



Nintendo Switch Midframe Replacement

Outside of catastrophic impact damage, the main...

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INTRODUCTION

Outside of catastrophic impact damage, the main reason to replace a midframe on a Nintendo Switch is because the joy-con mounting rail has been brutally ripped from the midframe, leaving no solid mounting for a replacement rail available.

In order to restore the security of the joy-con mount, it is necessary to replace the entire midframe, and this guide will step you through the procedure.

Note: When you remove the shield plate, you'll need to replace the thermal compound between the plate and the heatsink. Since normal thermal paste isn't designed to bridge large gaps, the closest replacement is K5 Pro viscous thermal paste. You will, however, need regular replacement thermal paste for the CPU.



TOOLS:

[ESD Safe Blunt Nose Tweezers](#) (1)
[iOpener](#) (1)
[Suction Handle](#) (1)
[Tweezers](#) (1)
[Spudger](#) (1)
[Microfiber Cleaning Cloths](#) (1)
[Isopropyl Alcohol](#) (1)
[K5-PRO Viscous Thermal Paste](#) (1)
[Thermal Paste](#) (1)
[iFixit Opening Tool](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Plastic Cards](#) (1)
[Tri-point Y00 Screwdriver](#) (1)
[JIS #000 Screwdriver](#) (1)



PARTS:

[Tesa 61395 Tape](#) (1)
[Nintendo Switch Midframe](#) (1)

Step 1 — Release the Joy Con controller locking tabs



ⓘ Before you begin this repair, make sure the device is completely powered off.

- Press and hold down the small round button on the back of the Joy Con controller.
- While you hold down the button, slide the controller upward.

Step 2 — Remove the Joy Con controllers



- Continue sliding the Joy Con upward until it's completely removed from the console.
- ⓘ Repeat this same process for the other Joy Con.

Step 3 — Remove the back-side screws



- Use a Y00 screwdriver to remove the four 6.3 mm-long screws securing the rear panel.
- ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

Step 4 — Remove the top and bottom screws



- Use a JIS 000 driver or an official iFixit PH 000 driver to remove the following screws securing the rear panel:
 - One 2.5 mm-long screw on the top edge of the device
 - Two 2.5 mm-long screws on the bottom edge of the device
- ⓘ To prevent these tight screws from [stripping](#), apply firm downward force, work slowly and try another JIS 000 or PH 000 driver if the screws won't come out.

Step 5



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the two 3.8 mm center screws on the sides of the device (one on each side).

Step 6



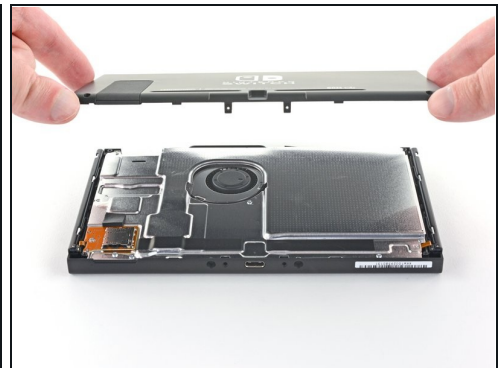
- Use your finger to flip up the kickstand on the back of the device.
 - ① If there's a microSD card in the microSD card slot, remove it now before you continue to the next step.

Step 7



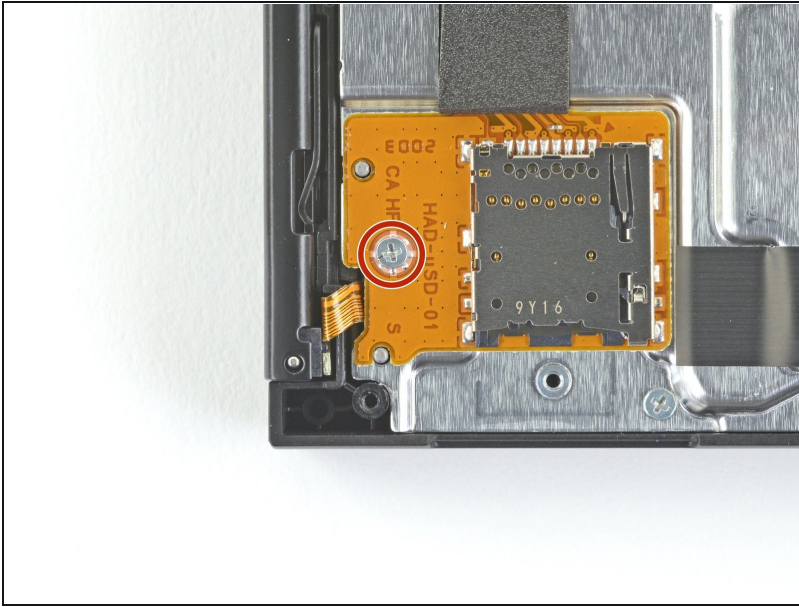
- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the 1.6 mm screw in the kickstand well.
- Close the kickstand.

Step 8



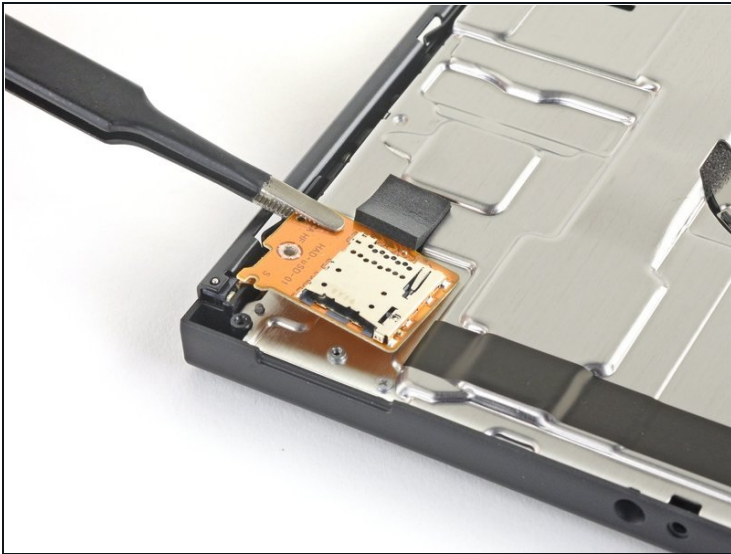
- Open the game card cartridge flap.
 - ① The game card cartridge flap attaches to the other half of the plastic shell, preventing you from completely lifting up the rear panel if it's closed.
- Lift the rear panel up from the bottom of the device and remove it.

Step 9 — Remove the microSD card reader



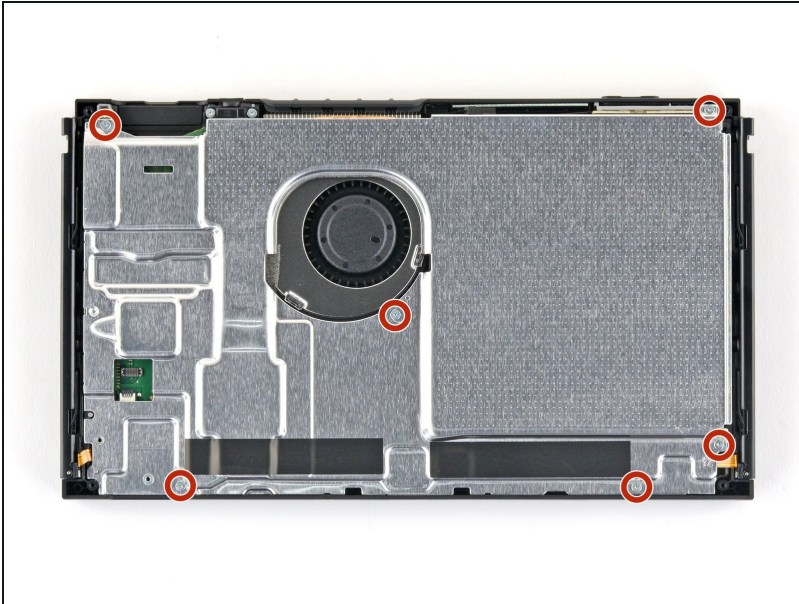
- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the 3.1 mm screw securing the microSD card reader to the device.

Step 10



- Use your fingers or a pair of tweezers to lift the microSD card reader straight up from the device to disconnect and remove it.
- ☑ During reassembly, make sure the press connector underneath the foam pad is firmly connected to the motherboard. It may help to remove the foam pad before reinstalling the card reader.

Step 11 — Remove the shield plate



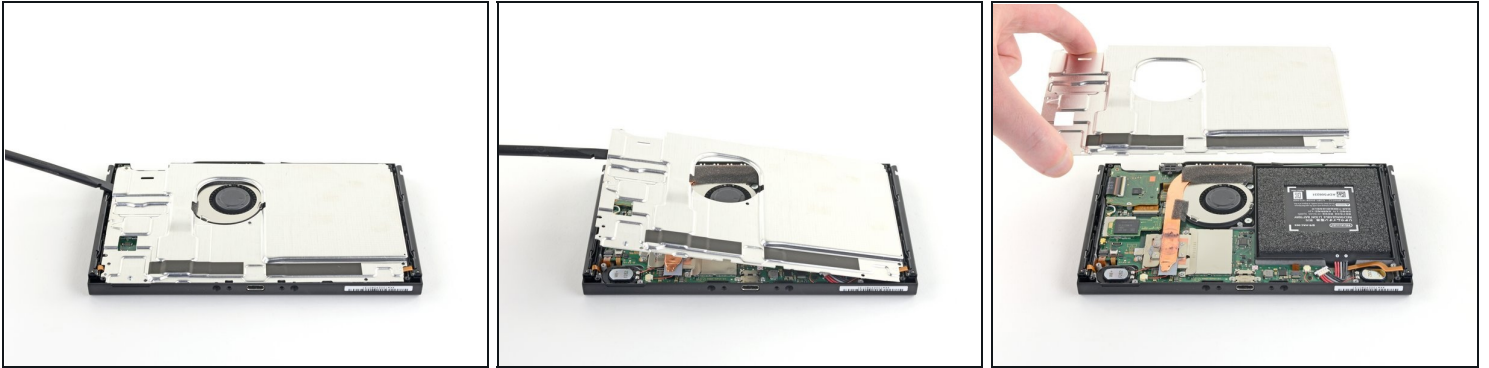
- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the six 3 mm screws securing the shield plate to the device.

Step 12



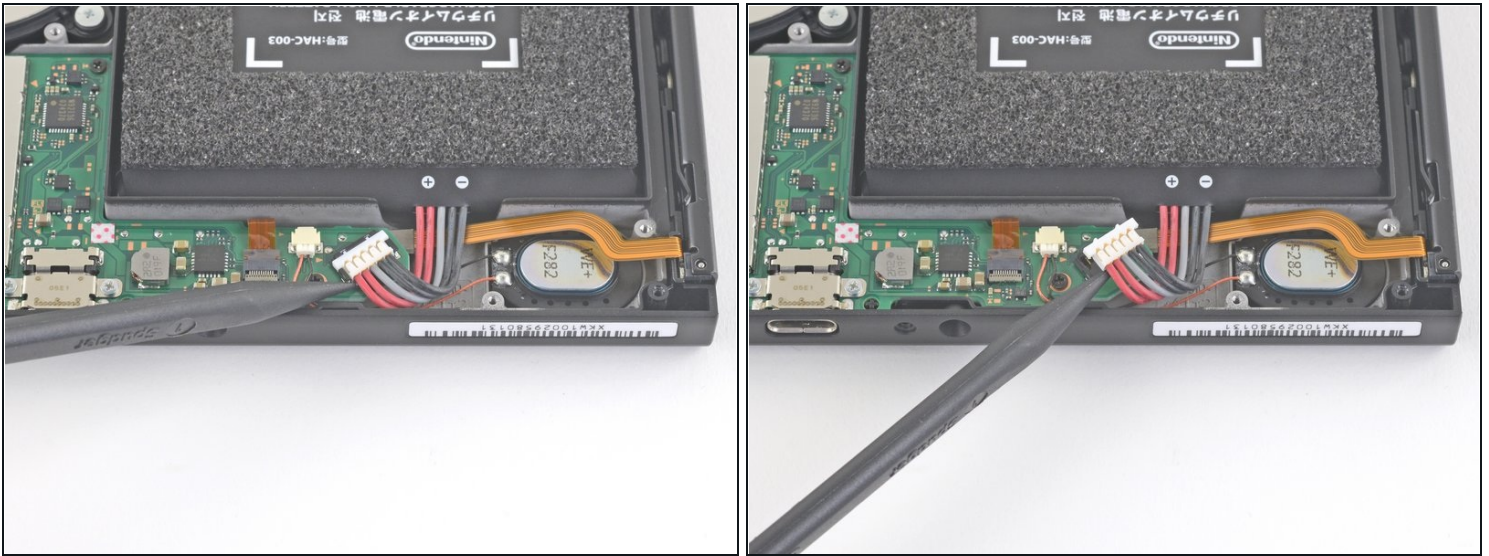
- Use your fingers or a pair of tweezers to peel back the piece of foam on the top edge of the device near the fan exhaust port.
⚠ If the foam doesn't easily peel away, don't force it as it might end up tearing. Carefully peel at different spots to pull back the foam.

Step 13



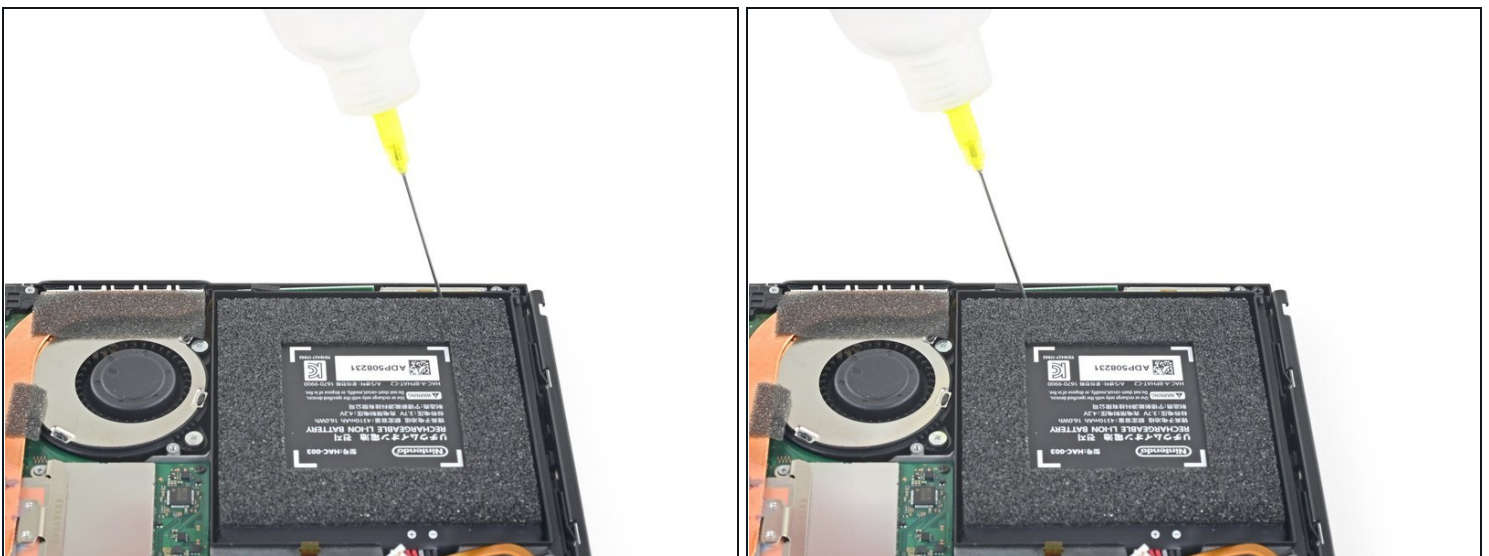
- Insert a spudger underneath the shield plate along the edge of the device.
- Pry up to lift the shield plate and remove it from the device.
 - ① You may feel a bit of resistance. This is normal, since the shield plate is slightly bonded to the heat sink with thermal paste.
- ① A thick pink thermal compound bridges the gap between the shield plate and the copper heat sink underneath. This helps prevent the Switch from overheating.
 - You can reuse the pink thermal compound if you're careful. Keep the compound clean and make sure it makes solid contact between the heat sink and the shield during reassembly.
 - If you need to replace it, refer to our [thermal paste guide](#) to remove the old thermal compound and replace it with an appropriate compound, such as [K5 Pro](#), during reassembly.

Step 14 — Disconnect the battery



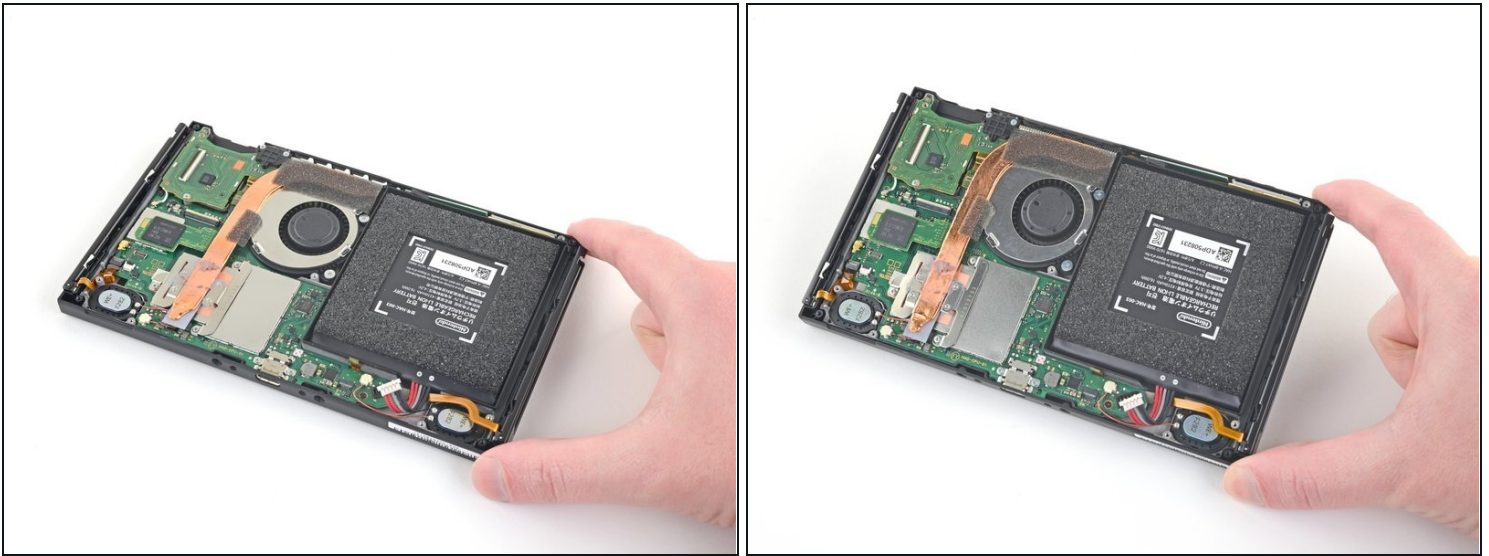
- Use the point of a spudger to pry the battery connector straight up and out of its socket on the motherboard.

Step 15 — Remove the battery



- Apply a few drops of [adhesive remover](#) or high-concentration (90% or higher) isopropyl alcohol inside the battery well along the top edge to weaken the adhesive.
- ❗ If you are using adhesive remover, [follow these preparation steps first](#).

Step 16



- Tilt the top edge of the device upward to allow the isopropyl alcohol to work its way underneath the battery.
- Hold for 1-2 minutes to allow time for the isopropyl alcohol to weaken the adhesive.

Step 17



- Insert an opening pick into the gap between the battery and the wall of the battery well.
- Carefully dig the tip of the opening pick underneath the battery and slide it along the edge to begin slicing the adhesive.

⚠ Take care not to puncture or bend the battery with your tool—a punctured or bent battery may leak dangerous chemicals or cause a thermal event.

Step 18



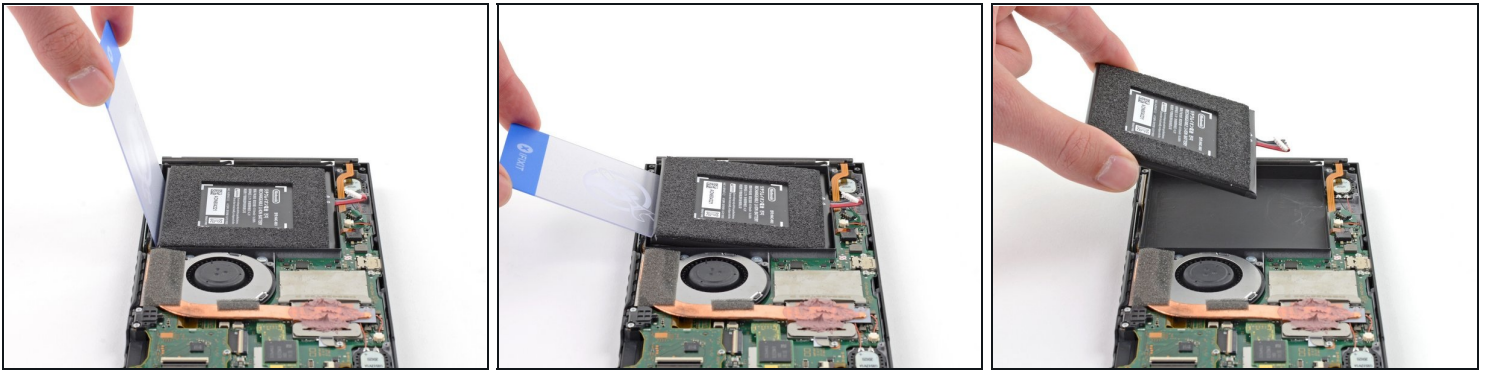
- Leave the opening pick in place and apply a few more drops of adhesive remover or isopropyl alcohol inside the battery well.
- Tilt the top edge of the device upward and wait 1-2 minutes for the isopropyl alcohol to weaken the adhesive.

Step 19



- Continue sliding the opening pick deeper along the top edge of the battery, slicing more of the adhesive underneath.

Step 20



- Once there's enough room, insert a [plastic card](#) underneath the battery and slowly pry the battery up.

ⓘ You may need to apply more isopropyl alcohol if you have difficulty prying.

⚠ Be careful not to bend the battery as you pry.

- Remove the battery.

⚠ Do not reuse the battery after it has been removed, as doing so is a potential safety hazard. Replace it with a new battery.

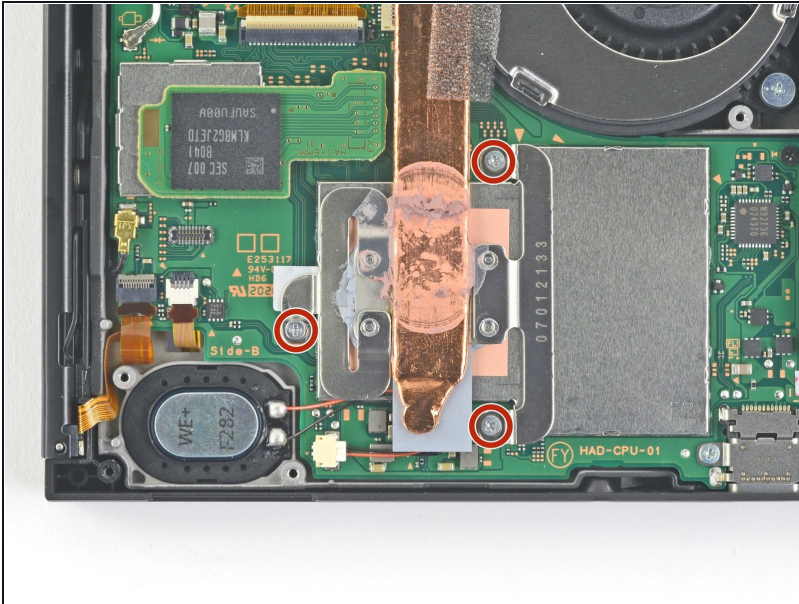
Step 21



- Use adhesive remover or isopropyl alcohol and a [microfiber cloth](#) to clean up any remaining adhesive left behind in the battery well before you install the new battery.

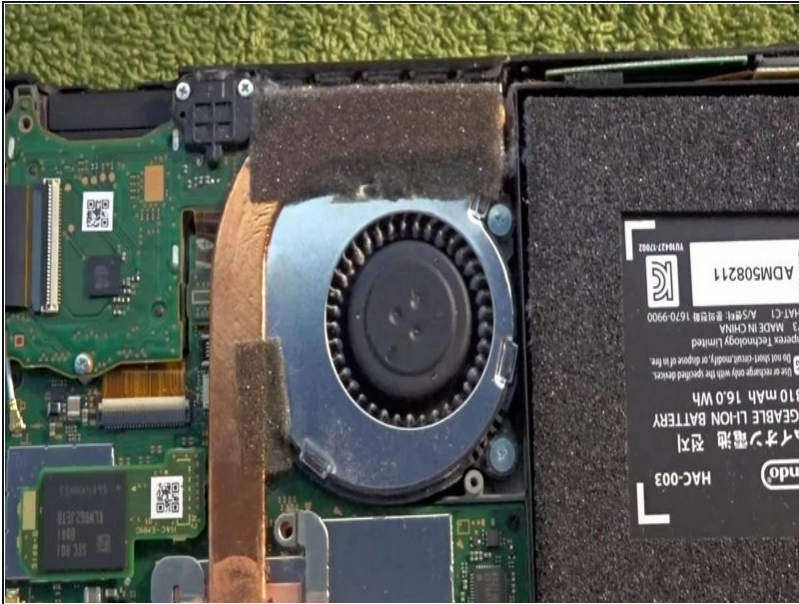
ⓘ If your new battery does not come with pre-installed adhesive, [follow this guide to install pre-cut adhesive](#) on the bottom of the battery.

Step 22 — Remove the heat sink



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the three 3 mm screws securing the heat sink to the motherboard.

Step 23



- Carefully peel the two foam pieces stuck over both the heatsink and the fan away from the fan.

i The foam only needs to be peeled back enough to clear the fan.

⚠ The foam is really delicate and tears easily. Use the following technique to peel the foam:

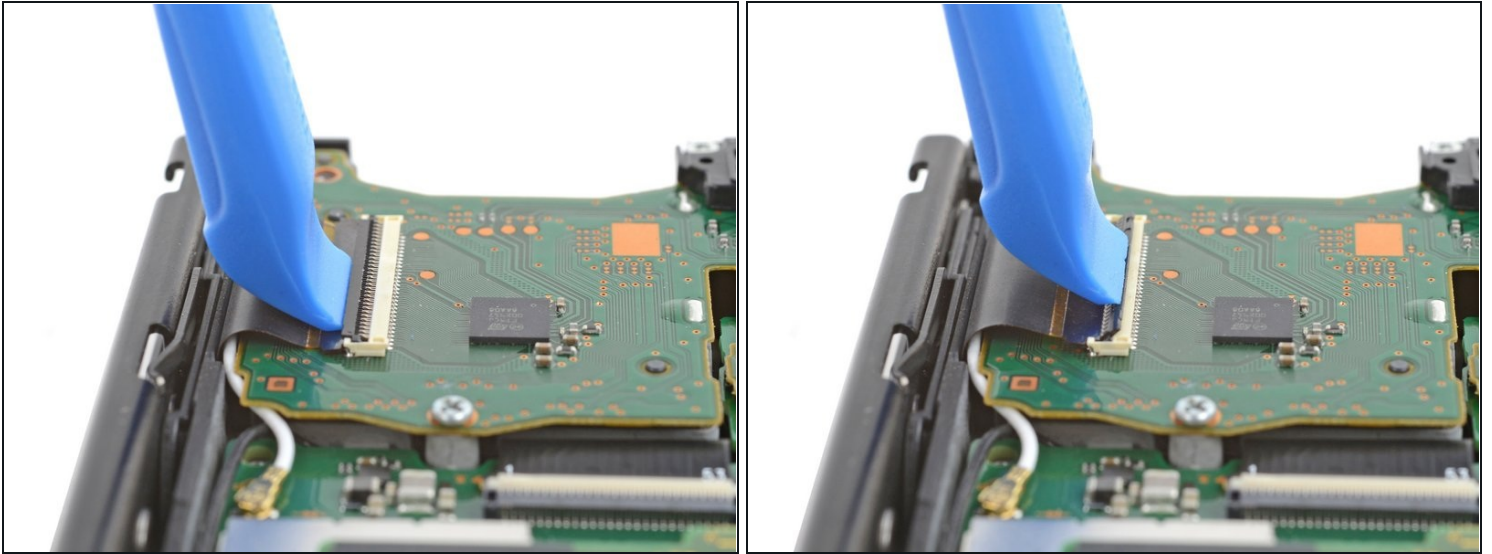
- Insert the point of a spudger underneath the part of the foam that isn't stuck against anything,
- Press the top of the foam with your finger to hold it in place.
- Roll the spudger tip underneath the foam all the way to the other end of the foam to release it.

Step 24



- Use a spudger or your fingers to lift the heatsink up and off the motherboard to remove it.
 - ⓘ You may feel a bit of resistance. This is normal, since the heat sink is slightly bonded to the CPU with thermal paste.
- ★ Clean off the old thermal paste from the heat sink and CPU using high-concentration (90% or higher) isopropyl alcohol and a microfiber cloth. [Apply new thermal paste](#) to the CPU before reassembly.
- Apply thermal paste to all surfaces that had thermal paste applied previously. This includes between the heatpipe and aluminum shield, which the Switch uses as additional heatsinking.

Step 25 — Remove the headphone jack and game card reader



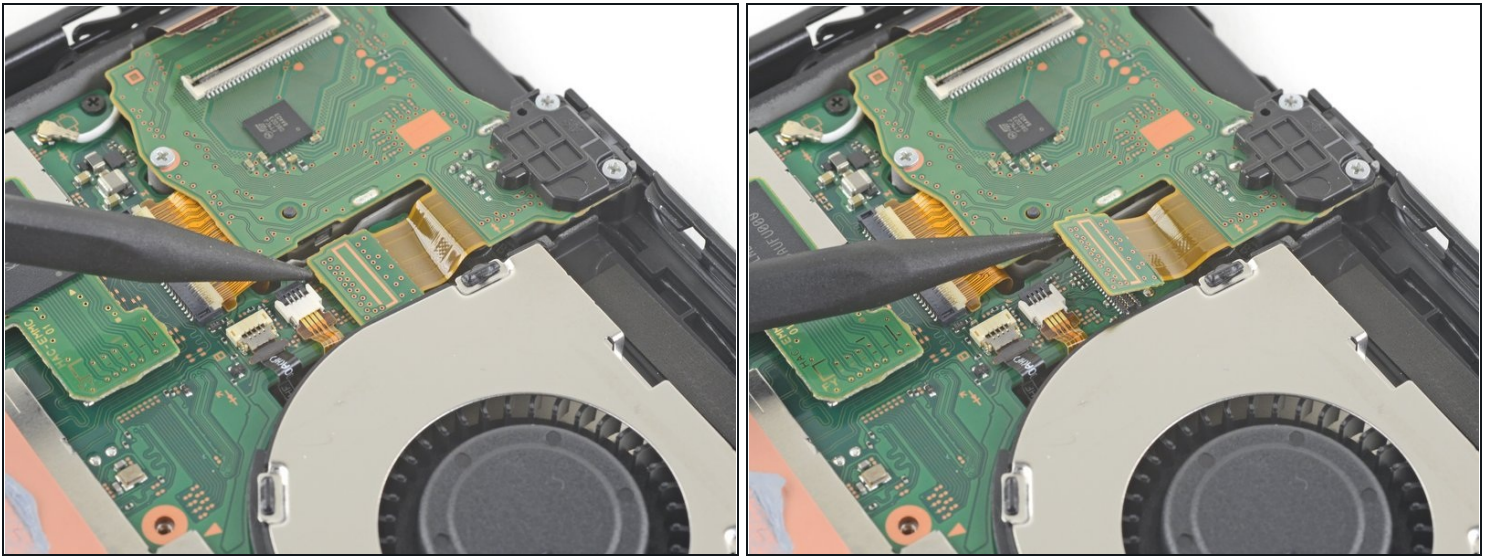
- Use an opening tool or your fingernail to flip up the small, hinged locking flap on the digitizer cable's [ZIF connector](#).

Step 26



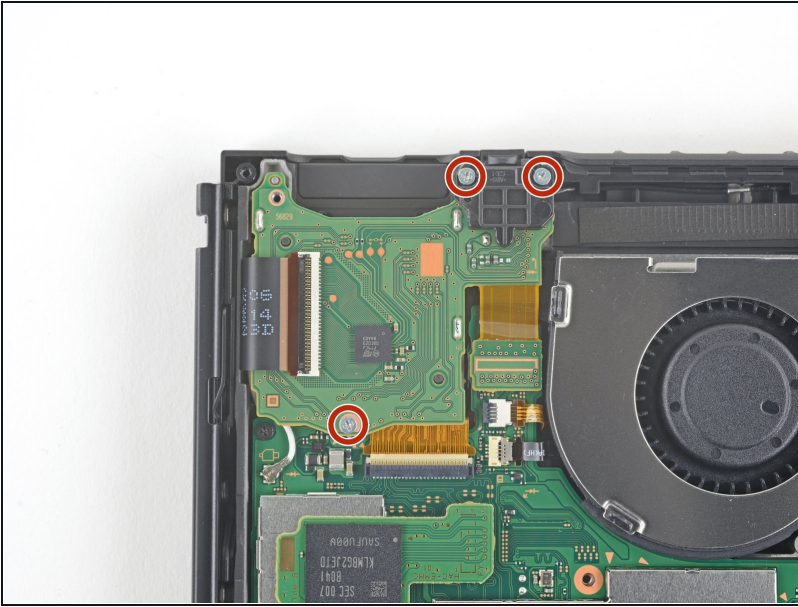
- Use a pair of tweezers to slide the digitizer cable horizontally out of its connector on the game card reader board.
- ☑ Before inserting the cable during reassembly, make sure the ZIF connector locking flap is [flipped up](#).
- ☑ With the cable **parallel to the board**, gently slide it into its connector.
 - ⚠ **Don't force the cable into the connector. If it doesn't insert, ensure the locking flap is flipped up, reposition the cable, and try again.**
- ⓘ If your touchscreen doesn't work after the repair but your Game Card reader does, make sure this cable is properly inserted. If your Game Card reader also doesn't work, check the Game Card connector in the next step instead.

Step 27



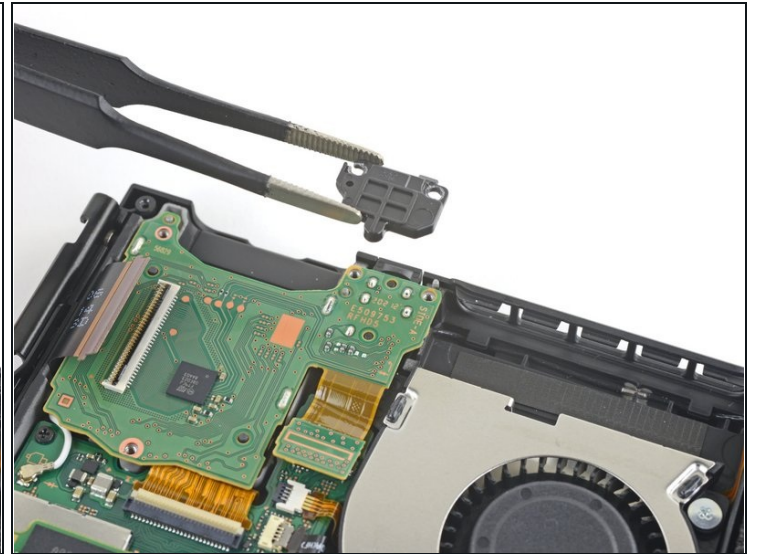
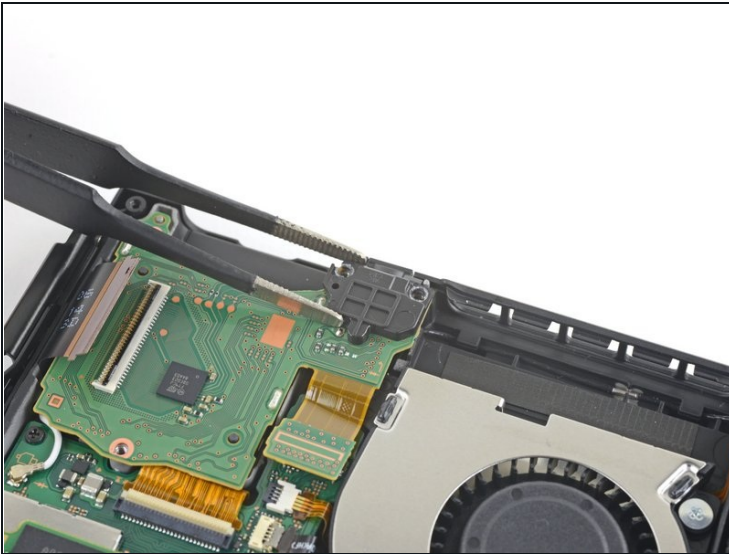
- Use the point of a spudger to pry the headphone jack and game card reader connector straight up to disconnect it from the motherboard.
- ☑ To re-attach [press connectors](#) like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend and cause permanent damage.
- ⓘ If the touch screen doesn't work and/or game cards aren't detected after reassembly, you might have not fully reconnected this press connector. Carefully disconnect it and try again.

Step 28



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the three 3.1 mm screws securing the headphone jack and game card reader board to the device.

Step 29



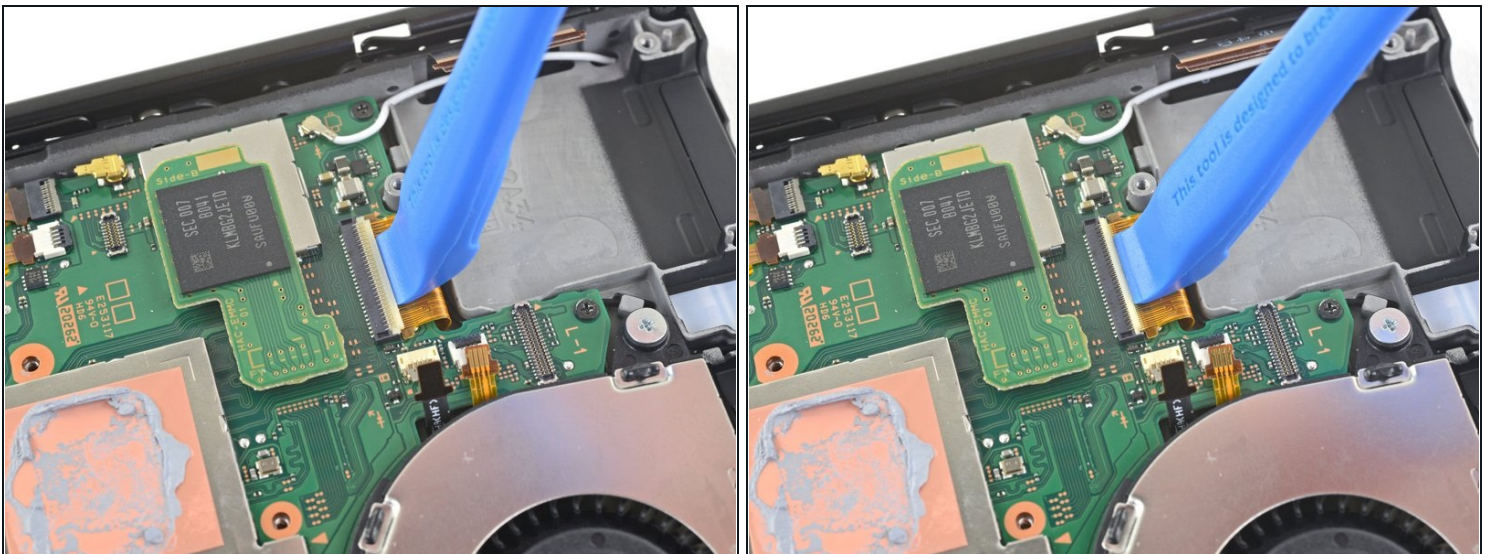
- Use a pair of tweezers or your fingers to remove the headphone jack bracket.

Step 30



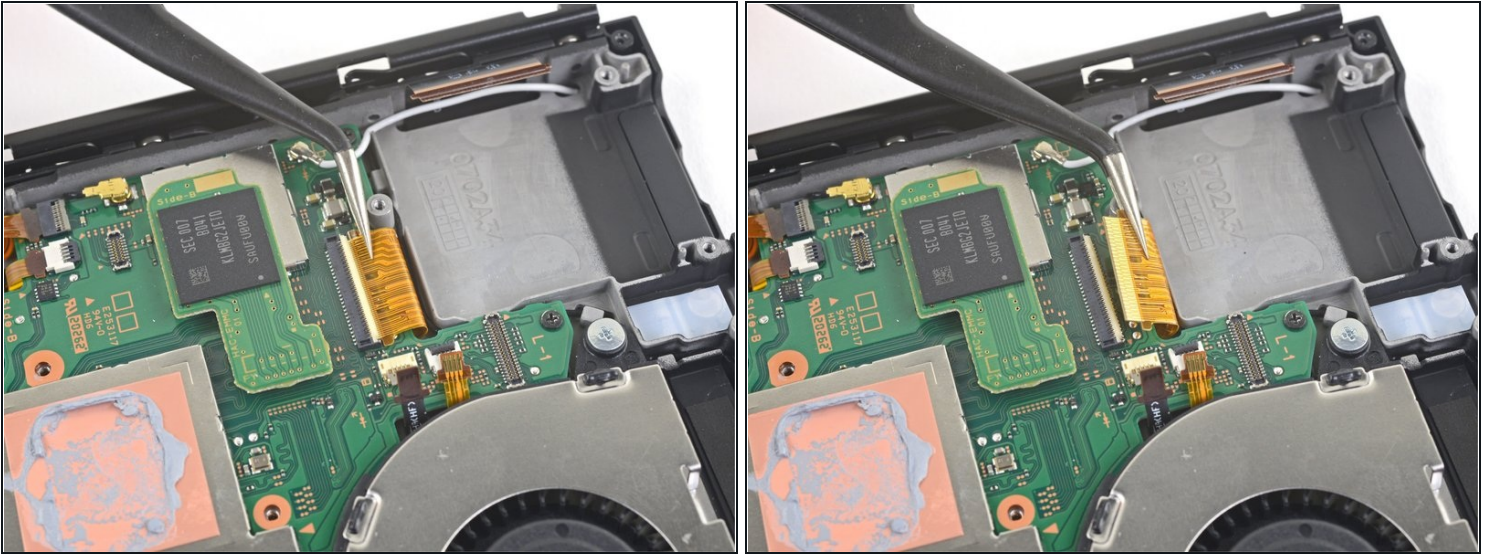
- Use a pair of tweezers or your fingers to remove the headphone jack and game card reader board.

Step 31 — Remove the motherboard



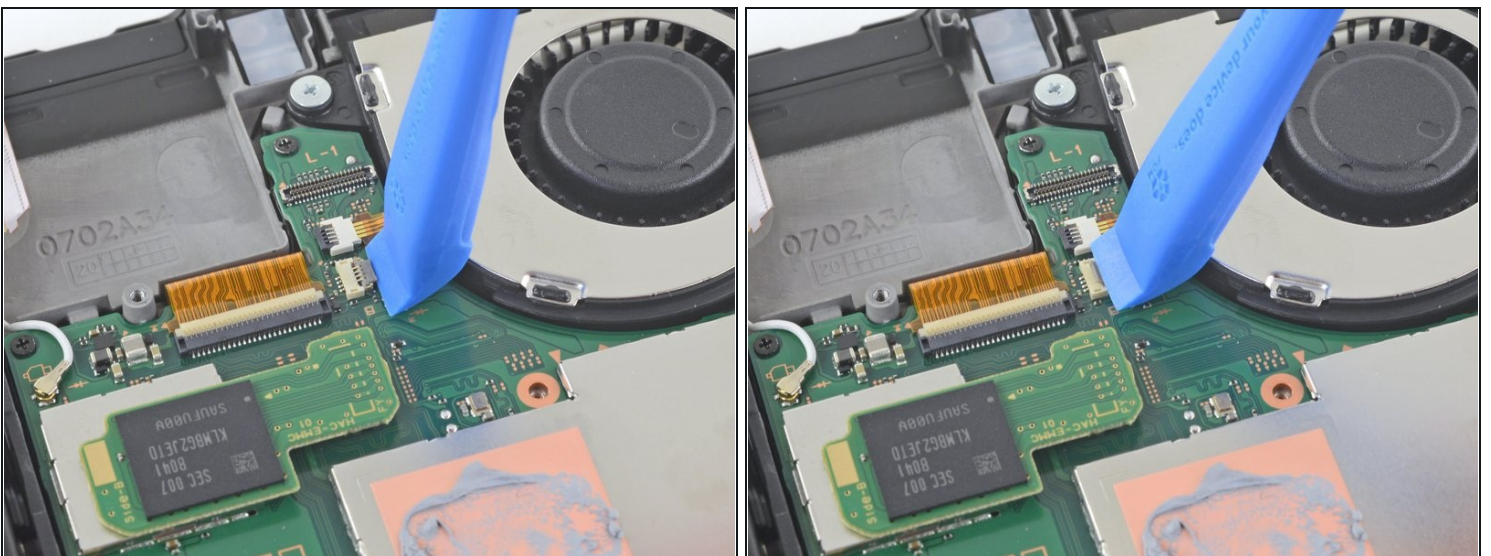
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the LCD ribbon cable [ZIF connector](#).

Step 32



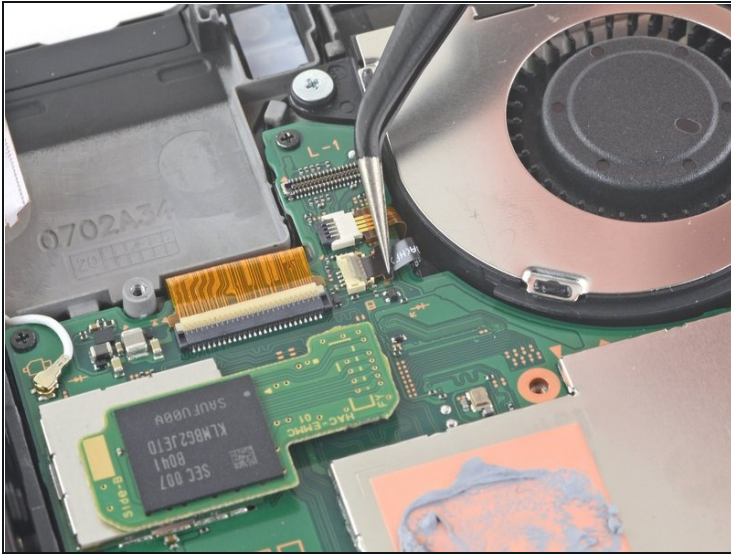
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 33



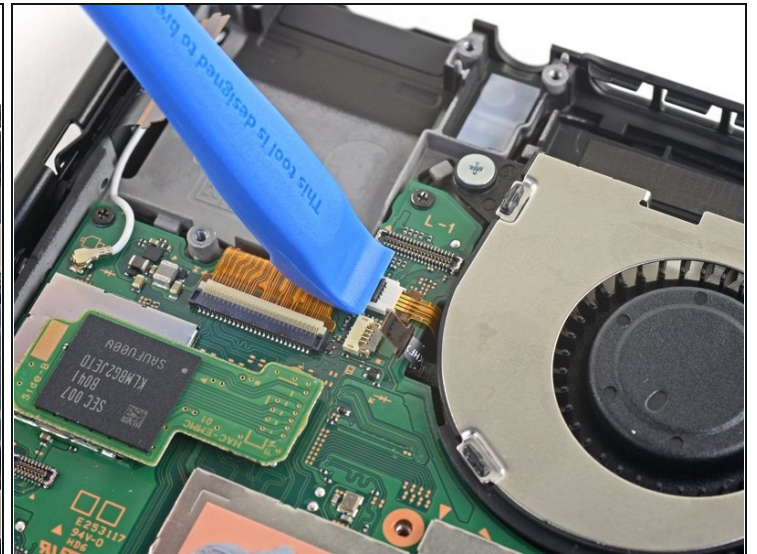
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the fan cable [ZIF connector](#).

Step 34



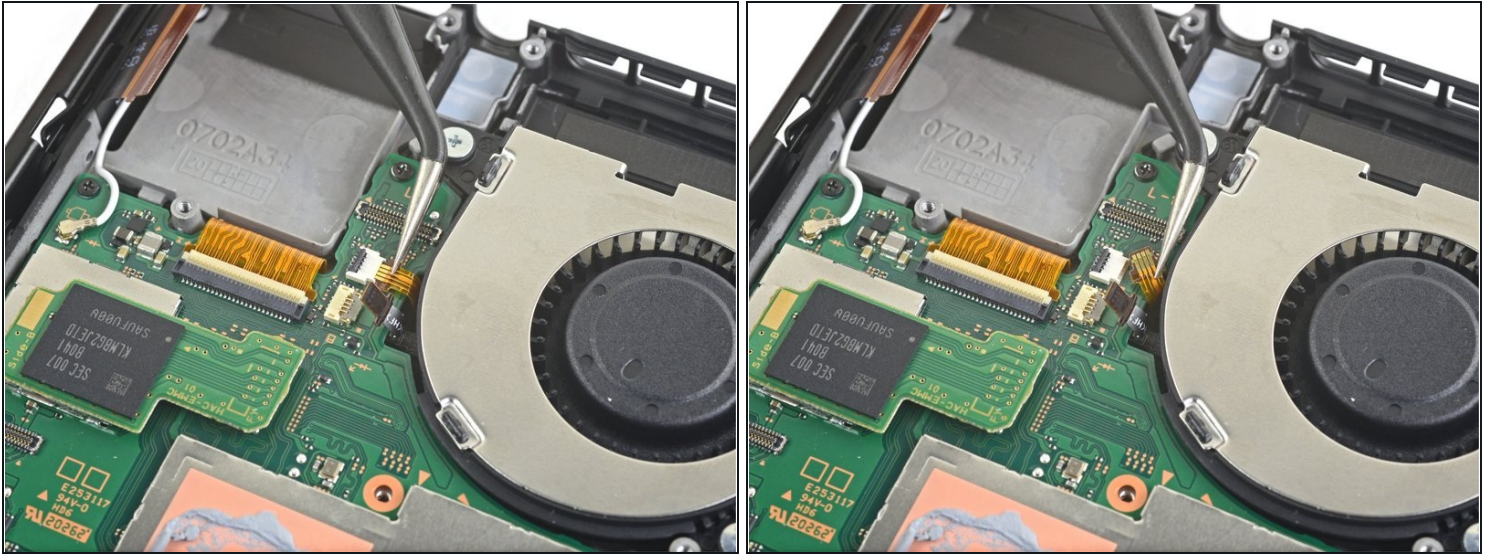
- Use a pair of tweezers to pull the fan cable straight out of its connector on the motherboard.

Step 35



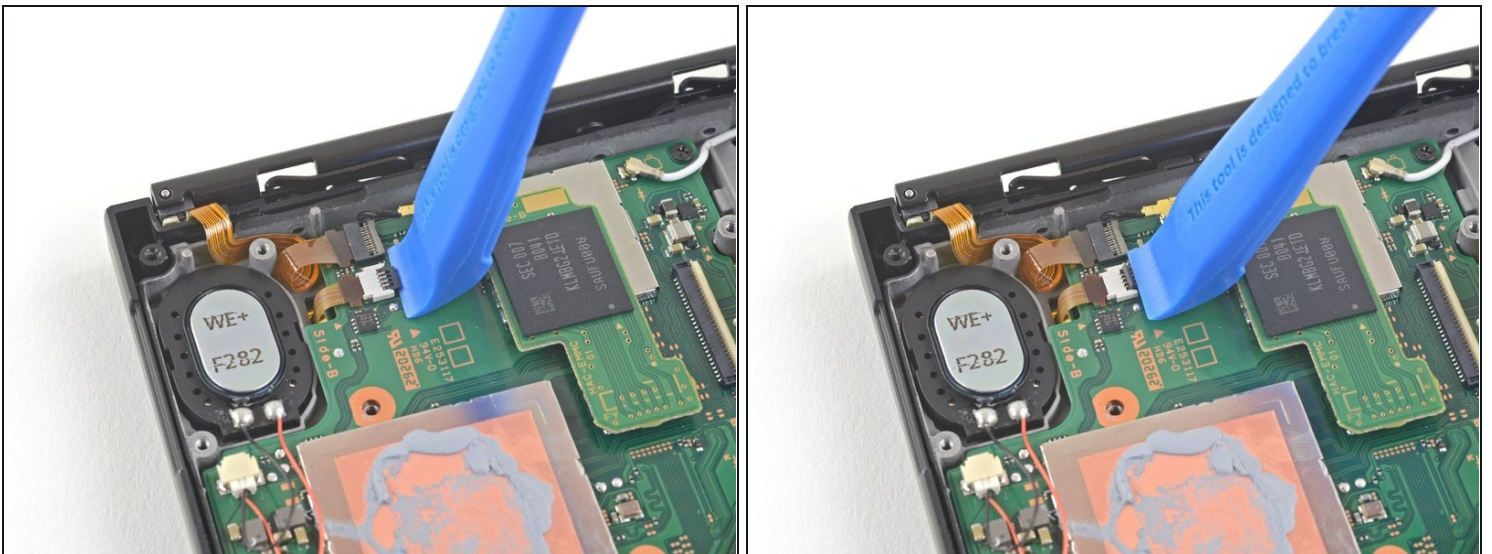
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the power and volume button ribbon cable [ZIF connector](#).

Step 36



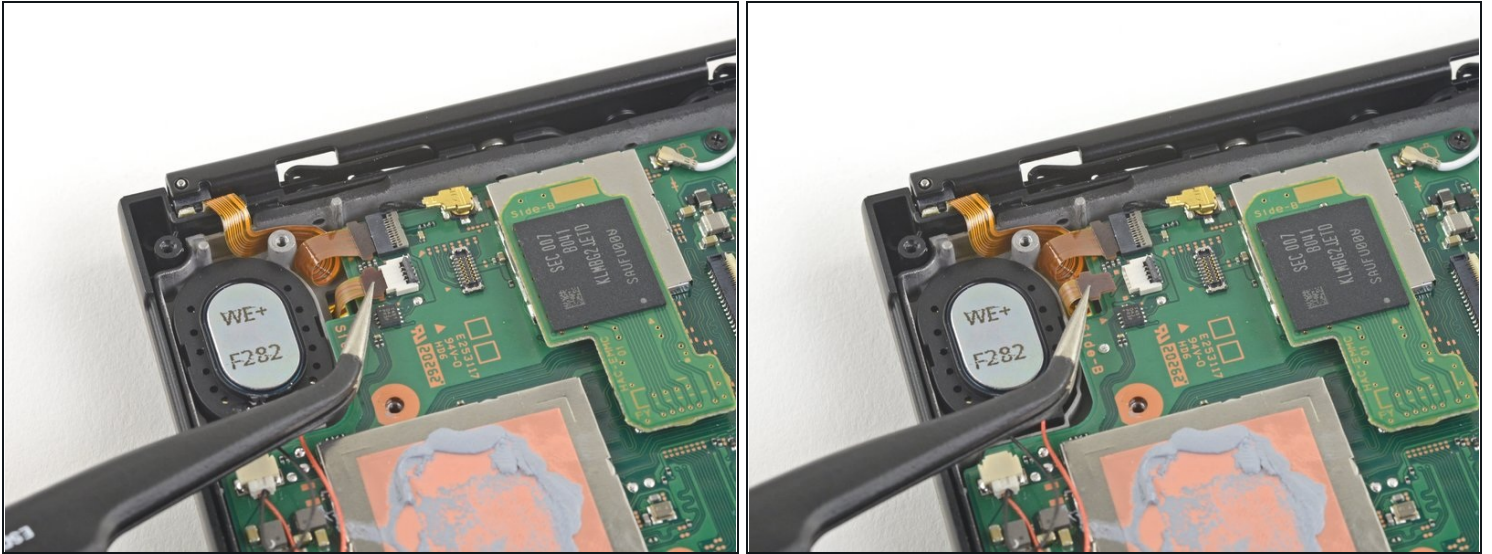
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 37



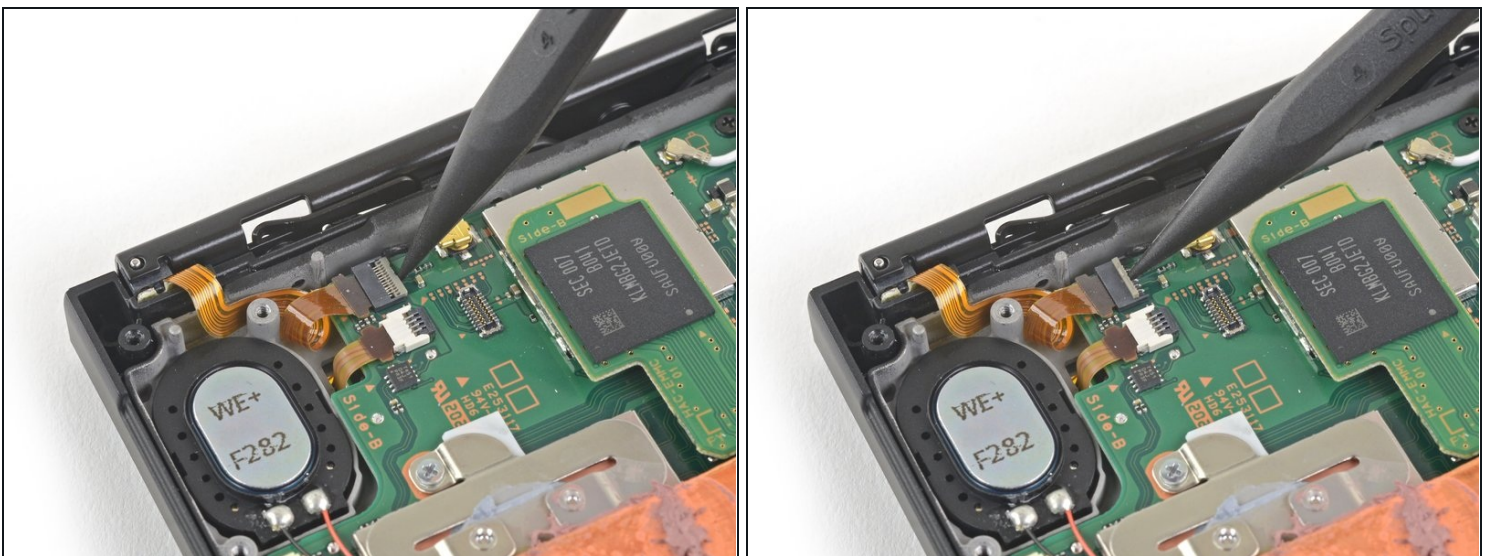
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the smaller LCD ribbon cable [ZIF connector](#).

Step 38



- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 39



- Use the point of a spudger, an opening tool, or your fingernail to flip up the small, hinged locking flap on the Joy Con sensor rail's data cable [ZIF connector](#).

Step 40



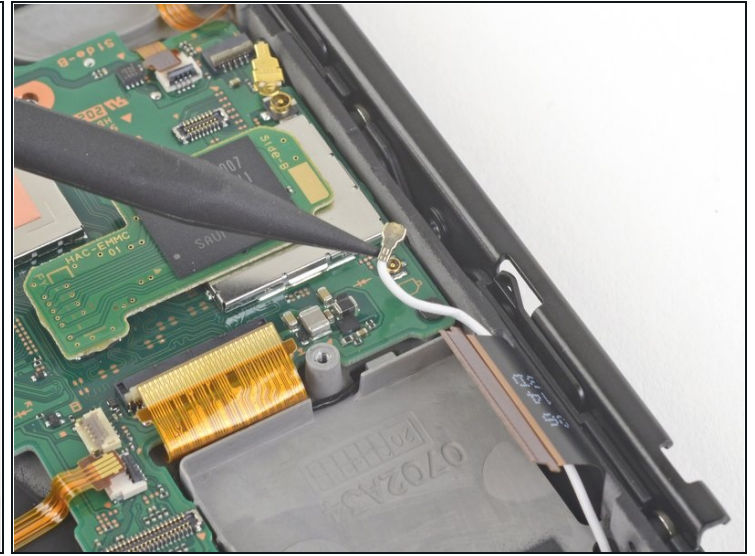
- Use a pair of tweezers to pull the ribbon cable straight out of its connector on the motherboard.

Step 41



- Use the point of a spudger to pry up the black antenna cable straight up out of its socket on the motherboard.

Step 42



- Use the point of a spudger to pry up the white antenna cable straight up out of its socket on the motherboard.

Step 43



- Use your fingers or a pair of tweezers to pull the right speaker connector straight out of its socket on the motherboard.

⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

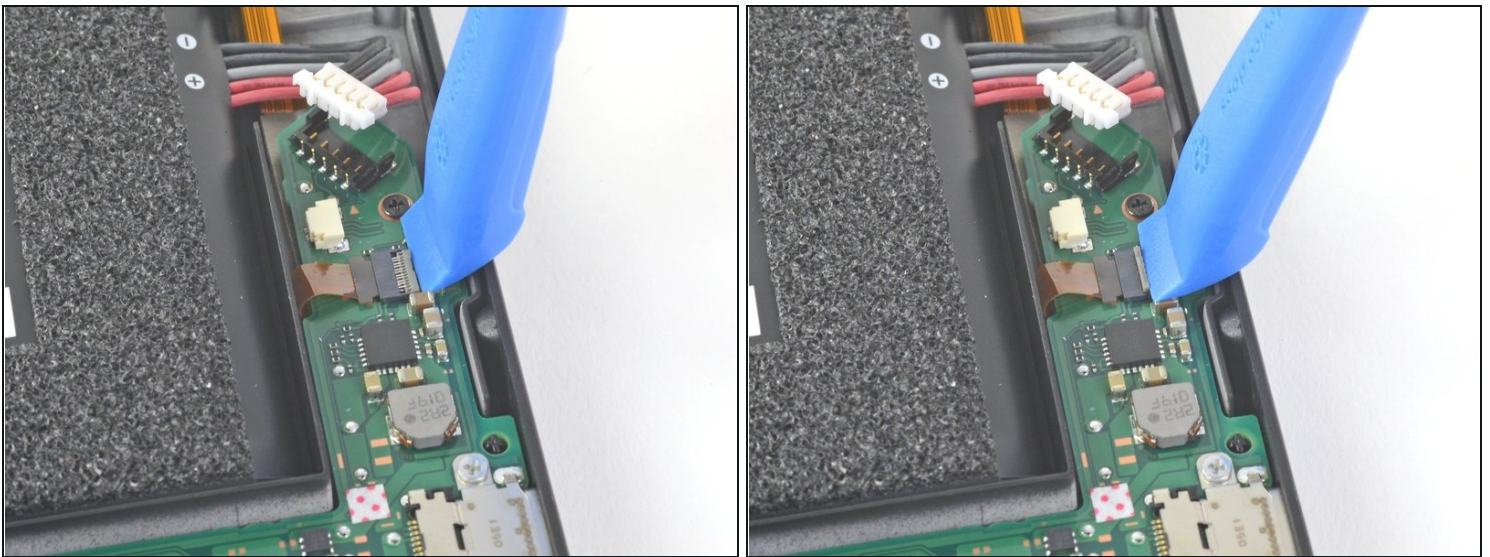
Step 44



- Use your fingers or a pair of tweezers to pull the left speaker connector straight out of its socket on the motherboard.

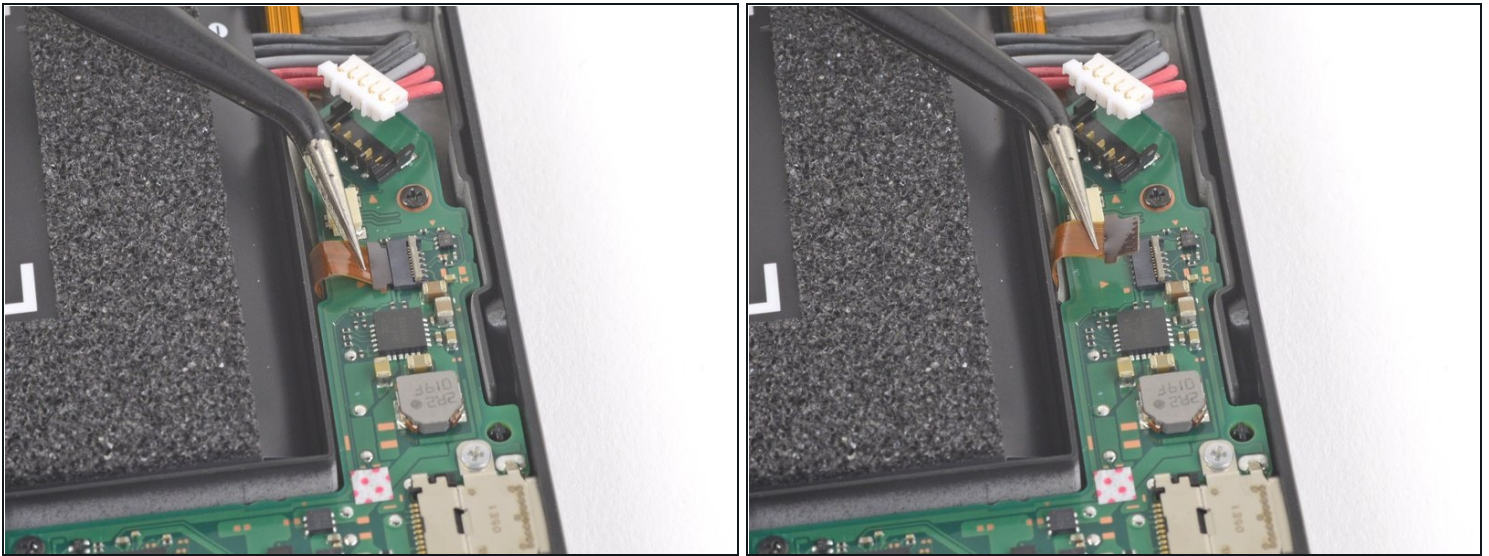
⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

Step 45



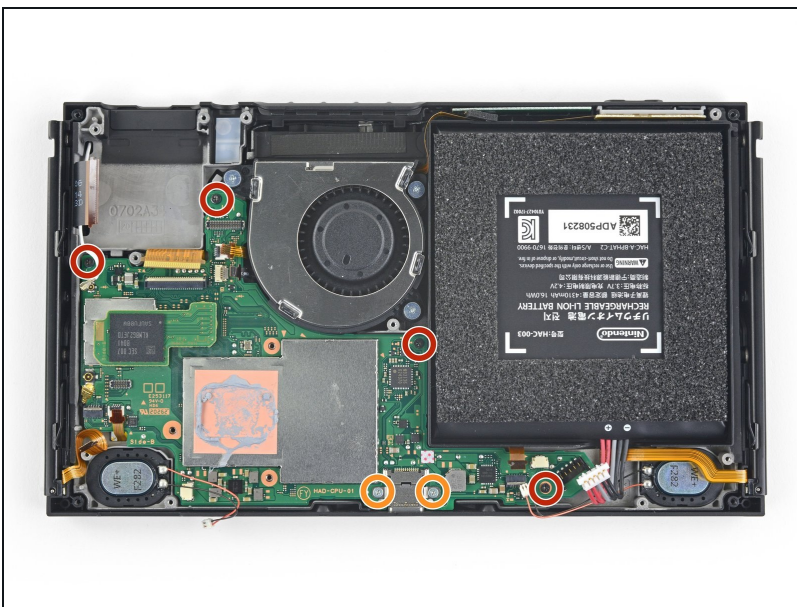
- Use an opening tool, spudger, or your fingernail to flip up the small, hinged locking flap on the Joy Con sensor rail data cable [ZIF connector](#).

Step 46



- Use a pair of tweezers to slide the Joy Con rail data cable straight out of its connector on the motherboard.

Step 47



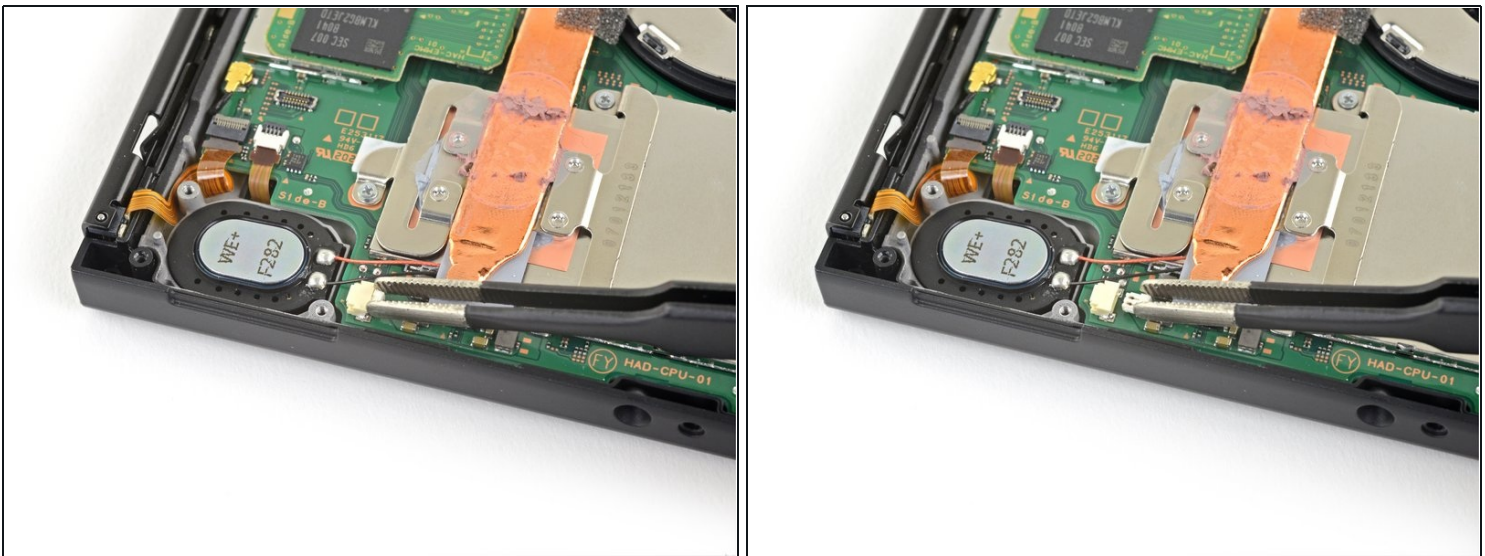
- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the following screws:
 - Four 2.5 mm screws
 - Two 3.1 mm screws

Step 48



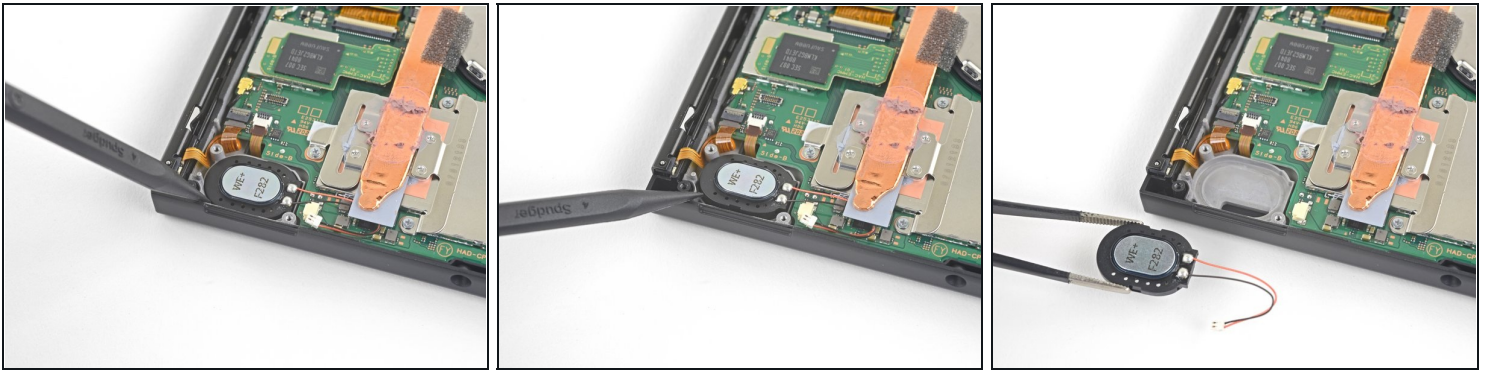
- Insert a spudger into a gap between the motherboard and the frame.
- Carefully lift up the motherboard and remove it from the frame.

Step 49 — Remove the right speaker



- If you're replacing just the left speaker, skip the next two steps.
 - Use your fingers or a pair of tweezers to pull the speaker connector straight out of its socket on the motherboard.
- ⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

Step 50



- Use the point of a spudger to pry the speaker up.
 - ❗ The speaker is adhered with light adhesive inside the speaker well, so a bit of force is required.
- Use your fingers or a pair of tweezers to remove the right speaker.

Step 51 — Remove the left speaker



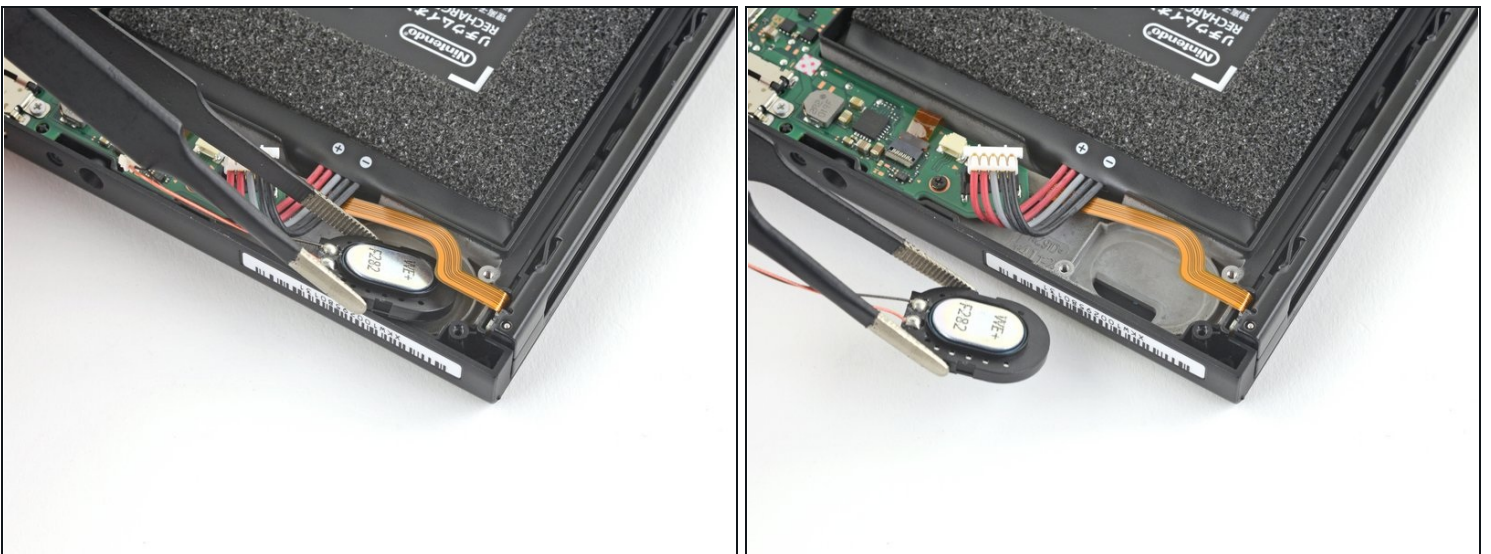
- ❗ Follow the next three steps if you're replacing the left speaker.
- Use your fingers or a pair of tweezers to pull the speaker connector straight out of its socket on the motherboard.
 - ⚠ Do not pull on the connector by the speaker wires. They're very thin and can easily snap off the connector.

Step 52



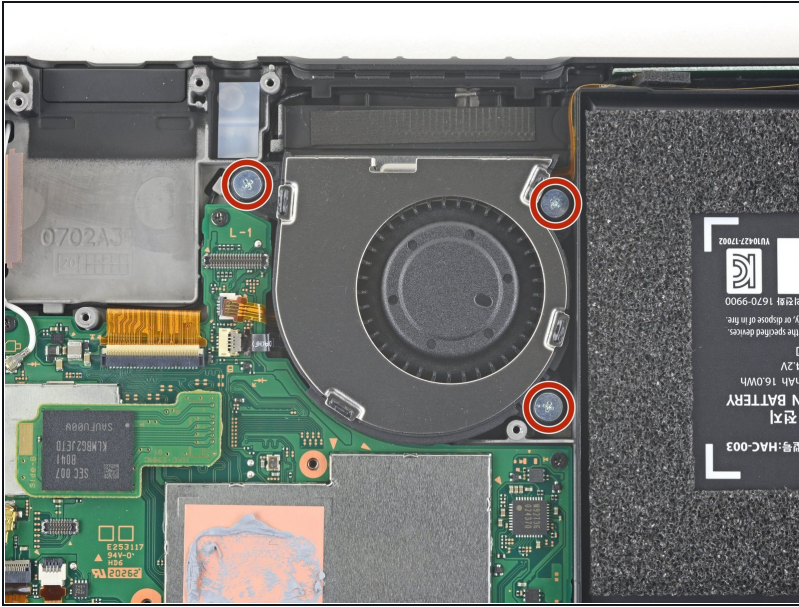
- Use the point of a spudger to pry up the speaker to loosen it from the speaker well.
- ① The speaker is adhered with light adhesive inside the speaker well, so a bit of force is required.

Step 53



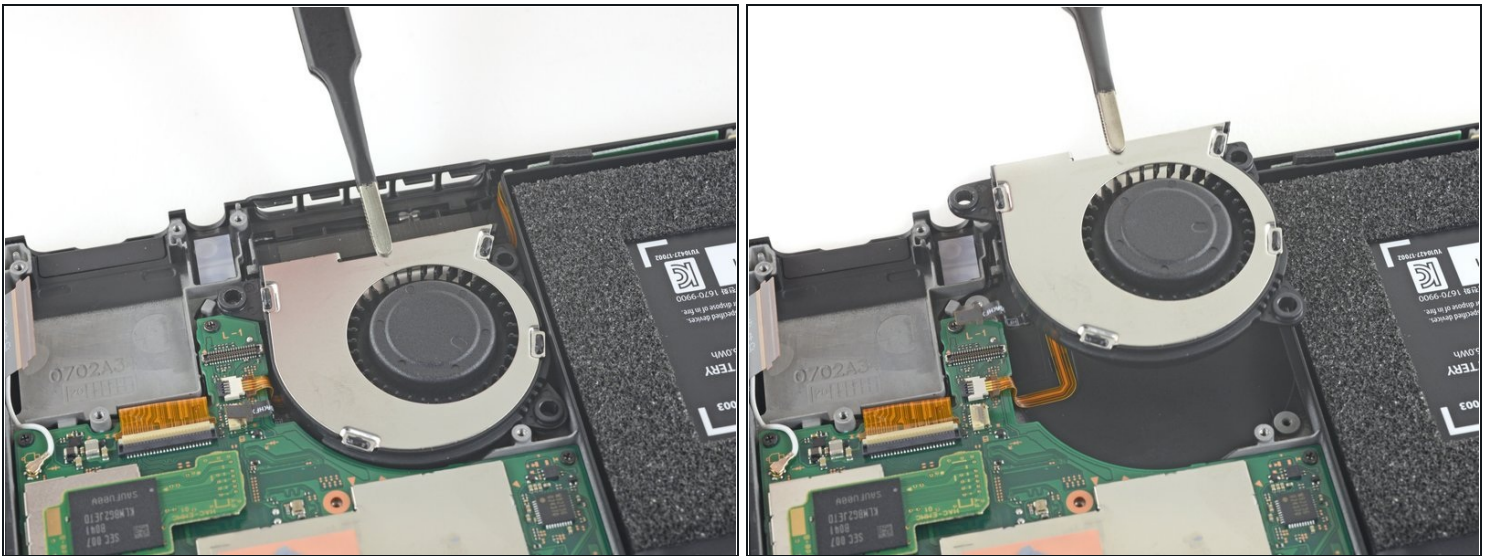
- Use your fingers or a pair of tweezers to carefully remove the speaker from the speaker well.

Step 54 — Remove the Fan



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the three 4.8 mm screws securing the fan.

Step 55



- Use a pair of tweezers or your fingers to lift the fan straight up and remove it from the device.
- ① Compare your new replacement part to the original part. You may need to transfer remaining components (such as the rubber bushings) to the new part before installing.

Step 56 — Remove the Right Joy Con Sensor Rail



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the four 3.7 mm screws securing the right Joy Con rail to the frame of the device.
- ⓘ These screws are torqued down and can be difficult to remove. To prevent them from [stripping](#), apply firm downward force, work slowly and try a different screwdriver if the screws won't come out.

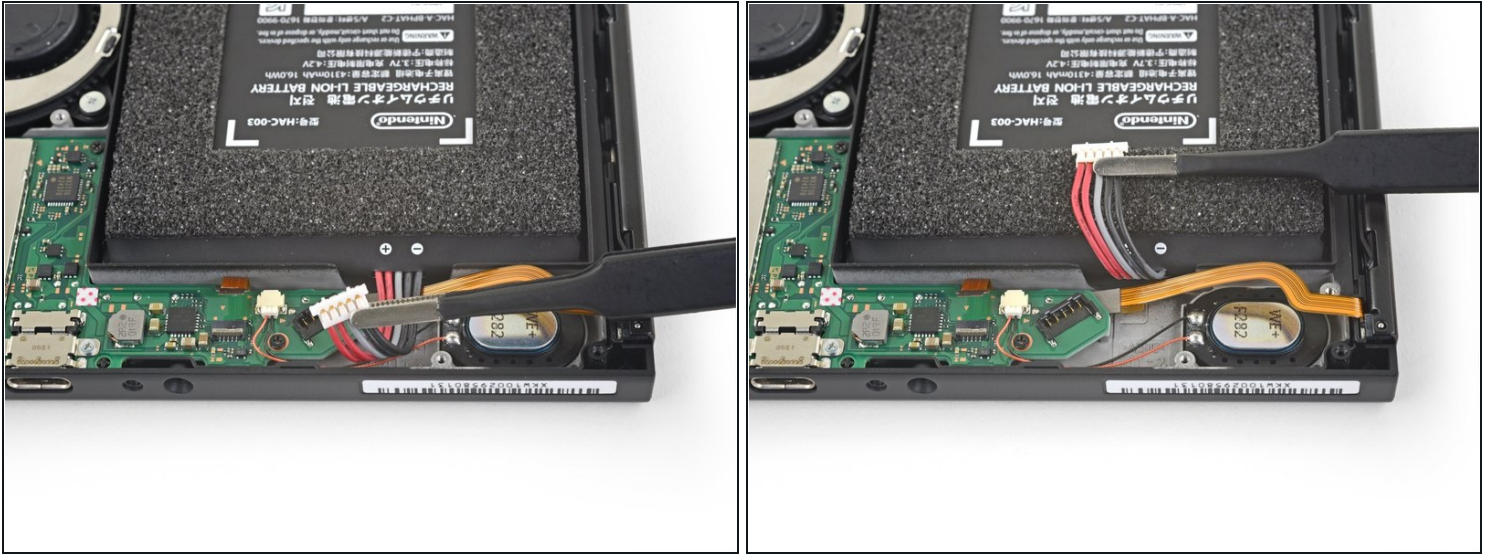
Step 57



- Remove the right Joy Con sensor rail.

⚠ Take care not to snag the rail's data cable on the device frame as you remove it.

Step 58 — Remove the Left Joy Con Sensor Rail



- Use your fingers or a pair of tweezers to lift the battery connector up and out of the way of the Joy Con rail's data cable.

Step 59



- Use your fingers or a pair of tweezers to lift the battery connector up and out of the way of the Joy Con rail's data cable.

Step 60



- Use a JIS 000 screwdriver or an official iFixit PH 000 driver to remove the four 3.7 mm screws securing the left Joy Con rail to the frame of the device.

i These screws are torqued down and can be difficult to remove. To prevent them from [stripping](#), apply firm downward force, work slowly and try a different screwdriver if the screws won't come out.

Step 61



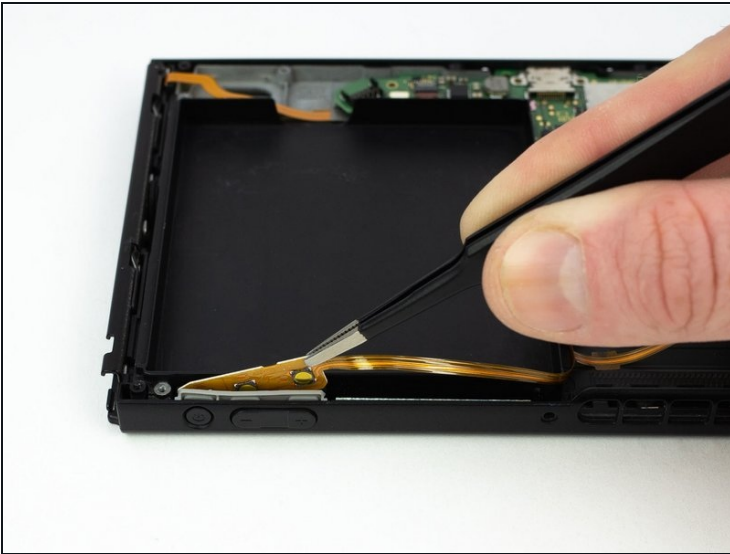
- Remove the left Joy Con sensor rail from the device.

Step 62 — Remove the Power and Volume Button Board



- Use the flat end of a spudger to pry up the taped down power/volume ribbon cable.

Step 63



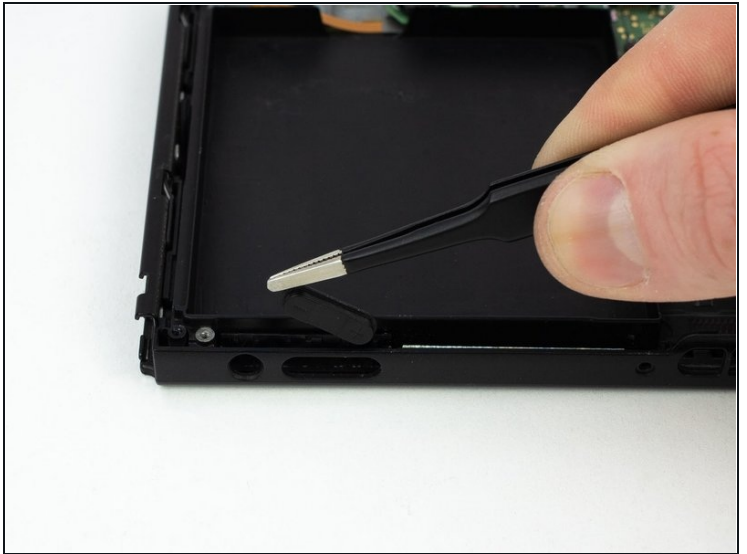
- Remove the power/volume board with a pair of blunt nose tweezers.

Step 64 — Remove the Exterior Power and Volume Buttons



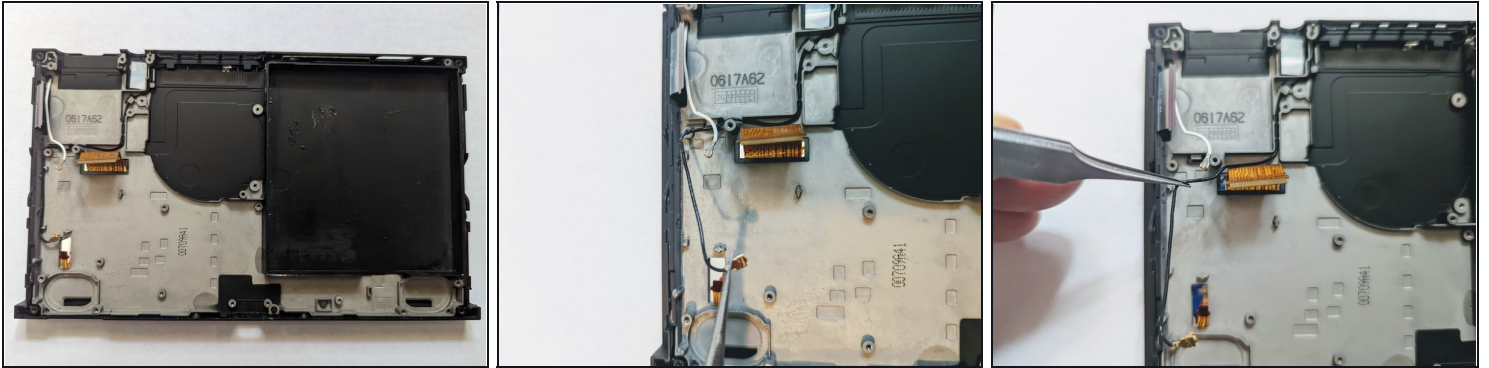
- Pull the rubber conductive pad out with a pair of blunt nose tweezers.

Step 65



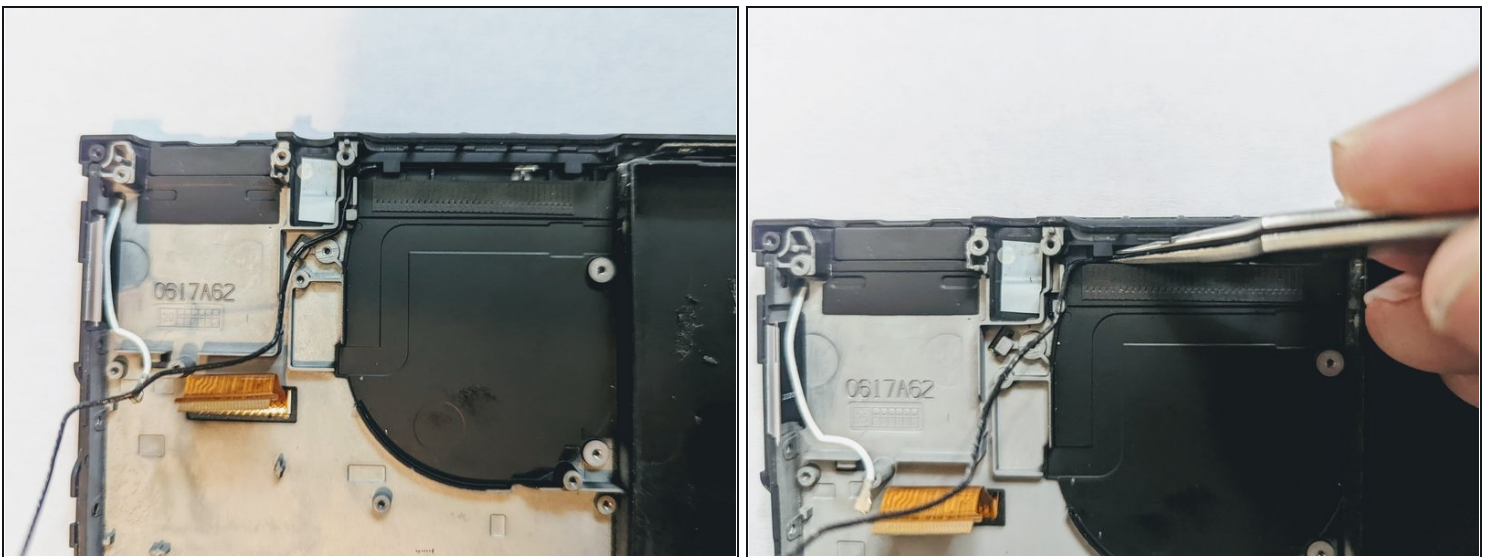
- Pull the power and volume buttons out with a pair of blunt nose tweezers.

Step 66 — Remove the WiFi Antenna



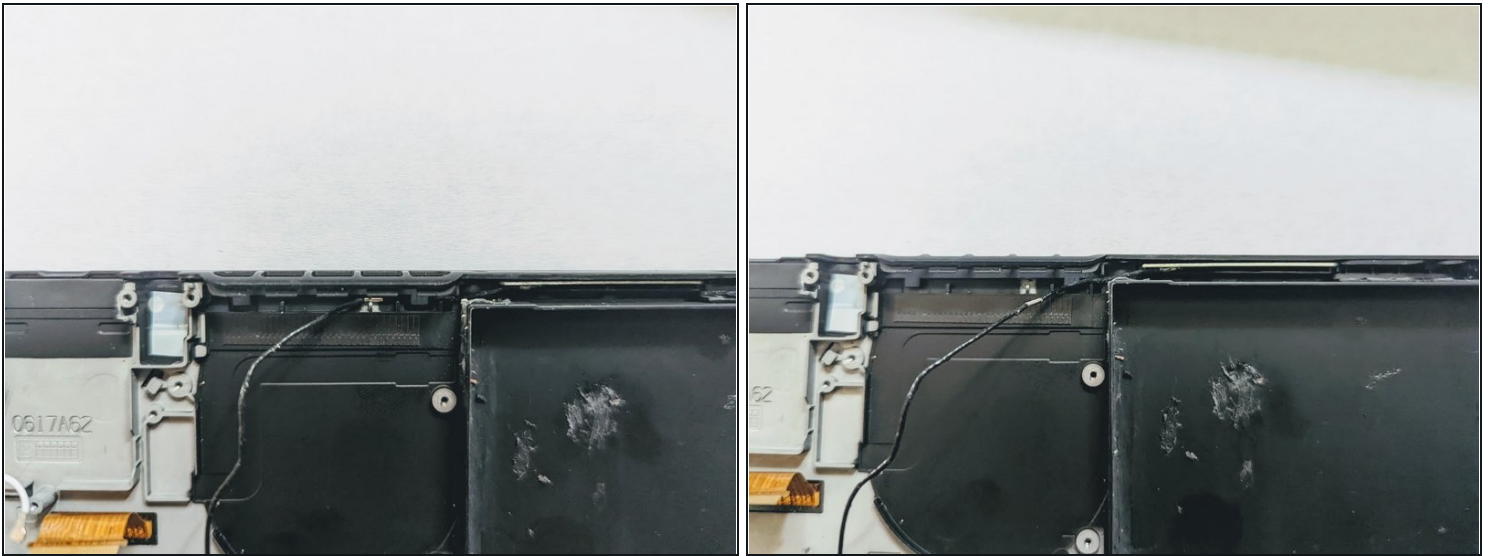
- Deroute the black coax cable from the midframe.

Step 67



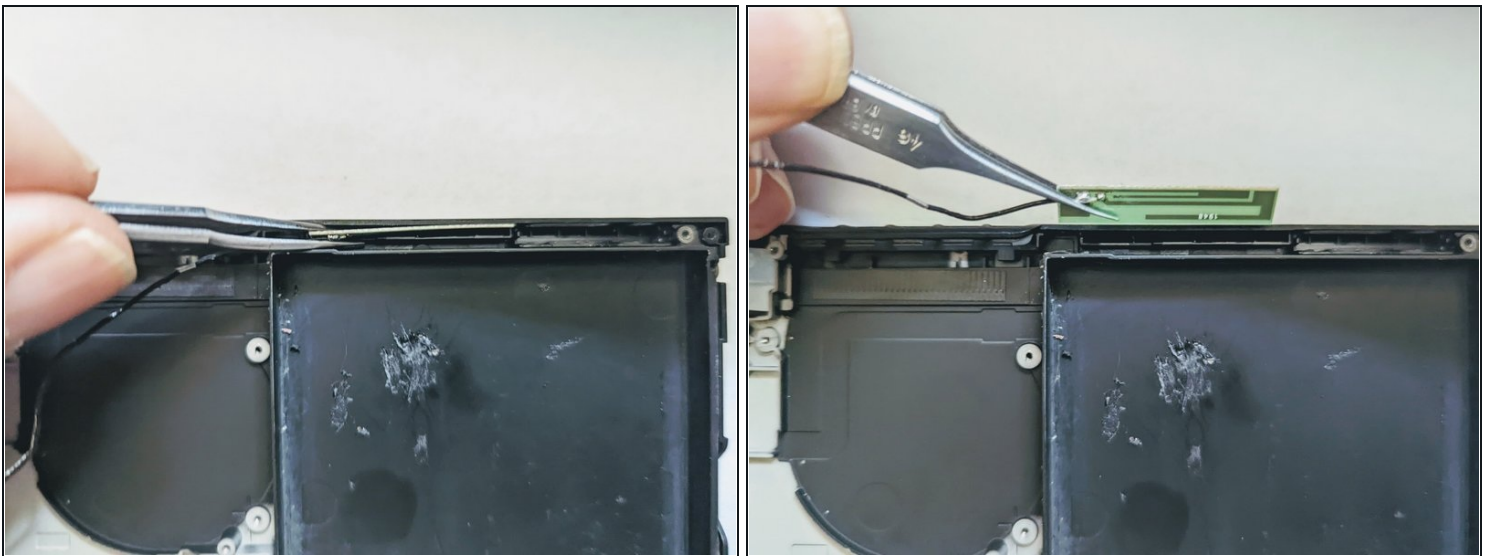
- Continue following the wire, derouting it as you go.

Step 68



- Pry the metal barrel surrounding the coax up from the midframe.

Step 69



- Grasp the WiFi antenna board with a pair of tweezers and lift straight up to remove it.

Step 70 — Remove the Screen



- [Heat an iOpener](#) and apply it to the bottom edge of the screen for around two minutes to help soften the adhesive.

⚠ A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the device—the display and internal battery are both susceptible to heat damage.

Step 71



- Apply a suction cup to the bottom-left corner of the screen.
- Pull up on the suction up with strong, steady force to create a gap.
 - ⓘ Depending on the age of your device, this may be difficult. If you have trouble, apply more heat and try again.
- Insert the point of an opening pick into the gap, making sure to only insert the pick about 5 mm.

Step 72



- Slide the opening pick along the bottom edge of the screen to slice the adhesive.
- Leave the pick inserted to prevent the adhesive from re-adhering to the frame.

Step 73



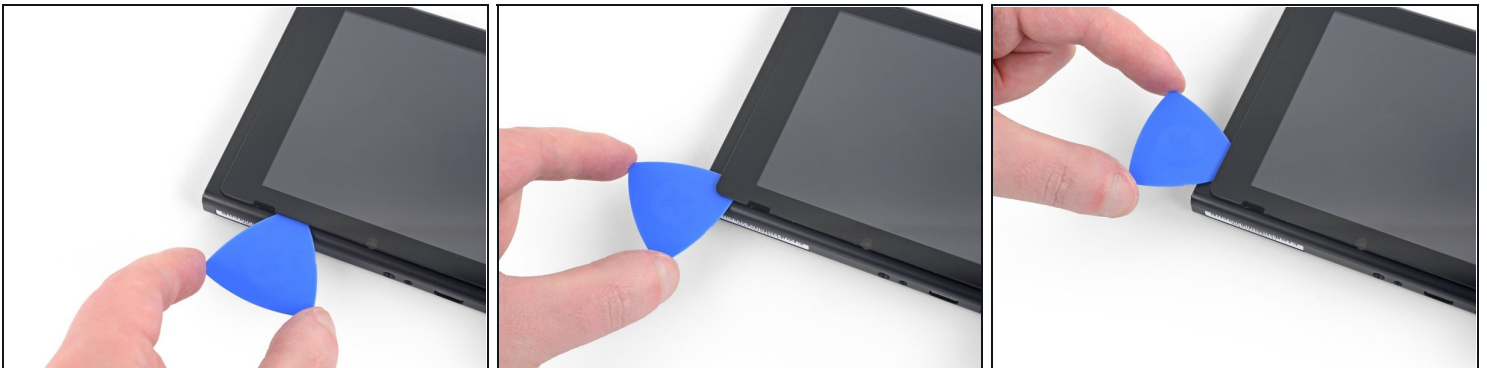
- Insert a second opening pick into the gap to the left of the first pick.
- Slide the opening pick back towards the left side of the device.
- Leave the opening pick inserted.

Step 74



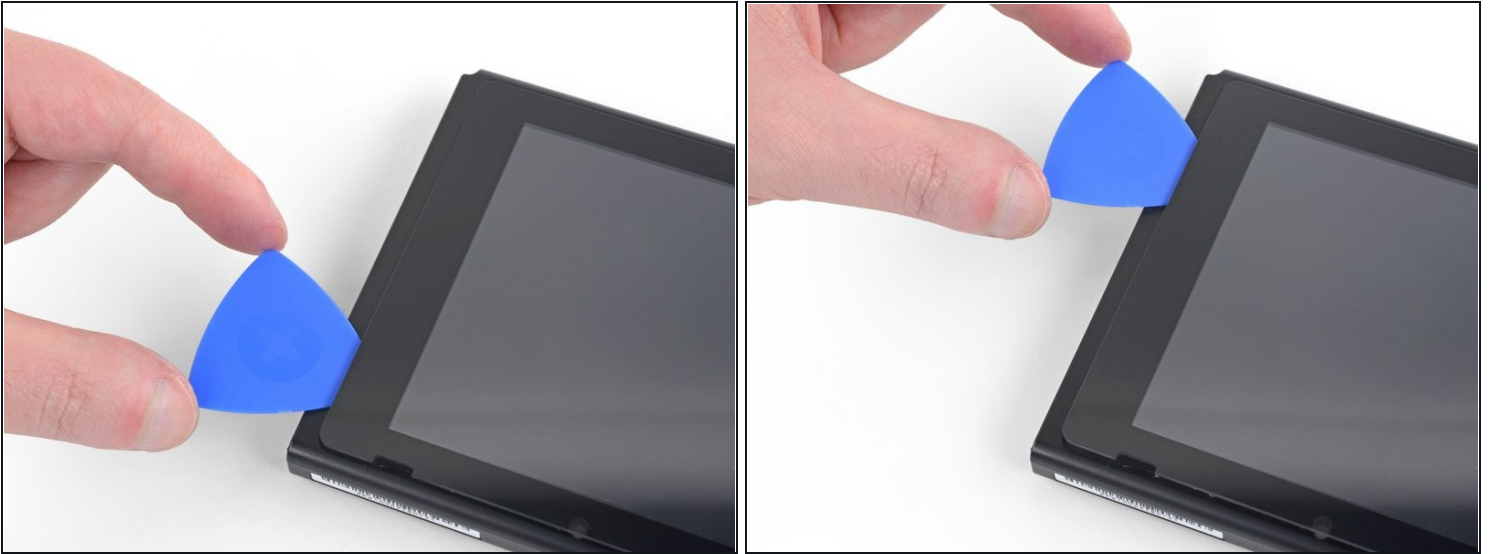
- Heat the left edge of the screen for around two minutes to help soften the adhesive.

Step 75



- Continue sliding the opening pick around the bottom-left corner to slice the adhesive.

Step 76



- Continue sliding the opening pick along the left edge of the screen to slice to adhesive.

Step 77



- Heat the top edge of the screen for around two minutes to help soften the adhesive.

Step 78



- Continue sliding the opening pick around the top-left corner of the screen to slice the adhesive.

Step 79



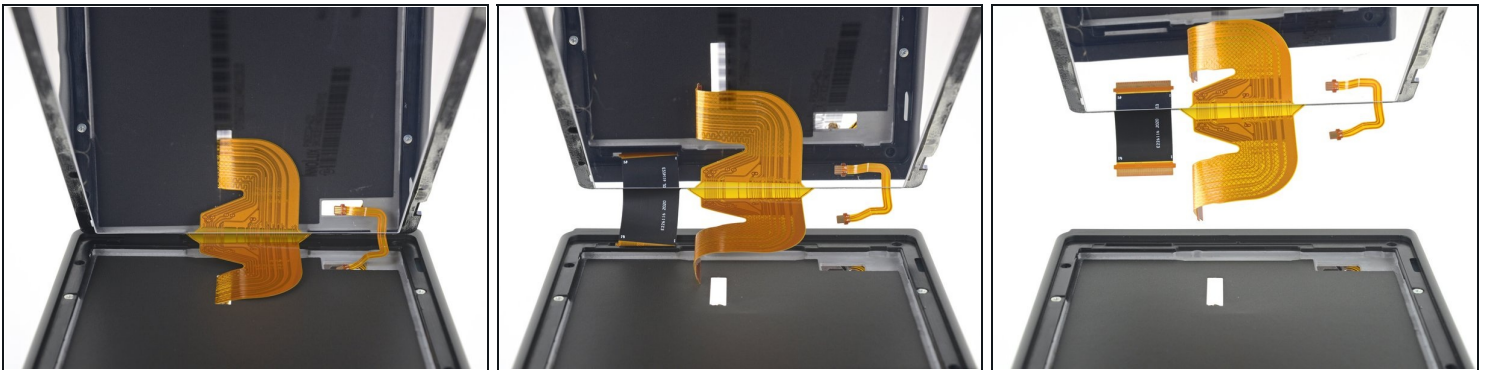
- Continue sliding the opening pick along the top edge of the screen to slice the adhesive.

Step 80



- Heat the right edge of the screen for around two minutes to help soften the adhesive.
- Place the flat end of a spudger into the gap along the left edge of the screen.
- Carefully and slowly lift the left edge of the screen, opening it like a book.

Step 81

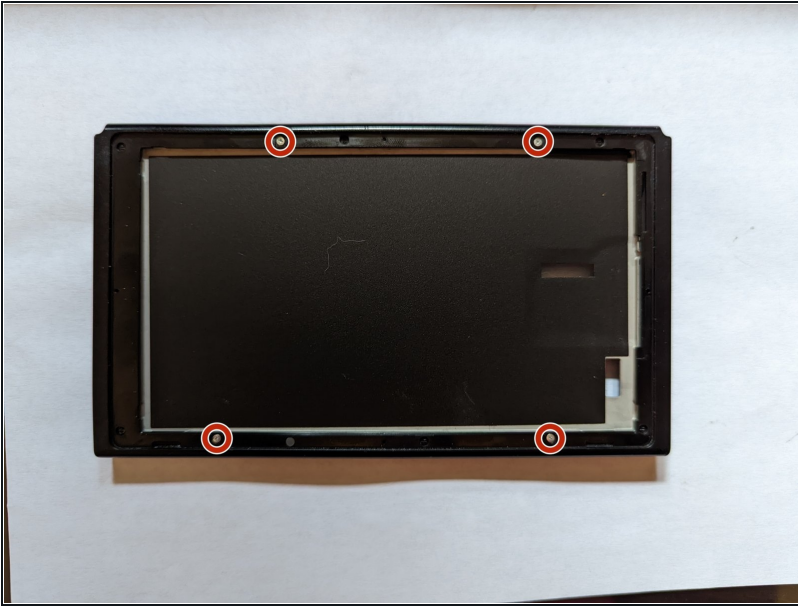


- Lift the right edge of the screen straight off the device, threading the ribbon cables through the frame as you do so.

⚠ Take care not to snag any of the ribbon cables on the frame as you remove the screen.

- ☒ You can reuse the screen adhesive if it is still sticky. Otherwise, replace the adhesive with double-sided tape such as Tesa tape.

Step 82 — Remove the Front Frame



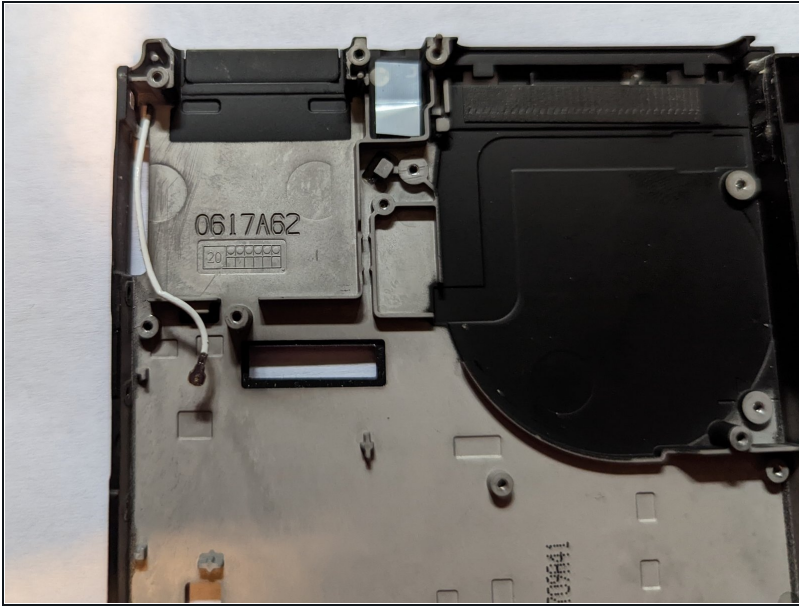
- Remove the four screws securing the front frame to the midframe.

Step 83



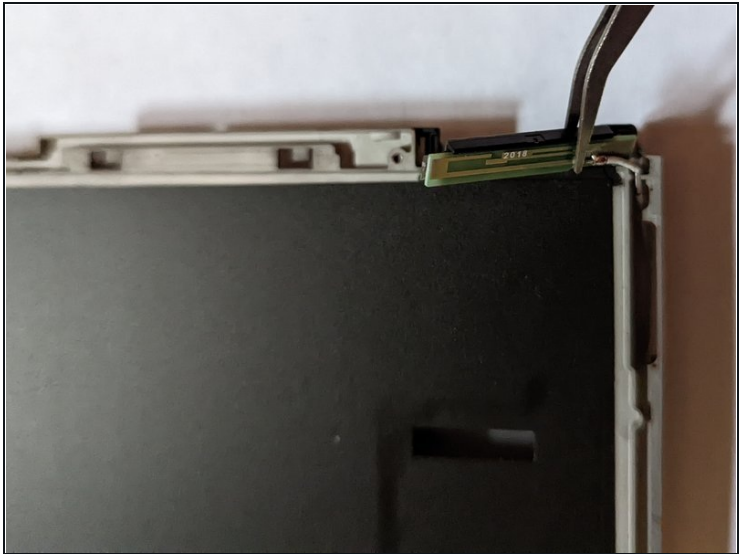
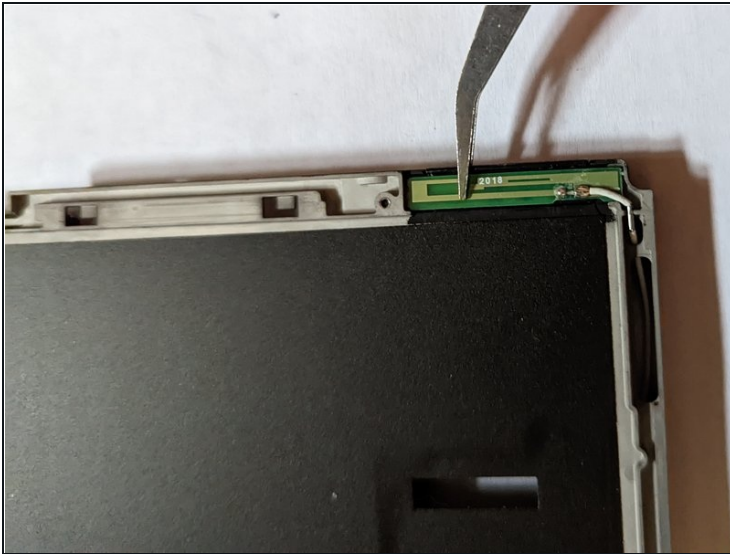
- Lift the front edge of the frame then slide the frame up toward the top of the display to remove it.

Step 84 — Remove the Bluetooth Antenna



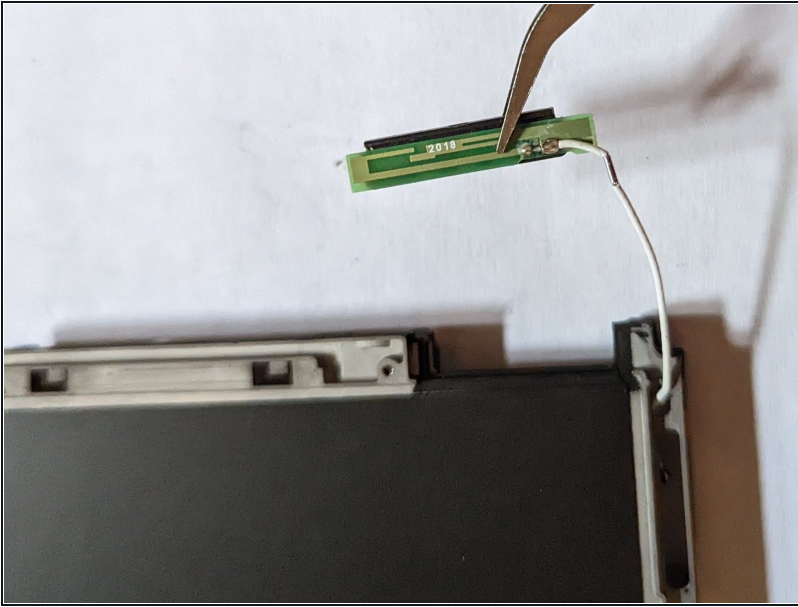
- Verify the coax wire is free of any obstructions or routing inside the device.

Step 85



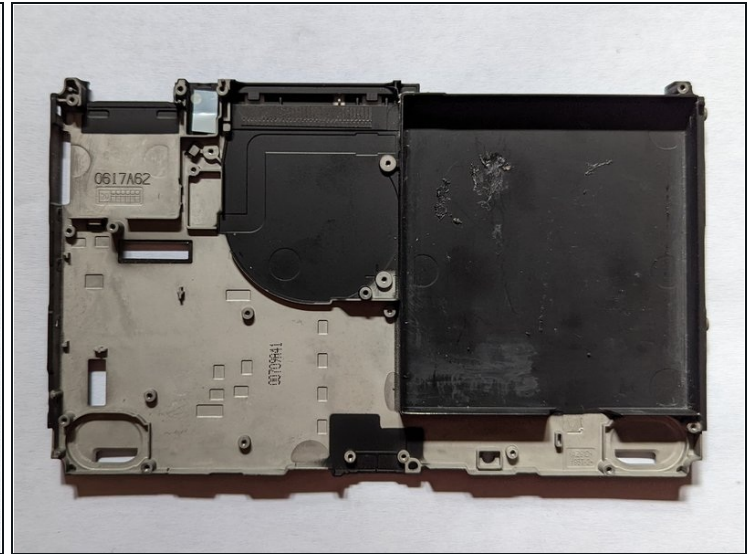
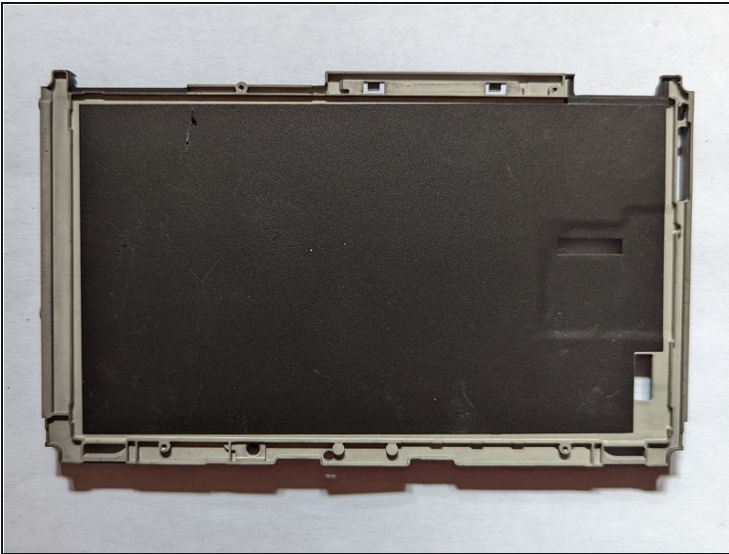
- The antenna is held in with light adhesive, so simply grasp it and pull up to release it.

Step 86



- Pull the coax cable through the slot in the frame.
- ① Replacement antennas may not come with the black plastic support piece, so you might have to transfer it from the old antenna to the new one.

Step 87 — Congratulations!



- The midframe has now been stripped bare.
- ① Many new midframes do not come with the black insulation layer between the midframe and the screen, so you may have to find a substitute or try to salvage the layer from your old midframe.

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