clean the heatsink and APU and reapply thermal paste.

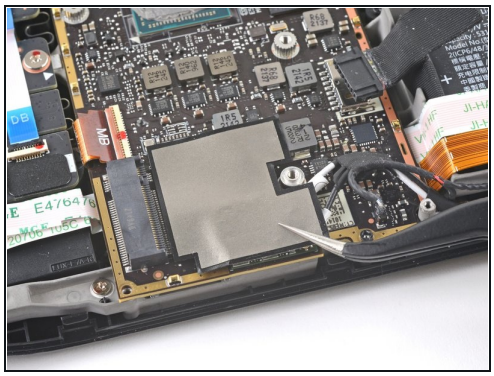
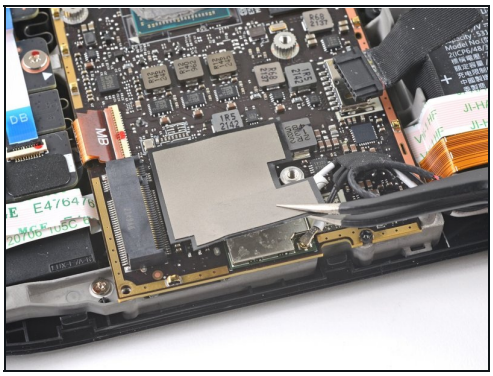
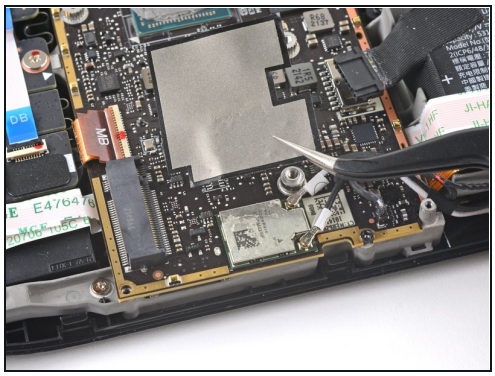
Step 14 — Disconnect the fan

- 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.

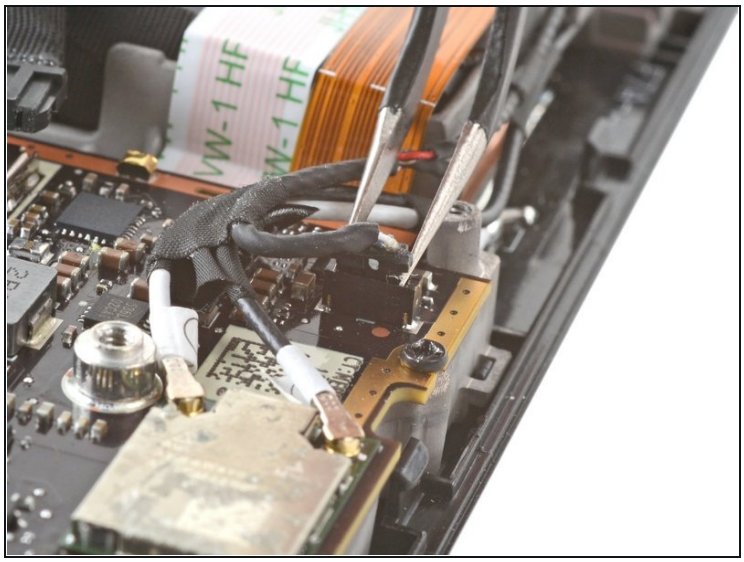
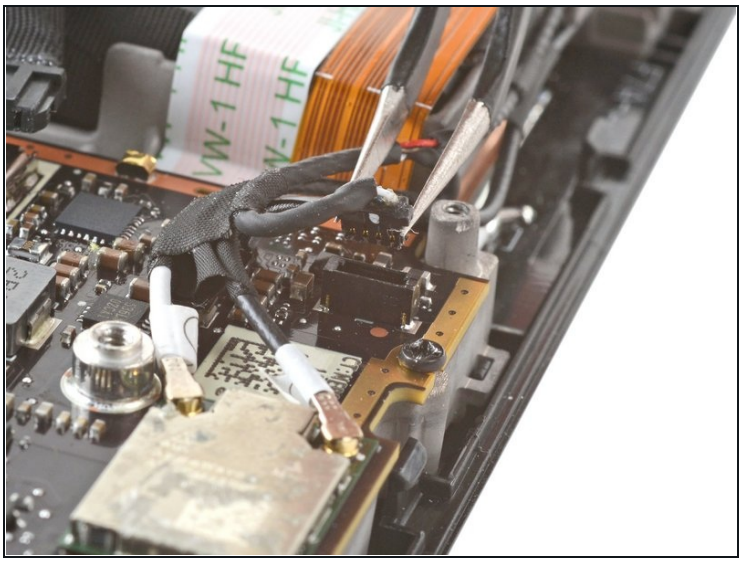
Step 15 — Remove the Wi-Fi shield tape

- Use a pair of tweezers to peel up and remove the Wi-Fi shield tape.

ⓘ 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.

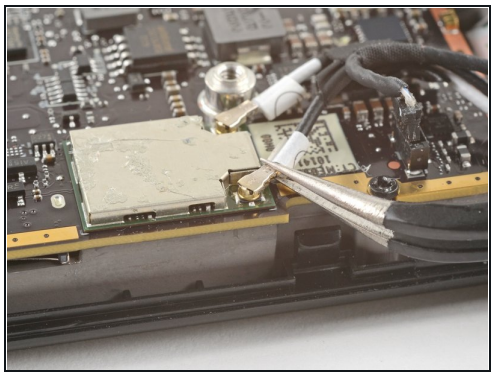
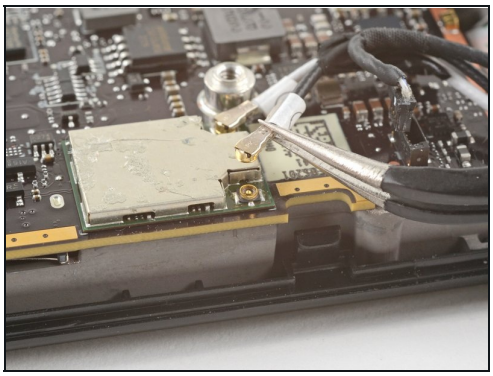
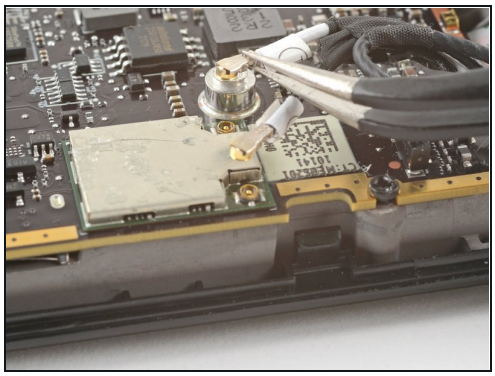
Step 16 — Disconnect the speakers

- 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

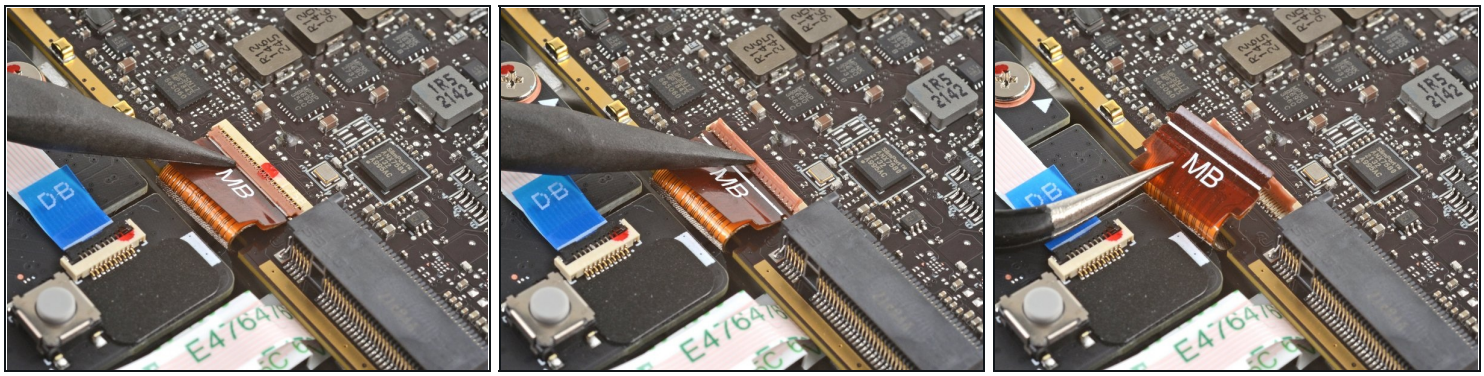
The Wi-Fi module is located next to the SSD on refreshed Steam Decks.

- 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.

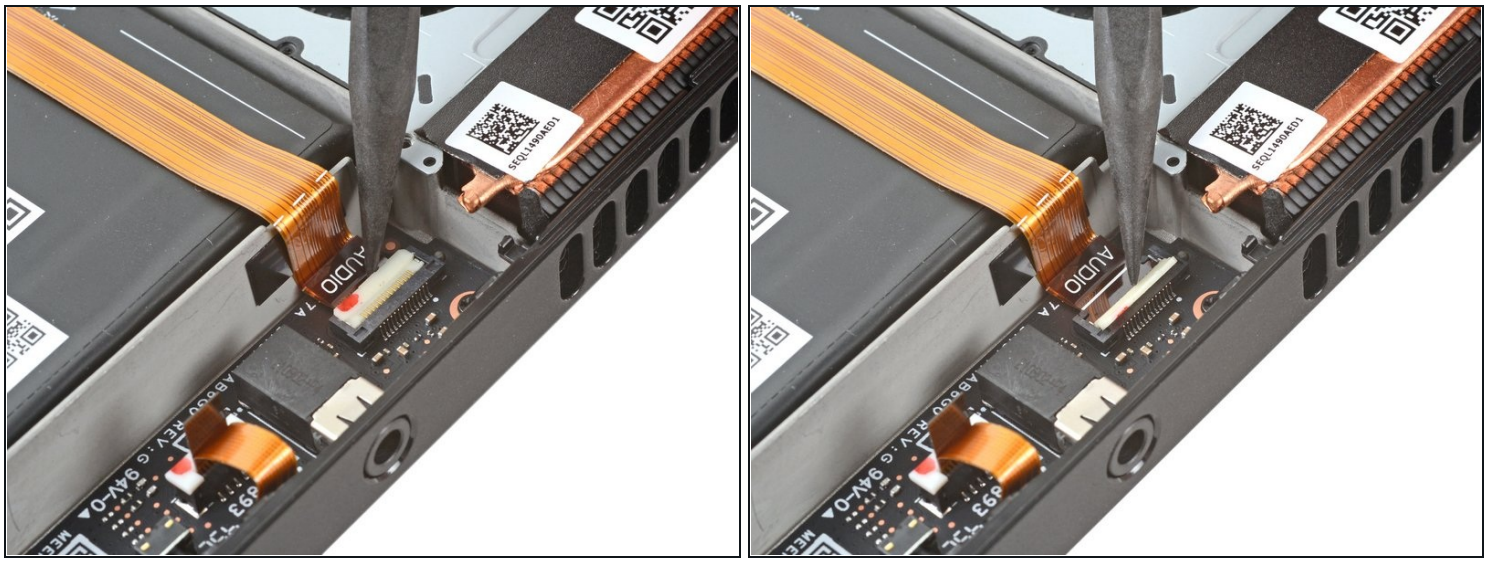
Step 18 — Disconnect the display



- 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.

ⓘ Grip the cable by the pull tab, not by the cable itself.

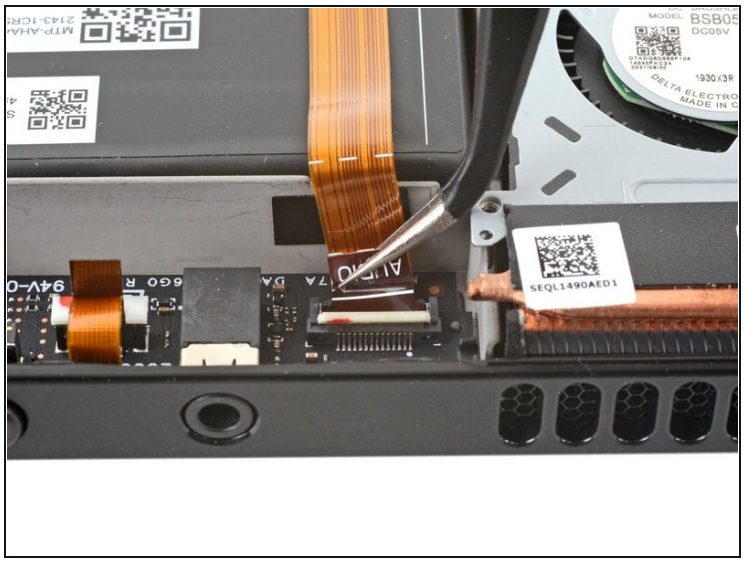
Step 19 — Disconnect the audio cable

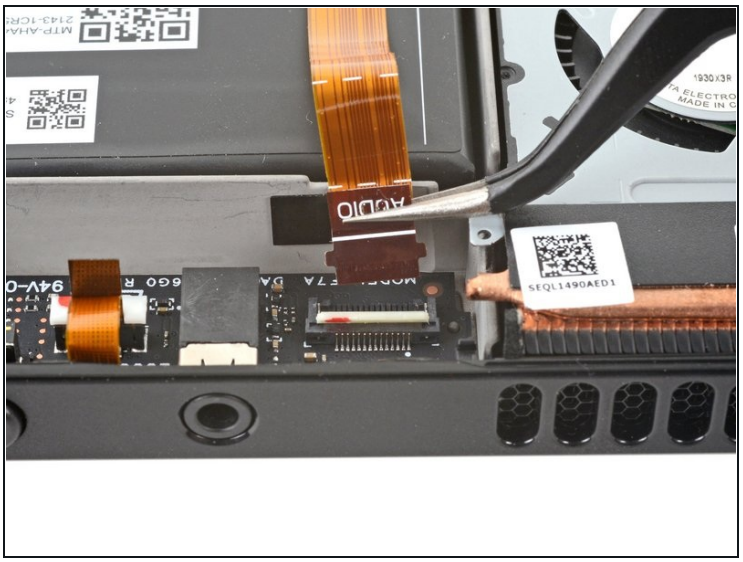


ⓘ Refreshed Steam Decks don't have this audio cable. If you have a refreshed version, skip the next three steps.

- Use the pointed end of a spudger to lift up the small locking flap on the audio cable's ZIF connector.

Step 20

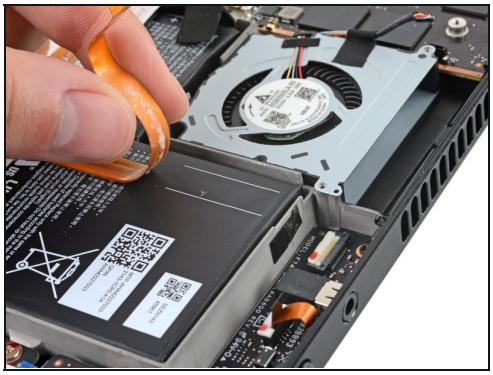


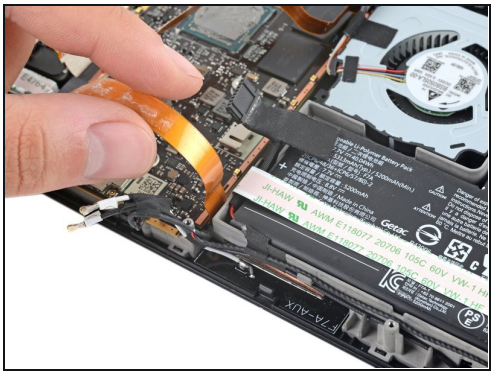


- Use a pair of tweezers to slide the cable out of its connector.

ⓘ Grip the cable by its pull tab, not by the cable itself.

Step 21



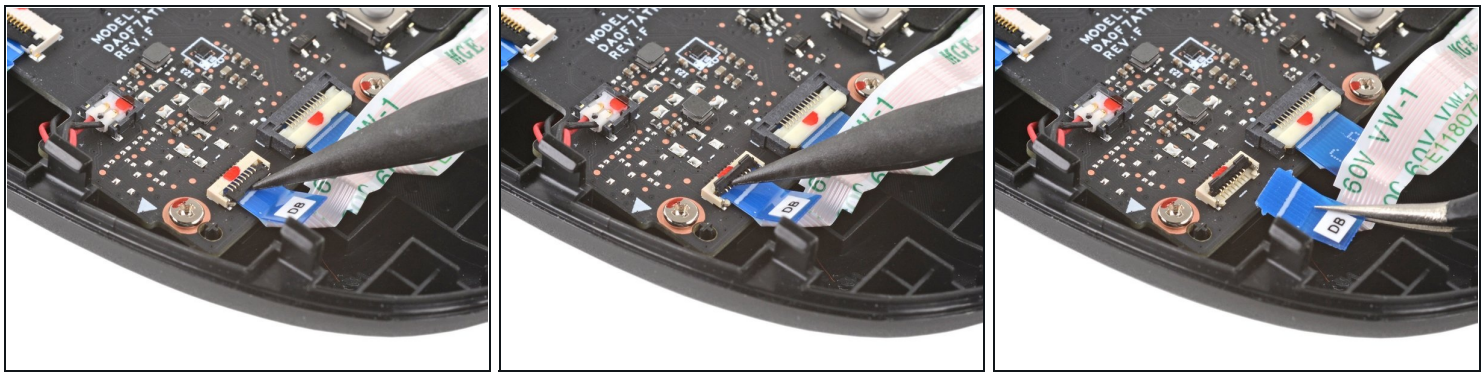


- Carefully peel the audio cable off of the battery.

ⓘ The audio cable is secured to the battery with some light adhesive.

ⓘ 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.

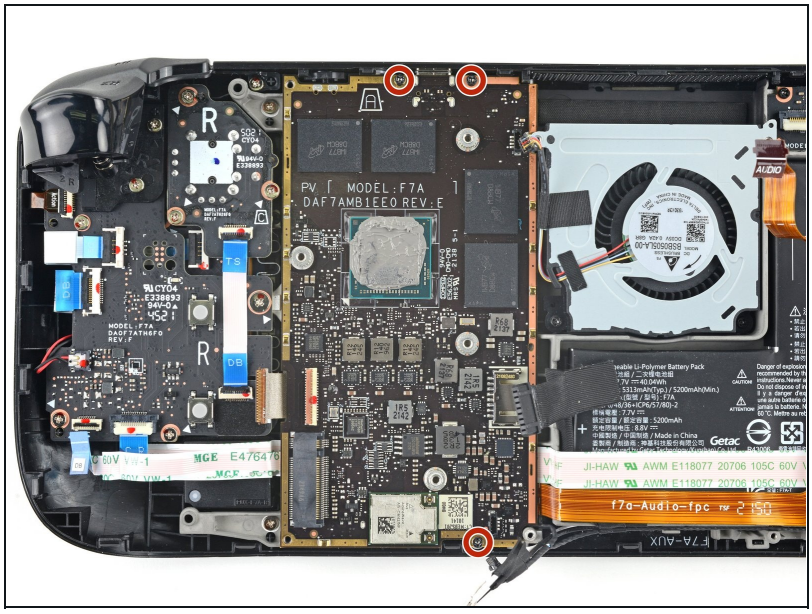
Step 22 — Disconnect the button board



- 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.

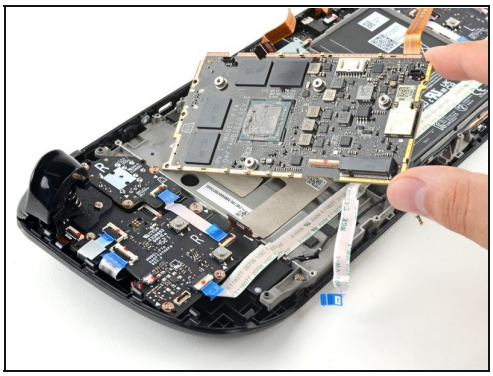
ⓘ Grip the cable by the blue pull tab, not by the cable itself.

Step 23 — Remove the motherboard screws



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

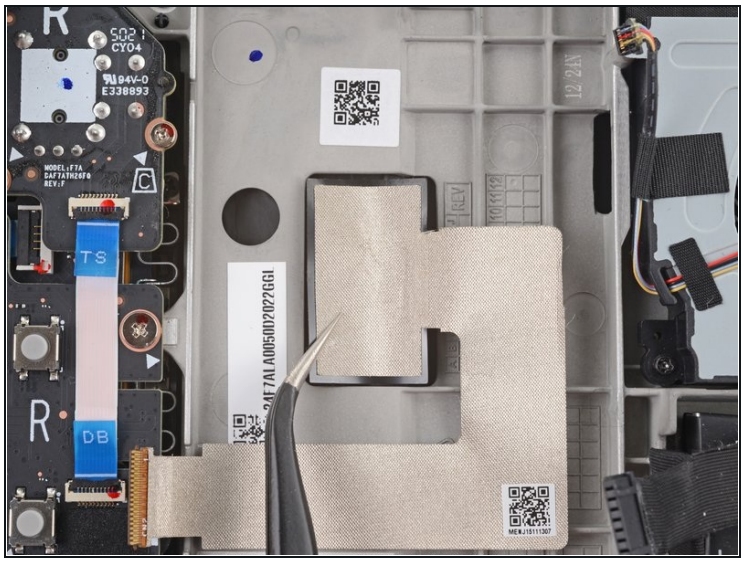
Step 24 — Remove the motherboard

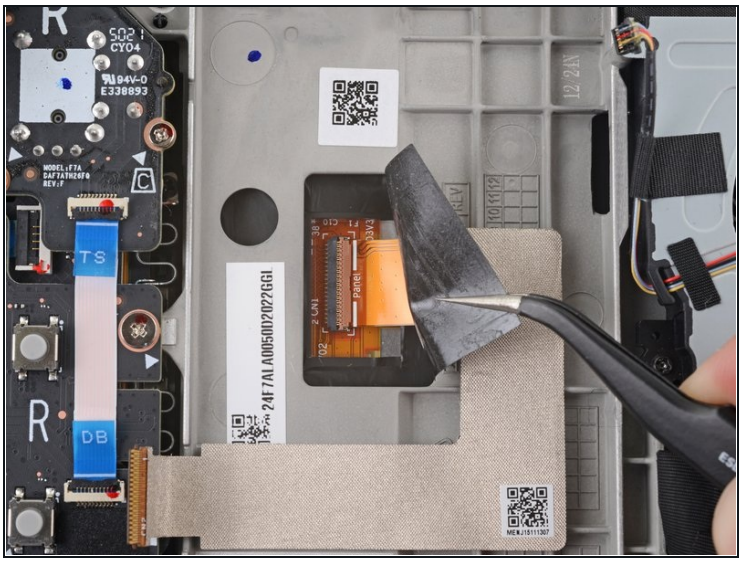


- Remove the motherboard.

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

Step 25 — Uncover the display connector





- Use a pair of tweezers to peel back the sticker covering the display connector.

ⓘ 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 26 — 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.

Step 27 — Heat the display adhesive

- Prepare an iOpener and apply it to the top edge of the display for one minute.
  - A hair dryer or heat gun may also be used, but be careful not to overheat the Steam Deck—displays and internal batteries are both susceptible to heat damage.

Step 28 — Apply a suction cup


- Apply a suction cup to the top left corner of the display by pressing down on it to create suction, as close to the edge as possible.

ⓘ If your screen is badly cracked, covering it with a layer of clear packing tape may allow the suction cup to adhere. Alternatively, very strong tape may be used instead of the suction cup. If all else fails, you can superglue the suction cup to the broken glass.

Step 29 — Insert an opening pick



- Pull up on the suction cup with strong, steady force to create a gap between the display and the frame.

- Insert the point of an opening pick into the gap.

⚠ Don't insert the pick more than 1/8 of an inch (~3 mm) or you risk damaging the display panel, ambient light sensor, or fragile cable underneath.

Step 30 — Begin to slice the adhesive



- Slide the opening pick across the top edge to slice the adhesive.

Step 31 — Heat the display adhesive

- Heat the right edge of the display for one minute.

Step 32 — Slice the right side adhesive

- Slide the opening pick down the right edge to slice the adhesive.

Step 33 — Heat the display adhesive

- Heat the bottom edge of the display for one minute.

Step 34 — Slice the bottom side adhesive

- Slide the opening pick across the bottom edge to slice the adhesive.

Step 35 — Heat the display adhesive

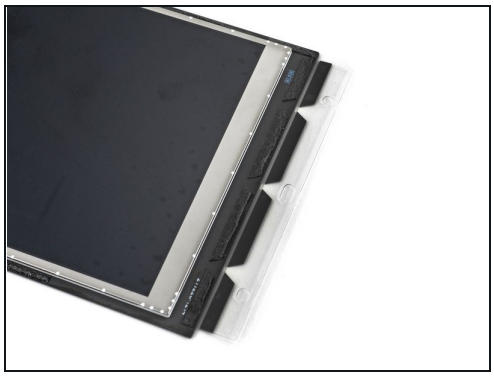
- Heat the left edge of the display for one minute.
- Slide the opening pick across the left edge to slice the adhesive.

Step 36 — Lift up the display



- Once you have sliced around the perimeter of the display, carefully lift the right edge up, opening it like a book.
- Remove the display.

Step 37 — Identify the adhesive strips and their locations



During reassembly:

- Look over the new display adhesive and match each strip to its respective side of the display.

Step 38 — Prepare the surfaces

ⓘ To ensure a good adhesive bond, thoroughly clean all adhesion surfaces.

- Remove large chunks of adhesives with the flat end of a spudger or plastic opening tool.

  ⚠ Don't use metal tools, as they can scratch the surface.

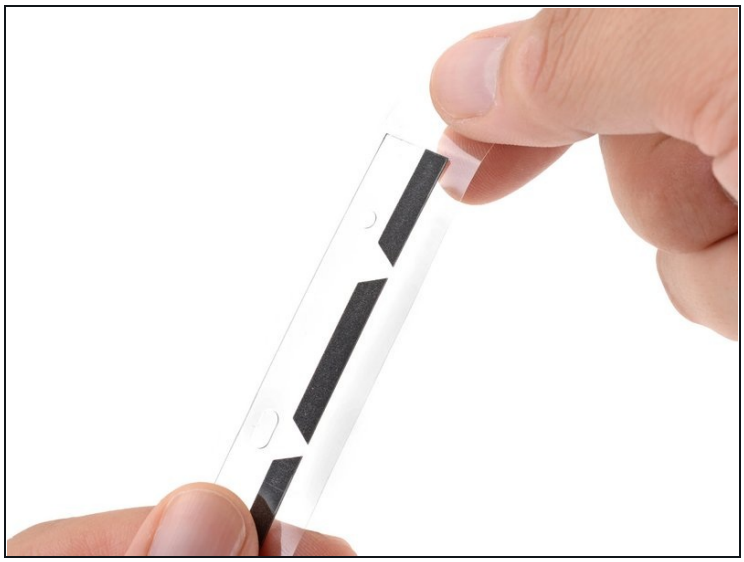
Step 39

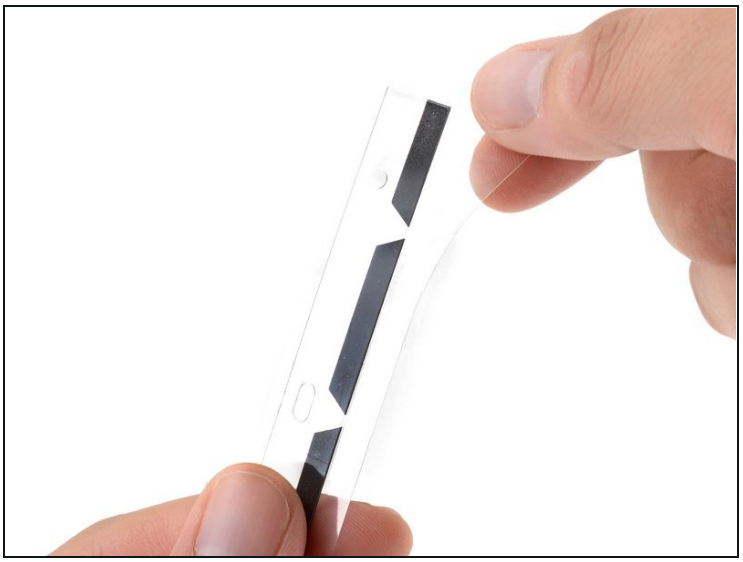
- Use adhesive remover or isopropyl alcohol (>90%) to remove any remaining residue. Wipe in one direction with a lint-free cloth or coffee filter until all the adhesive residue is gone.

ⓘ While isopropyl alcohol is generally safe to use on electronics, they will dissolve certain foam adhesives. Be careful to contain the alcohol when cleaning—don't use too much.

- Allow any leftover isopropyl alcohol to completely evaporate before reassembly.

Step 40 — Remove the adhesive liner



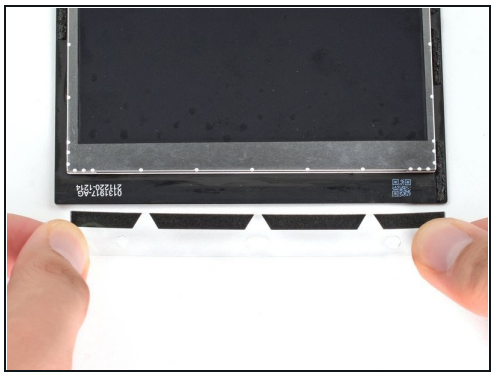
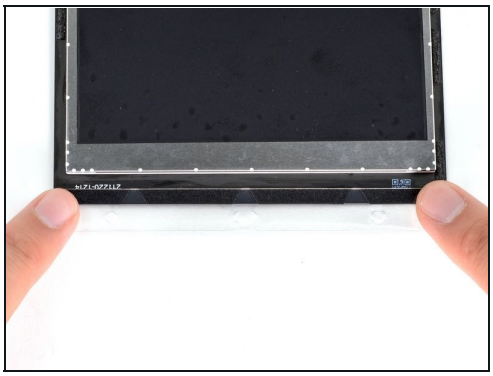
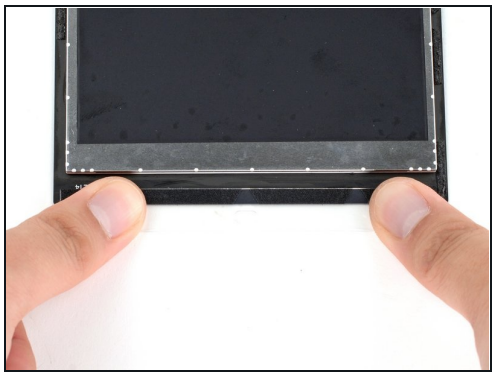


ⓘ Before you peel any liners, locate the surface the sticky side should adhere to.

- Once you have a good idea of where the adhesive strip goes, peel off and discard the liner, exposing the adhesive underneath.

ⓘ Be careful with exposed adhesives. Most of the time, you can't peel and reapply adhesive strips if they're stuck to the wrong spot.

Step 41 — Align and place the adhesive strips

Hold the exposed strip by its tabs and carefully line up the edge of the adhesive to the outer edge of display.

Use your old display as a reference for where the new adhesive strips should be applied on the new display's edges.

Be careful with alignment. Most of the time, you can't peel and reapply adhesive strips if they stick misaligned.

- Set the adhesive onto the surface and press firmly with your fingers to set it in place.
- Repeat the previous two steps for the three other display adhesive strips.

Step 42 — Peel off the last adhesive liners

- Peel off and discard the remaining plastic liners on all four strips, exposing the adhesive underneath.
- Repeat for all **four** display adhesive strips, being careful not to touch any exposed adhesives.

Step 43 — Install the new display

- Set the new display in place on the midframe and press firmly along the edges for 20-30 seconds to ensure a good adhesive bond.

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.