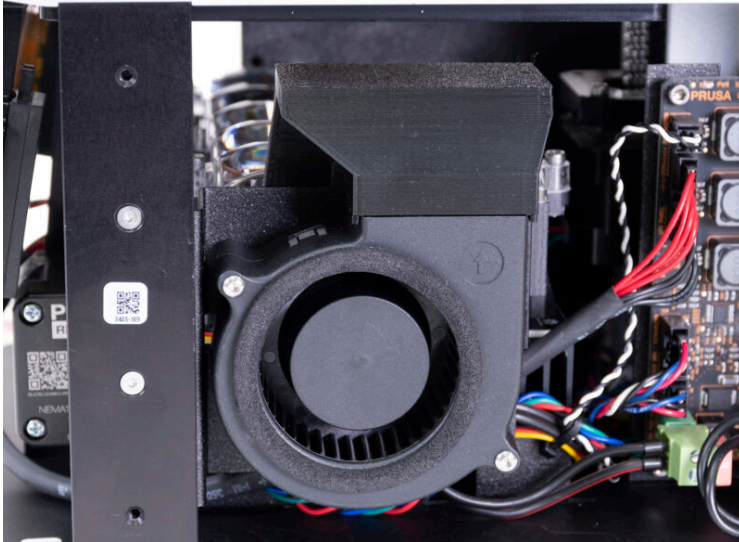


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# How to replace a blower fan (SL1S)



[help.prusa3d.com/g302616](https://help.prusa3d.com/g302616)

Scan the QR code to  
display the latest  
version of this  
chapter.

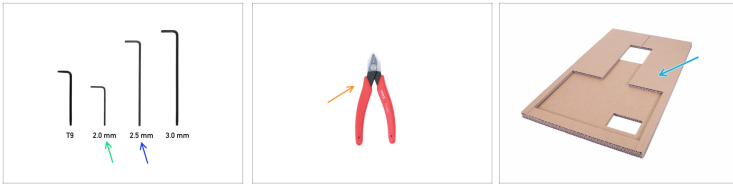


## STEP 1 Introduction



- ◆ This guide will take you through the replacement of the **blower fan** on the **Original Prusa SL1S SPEED**.
- ◆ All necessary parts are available in our shop [shop.prusa3d.com](http://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!!!

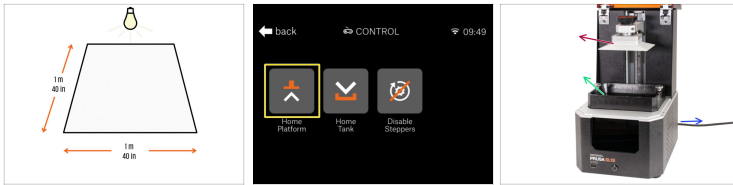
## STEP 2 Tools necessary for this chapter





● **For this guide, please prepare:**

- 2.0mm Allen key
- 2.5mm Allen key
- Cutting pliers
- Cardboard or similar soft pad (e.g. a piece of cloth)
- ⓘ Owners of the SL1 kit version can use the cardboard pad that came in the kit.
- Small bowl or box for storing fasteners. Some fasteners are very small and can be lost.





## STEP 3 Preparing the printer




 For a better handling, it is recommended to **prepare a clean workbench** with a space of at least 1 m x 1 m (40 in x 40 in). With access from two sides or more.

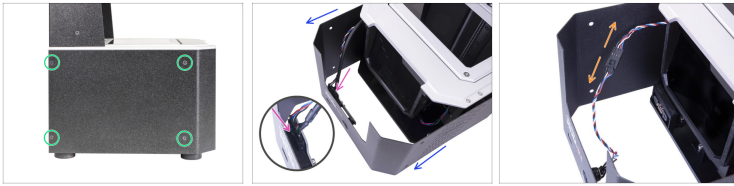
 We're recommending a **bright light above your workbench**. Some parts inside the printer are dark and inadequate light could make a very difficult procedure.

 **Before you start, do the following:**

-  Move the cantilever with the print platform up (Menu -> Control -> Home platform). You will need more space in the following steps.
-  Remove the resin tank. If you have a resin inside, pour it back into the bottle and clean the tank.
-  Remove the print platform.
-  Turn the printer off and unplug it.

 **All the removed screws will be reused. Do not throw away any screw!** In the instructions, it is graphically showing which type of screw to prepare.

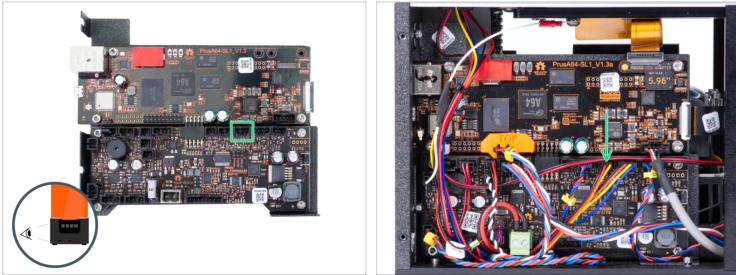
## STEP 4 Removing the cover



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

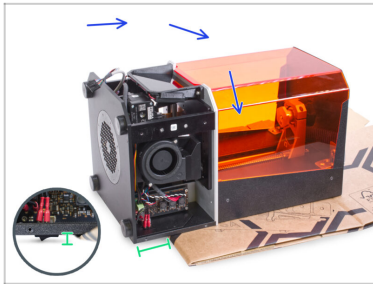
- Turn the left side of the printer towards you.
- Locate, release and remove the four screws. **Keep the screws safely in a bowl or box.** You will need them later on.
- Turn the printer by 180° and remove the last four screws on the other side.
- Slide the cover just a few cm/inches out.
- **i** There are two designs of USB and power button:
  - **NEW DESIGN:** The USB and the power button share the same connector. Disconnect the cable and remove the cover completely.
  - **OLD DESIGN:** The USB and the power button are separate. Disconnect the power button cable from the extension cable and remove the cover completely.

## STEP 5 Disconnecting the blower fan



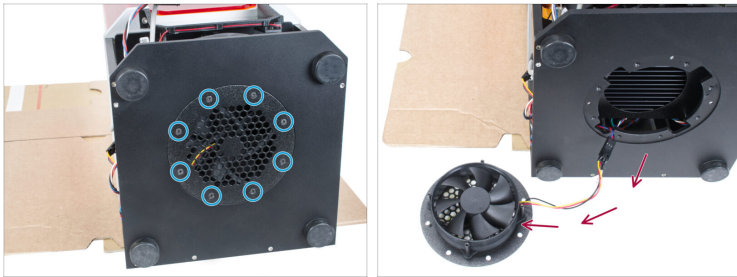
- ◆ Locate the blower fan cable (black-red-yellow wires). Press the safety pin on the connector and disconnect the blower fan from the electronics board (left side of the printer). **Do not pull out the connector without pressing the pin**, it may damage the connector or the board.
- ◆ Leave the cable free for now.

## STEP 6 Securing the printer



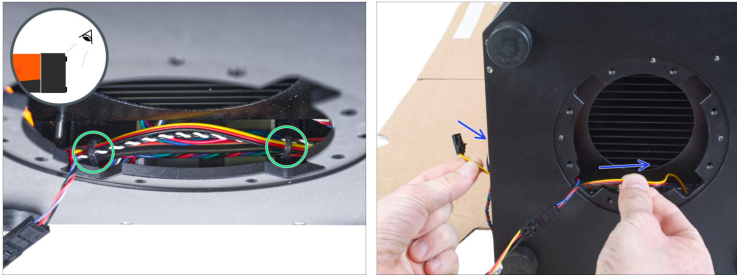
- Place the cardboard or other soft pad on your workbench.
- **VERY CAREFULLY** lay the printer on the soft pad by its back.
- Make sure there is a gap between the PSU power button and the surface beneath it. **Avoid laying the printer directly on the button.**

## STEP 7 Removing the UV LED fan



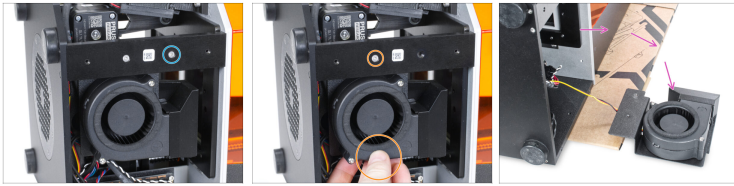
- ◆ Release all eight screws on the bottom of the printer. Store these screws
- ⚠ **Keep the screws safely in a bowl or box. You will need them later on.**
- ◆ Carefully remove the UV LED fan from the printer. Put it next to the printer. **No need to disconnect the fan cable.**

## STEP 8 Removing the blower fan cable



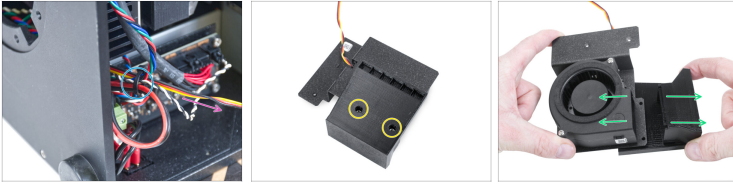
- Look into the opening at the bottom of the printer slightly from above and locate the cable bundle.
- Some units have secured the bundle with two zip ties. Cut these zip ties, but **AVOID CUTTING CABLES!!!**
- Push the blower fan cable through the gap between the electronics board and the base of the printer. Guide the cable to the right side of the printer and keep it free for now.

## STEP 9 Removing the blower fan assembly



- ◆ Release and remove the screw on the right side of the support.
- ◆ Hold the blower fan with your hand and release the screw on the left side of the support.
- ⚠ **Keep the screws safely in a bowl or box. You will need them later on.**
- ◆ Carefully put the blower fan assembly next to the printer.

## STEP 10 Disassembling the blower fan assembly



- ◆ Look from the right side and see if your printer has a zip tie on the cable bundle that includes the blower fan cable. Cut the zip tie. **AVOID CUTTING CABLES!!!**
- ◆ Remove the blower fan cable from the printer.
- ◆ Turn the blower fan assembly and remove two screws from the blower (printed part).
- ◆ Turn the blower to the previous position and tear apart the blower (printed part) and the blower fan.

## STEP 11 Blower fan mounting: New vs old version

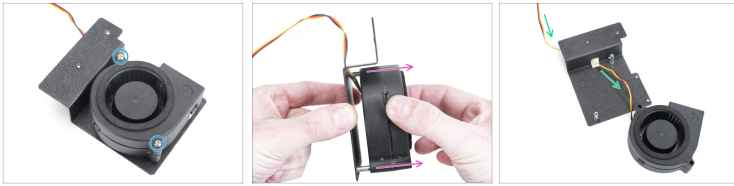


◆ **There are two different versions of the blower fan mounting.** Select your version and follow the appropriate steps:

- ◆ **NEW version** - (second picture) blower fan is secured with two screws accessible from the front side of the fan (turbine side). For this version, skip to Remove the blower fan (new version).
- ◆ **OLD version** - (third picture) blower fan is secured with two screws accessible from the back side of the fan assembly (back of the blower fan holder). *The old design may have two different screw types.* For this version, skip to Remove the blower fan (old version)

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## STEP 12 Remove the blower fan (new version)



- ◆ Release and remove two screws securing the blower fan.
- ◆ Pull out the blower fan from the two columns on the blower fan holder.
- ◆ Push the blower fan cable through the hole in the blower fan holder and put the blower fan away. You will no longer need this one.
- ◆ Now, go to New blower fan: parts preparation

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## STEP 13 Remove the blower fan (old version)



- ◆ From the back of the blower fan assembly release two screws securing the fan.
- ◆ Push the fan cable through the blower fan holder back to the fan.
- ◆ Place the blower fan away. You will no longer need this one.

## STEP 14 New blower fan: parts preparation



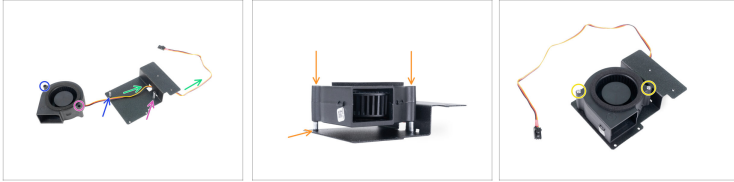
- **For the following steps, please prepare:**
- New blower fan (1x)
- Blower fan gasket (1x)
- **Blower mounting screws that you have removed earlier:**
  - M5x10r screw (2x) ***OLD blower fan holder***
  - M3x20r screw (2x) ***NEW blower fan holder***
- Keep prepared the rest of the previously removed screws. In the following steps, you will be prompted to use them.

## STEP 15 Sticking the gasket



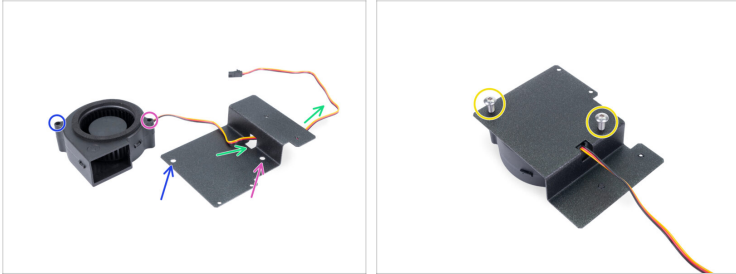
- ◆ Clean the top surface of the blower fan (the side with the turbine), before you apply the gasket. It is recommended to use IPA and cleaning wipes or paper towels.
  - ◆ Remove the center part of the gasket, you will need just the outer "rim".
  - ◆ Peel off the protective film (paper).
  - ◆ Place the gasket on the fan as in the picture, with the glue facing down. Press it all around to ensure full contact between the gasket and the fan.
- ⚠ **Make sure no part of the gasket is interfering with a spinning (central) part of the fan!**

## STEP 16 Assembling the new blower fan (new version)



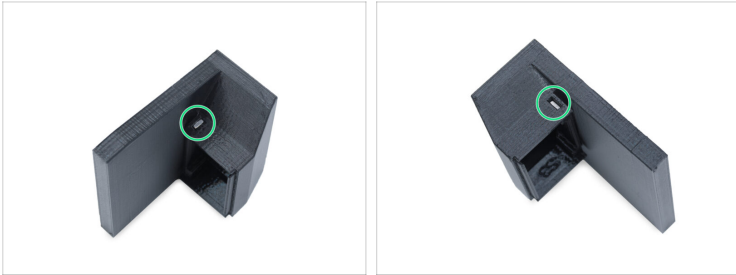
- ◆ This step is for the **new** version of the fan mounting. For the old version, go to [Assembling the new blower fan \(old version\)](#).
- ◆ Place the fan and the fan holder like in the picture. See the arrows to ensure correct orientation of the fan.
  - ◆ The left side of the fan.
  - ◆ The right side of the fan.
- ◆ Guide the cable through the hole.
- ◆ Place the fan on the columns and slide it carefully all the way down. Try to push equally to ensure the fan is always levelled.
- ◆ Secure the fan using two M3x20r screws. **Tighten them very carefully, or you might break the fan's casing.**
- ◆ Now, go to [Installing the blower](#)

## STEP 17 Assembling the new blower fan (old version)



- Place the fan and the fan holder like in the picture. See the arrows to ensure correct orientation of the fan.
  - The left side of the fan.
  - The right side of the fan.
  - Guide the cable through the hole.
  - Turn the assembly around and insert two screws M5x10r (previously M5x16r). **Tighten them very carefully, or you will break the fan's casing.**

## STEP 18 Assembling the blower fan



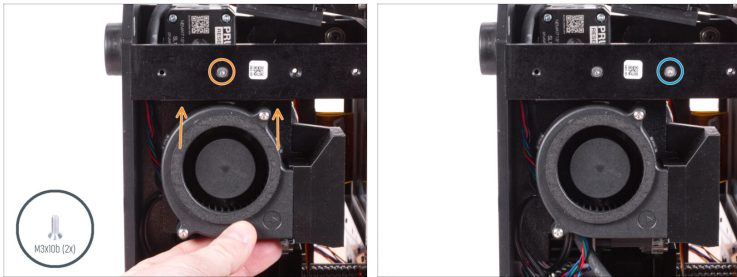
- Prepare the blower (printed part) and check if both M3nS nuts didn't fall out from the part. If so, insert them back into the holes in the plastic part. To insert the nuts, you can follow these instructions.

## STEP 19 Assembling the blower fan



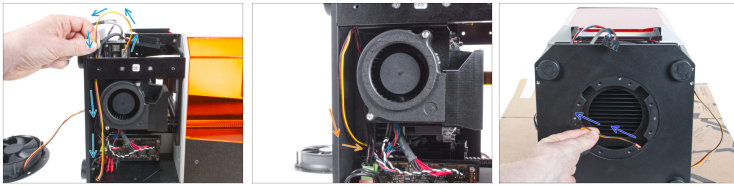
- Grasp the blower fan and blower as shown and point them at each other.
- Slide both parts together. Make sure there is no gap between them.
- Turn the assembly. Insert and tighten two M3x5 screws (that you removed earlier) into the plastic part and secure both parts together.

## STEP 20 Mounting the blower fan assembly



- Insert the blower fan assembly into the printer. The metal sheet (fan holder) has to be located behind the support bar.
- Hold the assembly by your hand and secure it with the M3x10b countersunk screw through the left screw hole.
- Insert and tighten the second M3x10b countersunk screw in the right screw hole.
- ⚠ **Make sure that no cable is pinched between the blower fan assembly and the UV LED assembly!**

## STEP 21 Guiding the blower fan cable



- ◆ Guide the blower fan cable like in the picture.
- ◆ Take the blower fan cable connector and guide it inside the printer along the cable bundle.
- ◆ From the opening on the bottom of the printer, take the blower fan cable and carefully pull it out. It is not necessary to pull the entire cable length. Suffice as much as you see in the picture.

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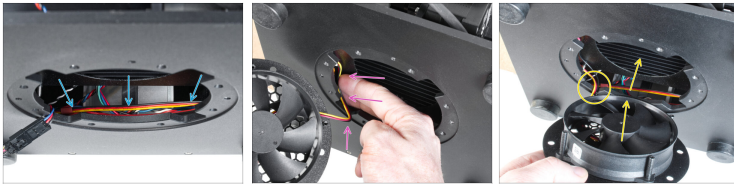
## STEP 22 Guiding the blower fan cable



- ◆ Guide the cable inside the printer and push it through the gap between the electronics board and the base of the printer. Guide the cable out to the electronics.
- ◆ Connect the blower fan cable connector to the empty slot on the electronics board.

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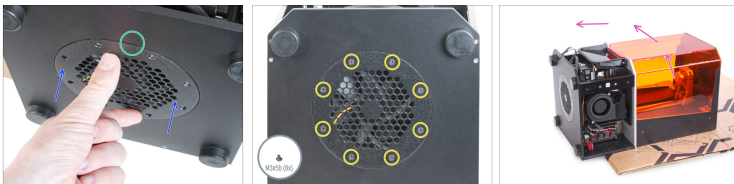
## STEP 23 Mounting the UV LED fan



- ◆ Push all the cables inside the printer down as much as possible. **There must be no cable in the UV LED fan area.**
- ◆ Gather as much UV LED cable as possible on the left side of the printer. Push the cable as far as the edge of the opening.
- ◆ Close the UV LED fan. **Avoid pinch the UV LED fan cable!**

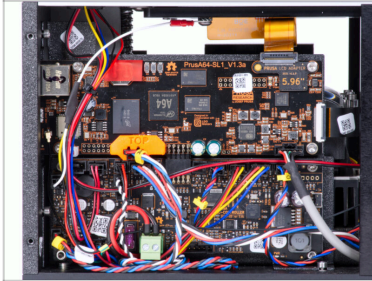
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## STEP 24 Finishing the UV LED fan



- ◆ Make sure you do not pinch the cable by making sure that the cover is flush with the surface of the printer.
- ◆ Align the holes after closing the UV LED fan.
- ◆ Secure the UV LED fan by tightening eight M3x5b countersunk screws, that you removed earlier.
- ◆ Now you can carefully put the printer back on its feet.

## STEP 25 Cable management



- ◆ Arrange all cables according to the picture.
- ⚠ **Make sure no cable protrudes from the printer.**

## STEP 26 Connecting the power button



- ◆ Slide the cover halfway to the printer and stop, we need to connect the front USB and power button first.
- ⚠ **Avoid pinching the cables!**
- ◆ **NEW DESIGN:** Look from above in the front cover and connect the USB & Power cable. Make sure the safety pin "clicks".
- ◆ **OLD DESIGN:** Connect the power cable button to the extension cable. Make sure the safety pin "clicks".

## STEP 27 Mounting the cover



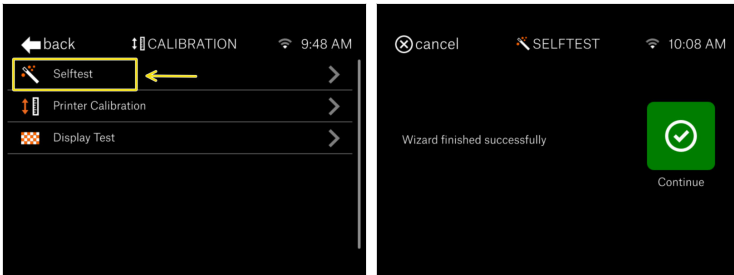
- Slide the cover onto the printer and secure it on one side using two M3x5b countersunk screws. Don't tighten them firmly yet. Move to the other side and repeat the procedure.
- As soon as the cover is aligned and partly secured, add the remaining screws and tighten them all on both sides.

## STEP 28 Mounting the cover



- Turn the printer around.
- Slide the cover onto the printer and secure it on one side using two M3x5b countersunk screws. Don't tighten them firmly yet. Move to the other side and repeat the procedure.
- As soon as the cover is aligned and partly secured, add the remaining screws and tighten them all on both sides.

## STEP 29 Testing the proper functionality



- Plug the printer and turn it ON.
- On the touch screen navigate to Home -> Settings -> Calibration -> Selftest.
- Run the Selftest and follow the instructions on the screen.
- The Selftest takes only a few minutes and will need user interaction. If no error message is displayed during the Selftest, everything is OK.

## STEP 30 It's done!



- **Great job!** You've just changed the blower fan on your SL1S SPEED printer.



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