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How to replace the power button (SL1/SL1S)



help.prusa3d.com/g146337

Scan the QR code to
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version of this
chapter.

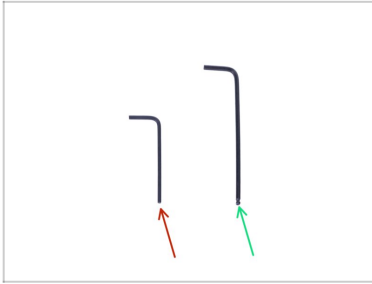





STEP 1 Introduction



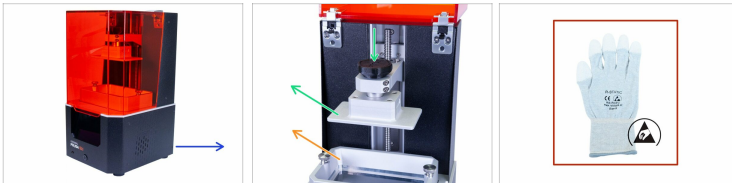
- ◆ This guide will take you through the replacement of the **power button** on the **Original Prusa SL1** and **SL1S SPEED**.
- ⓘ Some parts might slightly differ. However, it does not affect the procedure.
- ◆ All necessary parts are available in our eshop shop.prusa3d.com
- ⓘ Note that you have to be logged in to have access to the spare parts section.
- ⚠ **WARNING:** This device utilizes UV light, which can harm your eyesight or skin. Do not turn the device ON until it is fully reassembled with all the covers installed!!!
- ⚠ **Soldering is needed for units shipped from July 2019 to July 2020.** If you can't solder, contact our support team. They will send you a new bottom cover and a new power button.

STEP 2 Tools necessary for this guide








-  2.0mm Allen key
-  2.5mm Allen key
-  Some steps require additional tools. You will always be instructed before the appropriate steps.

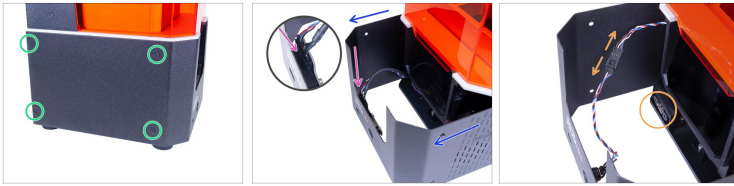
STEP 3 Prepare the printer



 **Before you start, make sure that:**

-  Printer is plugged off
 -  Remove the resin tank
 -  Remove the print platform
 -  Use ESD gloves (recommended)
-  ESD gloves are anti-static (prevent damage to the electronics).

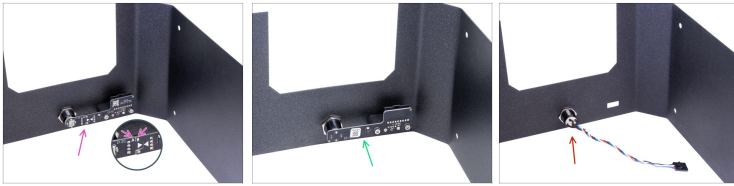
STEP 4 Removing the cover



⚠ Proceed carefully with these screws, preferably use an Allen key with straight sharp edges, there is a risk of stripping the screw's head.

- Turn the left side of the printer towards you.
- Locate, release and remove four screws.
- Turn the printer to the other side (180 °) and again remove four screws.
- Slide the cover just a few cm/inches out.
- **There are two designs of USB and power button:**
 - **NEW DESIGN:** The USB and the power button have the same connector. Disconnect the cable and remove the cover completely.
 - **OLD DESIGN:** The USB and the power button are separated. Disconnect the power button cable from the extension cable and remove the cover completely.

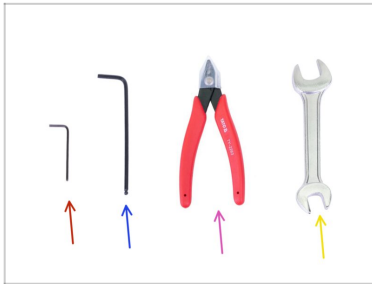
STEP 5 Multiple versions of the power button



⚠ The **USB board has been made in three versions.**
Look closer and check what version do you have.
Follow the instructions for the appropriate version:

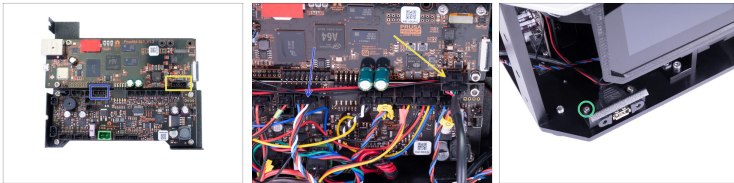
- 🜧** **Version 3.0** - Power button (A) board and USB connector (B) board are connected and mounted on the bottom cover. Skip to Tools necessary for the Version 3.0
- 🜨** **Version 2.0** - Power button and USB connector are on the same PCB board mounted on the bottom cover. Skip to Tools necessary for the Version 2.0
- 🜩** **Version 1.0** - Power button and USB connector are separate. The power button is mounted on the bottom cover. The USB connector is mounted inside the printer. Skip to Tools necessary for the Version 1.0

STEP 6 Tools necessary for the Version 1.0



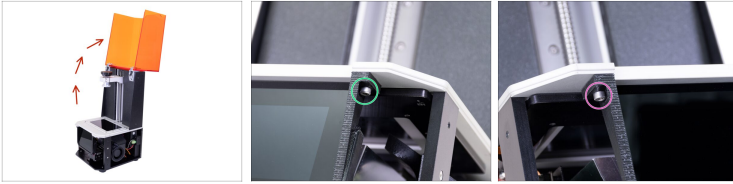
- 2.0mm Allen key
- 2.5mm Allen key
- Cutting pliers for zip ties
- Wrench size 19 mm

STEP 7 Disconnecting the USB and the Power button (Version 1.0)



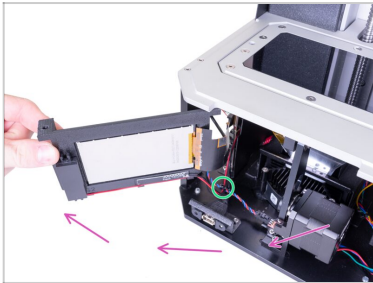
- Disconnect the power button extension cable from the Motion Controller.
- Disconnect the USB cable from the PrusaA64-SL1 board.
- Release the left screw on the USB connector.

STEP 8 Removing the touchscreen (Version 1.0)



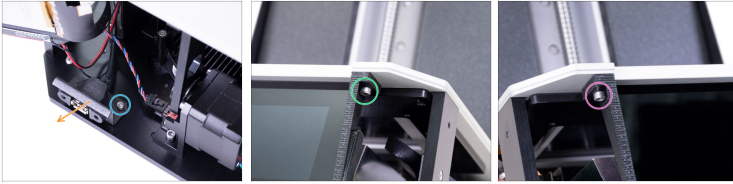
- ◆ Open the lid all the way.
- ◆ Look from below and locate the screw on the right side of the touchscreen frame. Release the screw.
- ◆ Slightly loosen the screw on the left side of the frame. Do not remove it.

STEP 9 Removing the touchscreen (Version 1.0)



- ◆ Carefully rotate the touchscreen all the way to the left.
- ⓘ If you can't rotate the screen easily, loosen the left screw a little more.
- ◆ Cut the zip tie securing the USB, Power, optical, and touchscreen cables.

STEP 10 Removing the USB connector (Version 1.0)



- ◆ Release the screw on the right side of the USB connector.
- ◆ Remove the USB connector from the printer. It will no longer be needed.
- ◆ Carefully rotate the touchscreen back to its original position.
- ◆ Insert the M4x10 screw back into the hole on the right side of the touchscreen frame and tighten the screw.
- ◆ Tighten the screw on the left side of the frame.

STEP 11 New power button - parts preparation (Version 1.0)

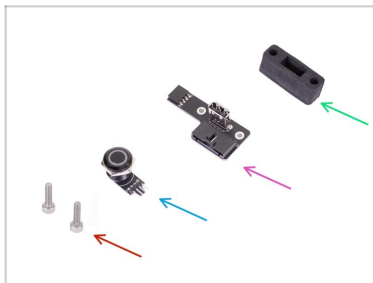


◆ For the following steps, please prepare:

- ◆ Bottom cover (1x)
- ◆ USB & Power cable (1x)
- ◆ Zip tie (1x)

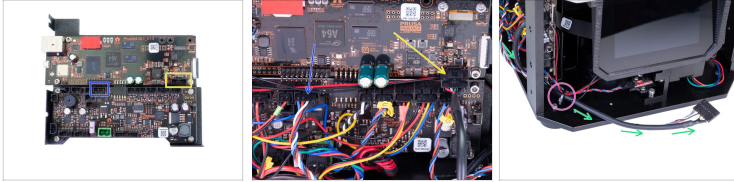
ⓘ The list continues in the next step...

STEP 12 New power button - parts preparation (Version 1.0)



- ◆ M3x8 screw (2x)
- ◆ New power button (1x)
- ◆ New USB board (1x)
- ◆ Foam seal (1x)

STEP 13 Connecting the USB and Power button cables (Version 1.0)



- ◆ Connect the power button cable to the Motion Controller.
- ◆ Connect the USB cable to the PrusaA64-SL1 board.
- ◆ Guide the cables behind the support, as in the picture.
- ◆ Secure the power, USB, WiFi, and speaker cables together with the zip tie.
- ◆ Now, skip to New power button preparation

STEP 14 Tools necessary for the Version 2.0



⚠ WARNING: Disassembling this version **requires soldering**, if you don't have the equipment, contact our support team and they will send you an assembled cover with the new button.

🔷 2.0mm Allen key

🔷 2.5mm Allen key

🔷 Needle-nose pliers

🔷 Wrench size 19 mm

🔷 Soldering iron


🔷 Tin extractor (or steel brush)





📘 A tin extractor or steel brush is needed to remove the molten tin from the pins.

📘 It is highly recommended to wear safety glasses.

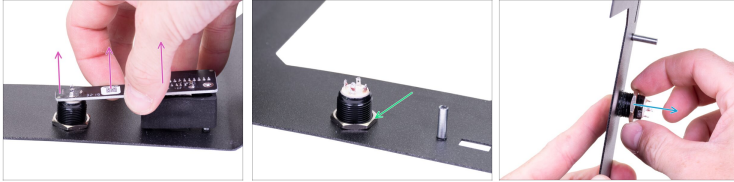
STEP 15 Disassembling the power button (Version 2.0)



 **Soldering is required in this step. Be extra careful during the procedure. Do not touch the HOT PARTS of the soldering iron!!!**

-  Set the temperature on the soldering iron to 350 °C / 662 °F.
-  Put the tip of the soldering iron on each connector and wait until the tin melts down.
-  Use the tin extractor or steel brush to remove the tin from the connectors.
-  Use the pliers to straighten the connectors.

STEP 16 Disassembling the power button (Version 2.0)



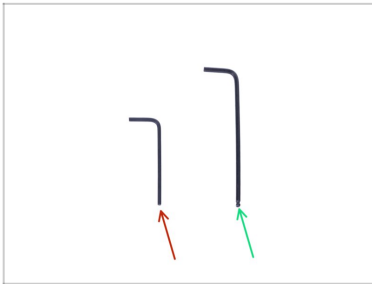
- ◆ Remove the USB board from the power button. Use more force. It doesn't matter if you damage the button or the board.
- ◆ Release the nut with the wrench.
- ◆ Remove the nut from the button.

STEP 17 Disassembling the power button (Version 2.0)



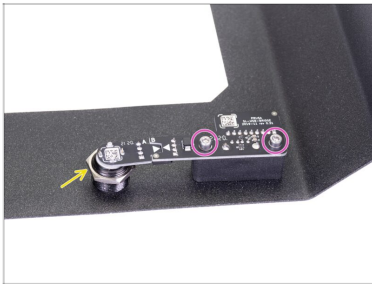
- ◆ Push the button from the inside of the front cover and remove it.
- ◆ Remove the foam seal from the USB connector. Keep it close, we'll need it soon.
- ◆ Now skip to New power button - parts preparation (Version 2.0 & 3.0)

STEP 18 Tools necessary for the Version 3.0



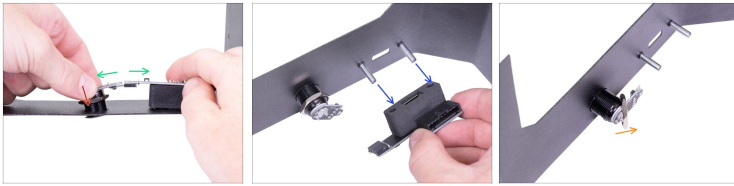
- 2.0mm Allen key
- 2.5mm Allen key

STEP 19 Removing the power button (Version 3.0)



- Loosen the silver nut on the power button and move it all the way up.
- Release and remove two screws on the USB board.

STEP 20 Removing the power button (Version 3.0)



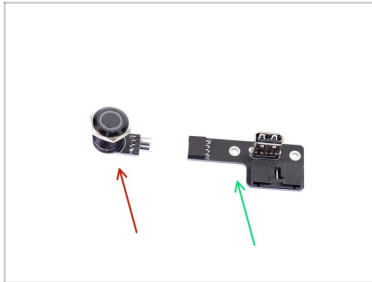
- ◆ Slightly tilt the power button, then push it down.
- ◆ Disconnect the power button from the USB board.
- ◆ Remove the USB board from the bottom cover.
- ◆ Remove the nut from the power button.

STEP 21 Removing the power button (Version 3.0)



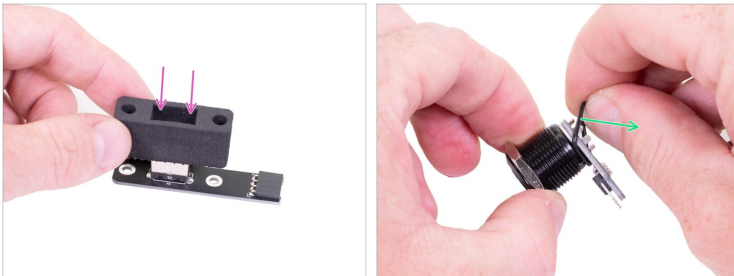
- ◆ Remove the power button from the front side of the bottom cover.
- ◆ Now skip to New power button preparation (Version 2.0 & 3.0)

STEP 22 New power button - parts preparation (Version 2.0 & 3.0)



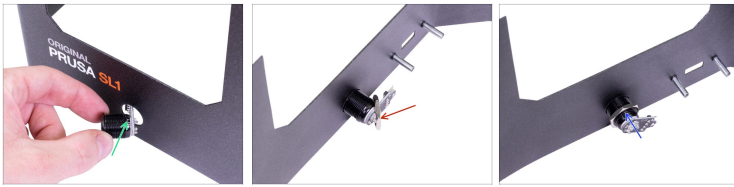
- ◆ For the following steps, please prepare:
- ◆ New power button (1x)
- ◆ New USB board (1x)

STEP 23 New power button preparation



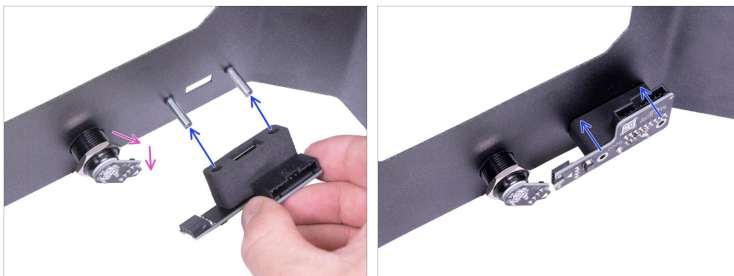
- ① The following steps are common for Version 1.0, 2.0, and 3.0.
- ◆ Place the foam seal on the USB connector.
- ◆ Locate the o-ring between the button and the PCB and remove it. We won't need this part anymore.

STEP 24 Mounting the new power button



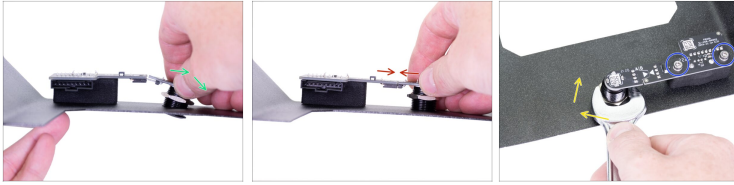
- ◆ Insert the power button from the front side of the cover into the hole.
- ◆ Place the nut on the power button from inside of the cover.
- ◆ Do not tighten the nut all the way. Leave it four threads from the end.

STEP 25 Mounting the new USB board



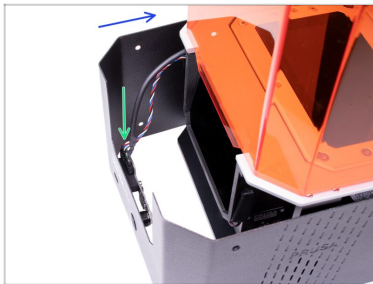
- ◆ Rotate the power button that the long side of the PCB is facing down.
- ◆ Place the USB board with the foam seal on the columns and slide it all the way on.

STEP 26 Joining boards together



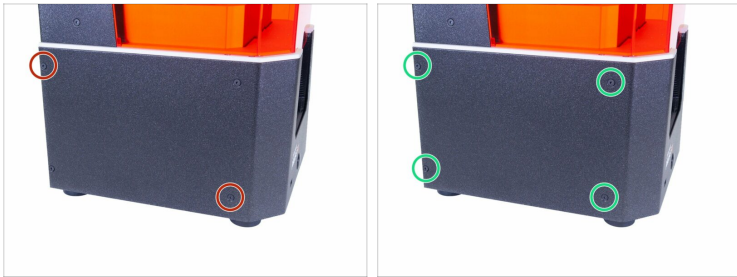
- ◆ Slightly and carefully tilt the power button like in the picture and align the pins against the connector on the USB board.
- ◆ Straighten the power button and connect the power button pins in the USB board connector.
- ◆ Tighten the nut against the cover by the wrench. **Do not overtighten the nut!**
- ◆ Secure the board with two M3x8 screws.

STEP 27 Connecting the power button



- ◆ Slide the cover half-way to the printer and stop, we need to connect the front USB and power button first.
- ◆ Look from above in the front cover and connect the USB & Power cable. Make sure the safety pin "clicks".

STEP 28 Assembling the cover



- ◆ Slide the cover on the printer and secure it on one side using two M3x5b countersunk screws. Don't tighten them firmly and move on the other side, repeat the procedure.
- ◆ As soon as the cover is aligned and partly secured, add the remaining screws and tighten them all.
- ◆ Turn the printer over (180 °) and use the same procedure.

STEP 29 It's done!



- ◆ Great job! You've just replaced the power button on the SL1/SL1S printer.
