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How to replace the USB connector (SL1/SL1S)



help.prusa3d.com/g159458

Scan the QR code to
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version of this
chapter.

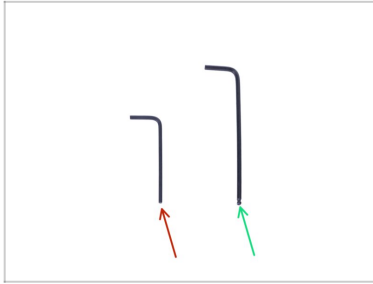


STEP 1 Introduction



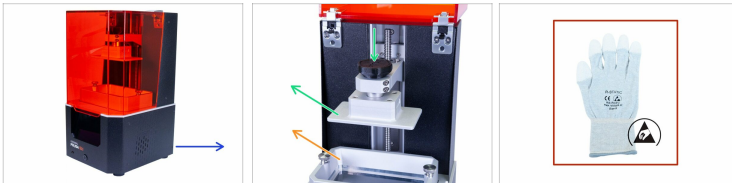
- ◆ This guide will take you through the replacement of the **USB connector** on the **Original Prusa SL1 and SL1S SPEED**.
- ⓘ Some parts might slightly differ. However, it does not affect the procedure.
- ◆ All necessary parts are available in our eshop shop.prusa3d.com
- ⓘ Note that you have to be 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 & USB board.

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.

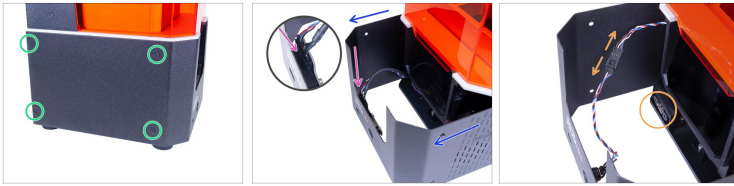
STEP 3 Prepare the printer



⚠ 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).

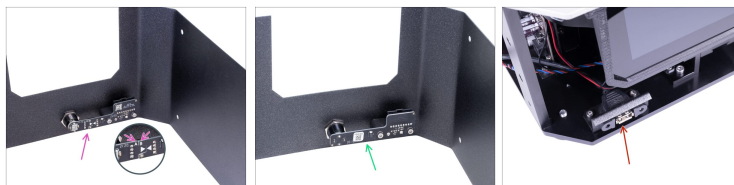
STEP 4 Removing the cover



⚠ 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.

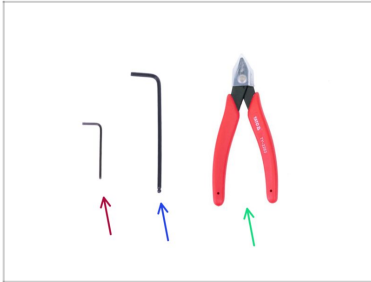
STEP 5 Multiple versions of the USB board



⚠ 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:**

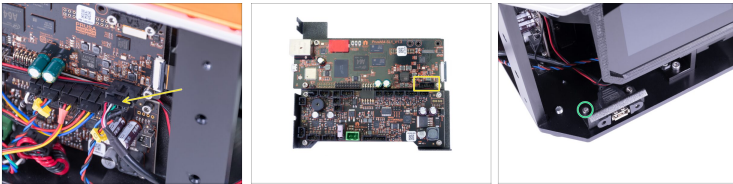
- ◆ **Version 3.0** - Power button (A) board and USB connector (B) board are connected and mounted on the bottom cover. Skip to Tools necessary for the Version 3.0
- ◆ **Version 2.0** - USB connector and power button are on the same PCB board mounted on the bottom cover. Skip to Tools necessary for the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

STEP 6 Tools necessary for the Version 1.0



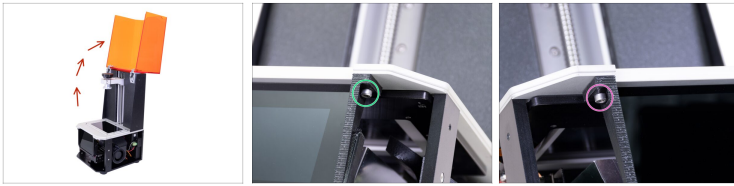
- 2.0mm Allen key
- 2.5mm Allen key
- Cutting pliers for zip ties

STEP 7 Disconnecting the USB (Version 1.0)



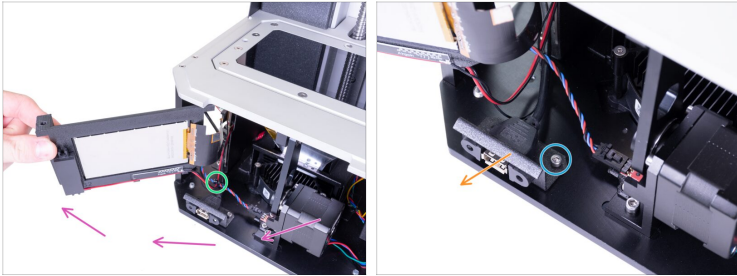
- Disconnect the USB cable from the PrusA64-SL1 board.
- Release the left screw on the USB connector.

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 USB connector (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.
- ◆ Release the screw on the right side of the USB connector.
- ◆ Remove the USB connector from the printer. It will no longer be needed.

STEP 10 Disassembling the USB connector (Version 1.0)



- ◆ Release two screws on the USB connector holder.
- ◆ Remove the USB connector from the USB connector holder.

STEP 11 New USB connector - parts preparation (Version 1.0)



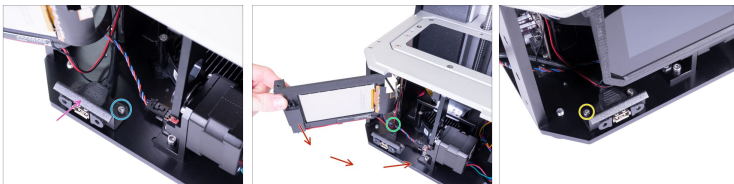
- ◆ **For the following steps, please prepare:**
- ◆ New USB connector (1x)
- ◆ Zip tie (1x)

STEP 12 Assembling the USB connector (Version 1.0)



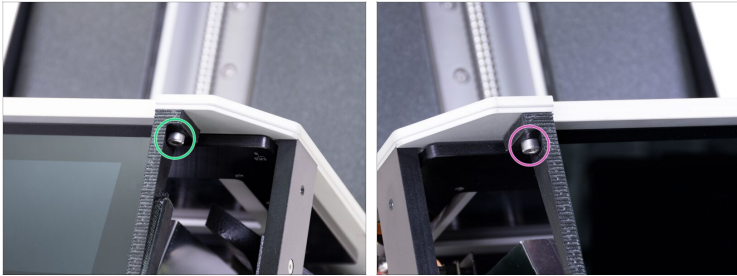
- ◆ Insert the USB connector cable through the opening in the USB connector holder.
- ◆ Make sure the USB symbol on the connector is facing up.
- ◆ Mount the USB connector to the holder with two M3x5 screws from the backside.

STEP 13 Mounting the USB connector (Version 1.0)



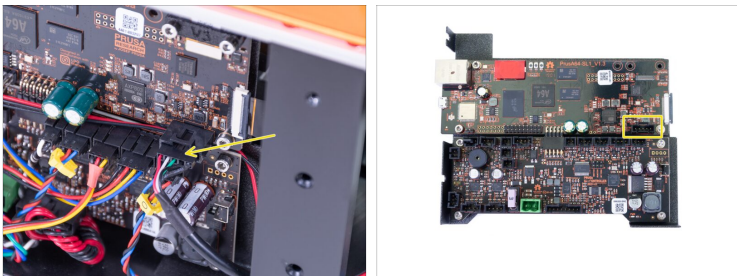
- ◆ Place the USB connector on the bottom plate inside the printer.
- ◆ Secure it with the M3x5 screw on the right side.
- ◆ Zip tie together the USB cable, optical sensor, WiFi and speaker cable.
- ◆ Carefully rotate the touchscreen back to its original position.
- ◆ Secure the USB holder with the M3x5 screw on the left side.

STEP 14 Mounting the touchscreen (Version 1.0)



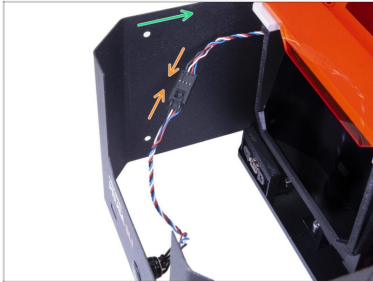
- Insert the M4x10 screw back into the hole on the right side of the touchscreen frame and tighten the screw.
- Tighten the screw on the left side of the frame.

STEP 15 Connecting the USB connector (Version 1.0)



- Connect the USB cable to the PrusA64-SL1 board. Make sure the red cable in the connector is on the left side.

STEP 16 Connecting the power button (Version 1.0)





- Slide the cover half-way to the printer and stop, we need to connect the front USB and power button first.
- Connect the power button cable to the extension cable. Make sure the safety pin "clicks".
- Now skip to Assembling the cover

STEP 17 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 power button & USB board.

 2.0mm Allen key


 2.5mm Allen key

 Cutting 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 18 Disassembling the USB connector board (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 19 Disassembling the power button & USB board (Version 2.0)



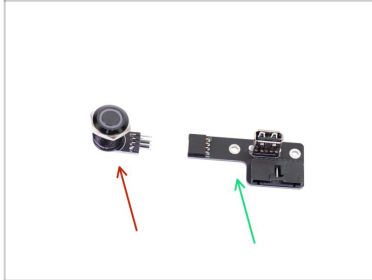
- ◆ Remove the USB board from the power button. Use more force. It doesn't matter if you damage the button or the board.
- ◆ Release the nut with the wrench.
- ◆ Remove the nut from the button.

STEP 20 Disassembling the power button & USB board (Version 2.0)



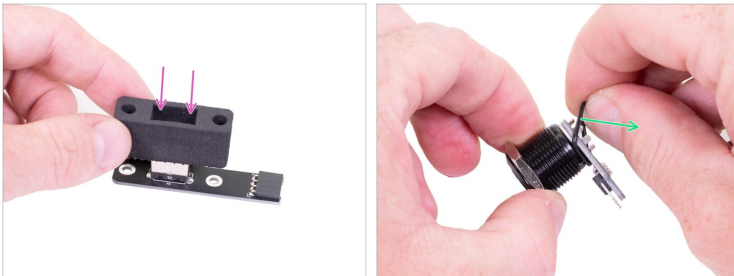
- ◆ Push the button from the inside of the front cover and remove it.
- ◆ Remove the foam seal from the USB connector. Keep it close, we'll need it soon.

STEP 21 New power button & USB board - parts preparation (Version 2.0)



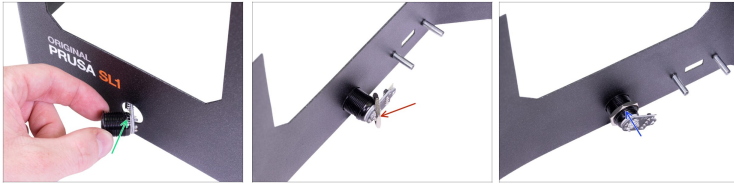
- ◆ For the following steps, please prepare:
- ◆ New power button (1x)
- ◆ New USB board (1x)

STEP 22 New USB board preparation (Version 2.0)



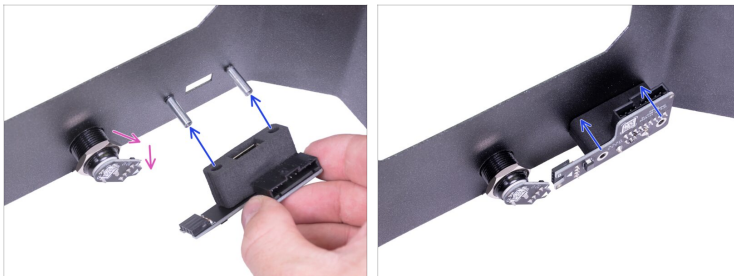
- ◆ Place the foam seal on the USB connector.
- ◆ Locate the o-ring between the button and the PCB and remove it. We won't need this part anymore.

STEP 23 Mounting the new power button (Version 2.0)



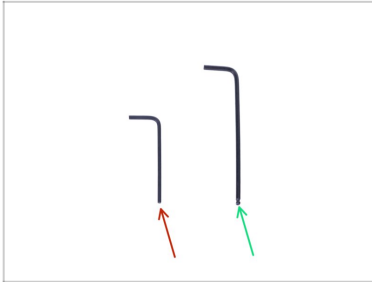
- ◆ Insert the power button from the front side of the cover into the hole.
- ◆ Place the nut on the power button from inside of the cover.
- ◆ Do not tighten the nut all the way. Leave it four threads from the end.

STEP 24 Mounting the new USB board (Version 2.0)



- ◆ 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.
- ◆ Now skip to Joining boards together

STEP 25 Tools necessary for the Version 3.0



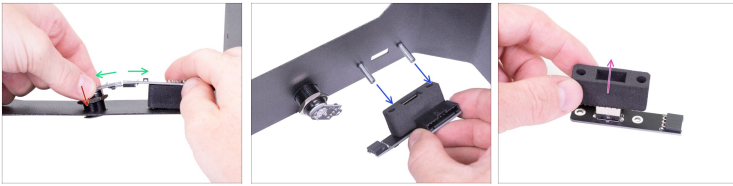
- 2.0mm Allen key
- 2.5mm Allen key

STEP 26 Removing the USB connector (Version 3.0)



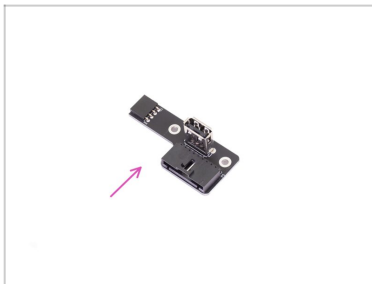
- Loosen the silver nut on the power button and move it all the way up.
- Release and remove two screws on the USB board.

STEP 27 Removing the USB connector (Version 3.0)



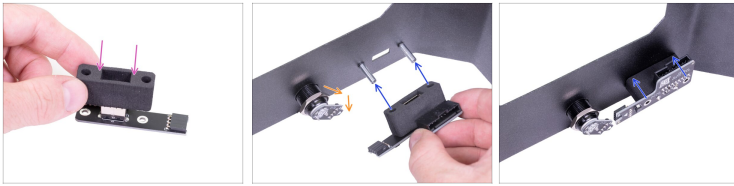
- ◆ Slightly tilt the power button, then push it down.
- ◆ Disconnect the power button from the USB board.
- ◆ Remove the USB board from the bottom cover.
- ◆ Remove the foam seal from the USB connector. Keep it close, we'll need it soon.

STEP 28 New USB connector - parts preparation (Version 3.0)



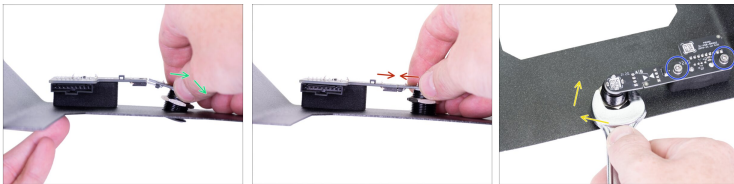
- ◆ **For the following steps, please prepare:**
- ◆ New USB board (1x)

STEP 29 Mounting the new USB board (Version 3.0)



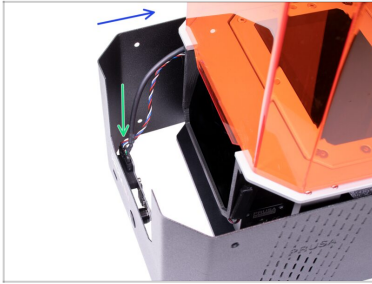
- ◆ Place the foam seal on the USB connector.
- ◆ Rotate the power button that the long side of the PCB is facing down.
- ◆ Place the USB board with the foam seal on the columns and slide it all the way on.

STEP 30 Joining boards together



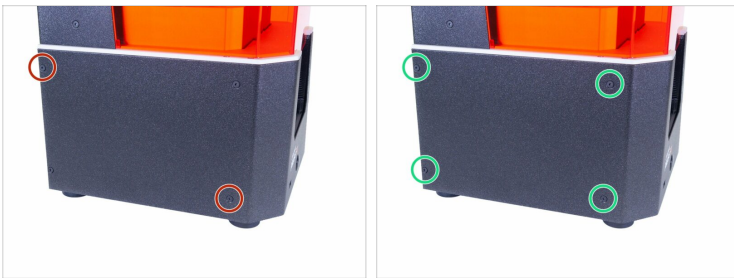
- ① The following steps are common for Version 2.0 and 3.0.
- ◆ Slightly and carefully tilt the power button like in the picture and align the pins against the connector on the USB board.
- ◆ Straighten the power button and connect the power button pins in the USB board connector.
- ◆ Tighten the nut against the cover by the wrench. **Do not overtighten the nut!**
- ◆ Secure the board with two M3x8 screws.

STEP 31 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 32 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 33 It's done!



- ◆ **Great job!** You've just replaced the USB connector on the SL1/SL1S printer.
