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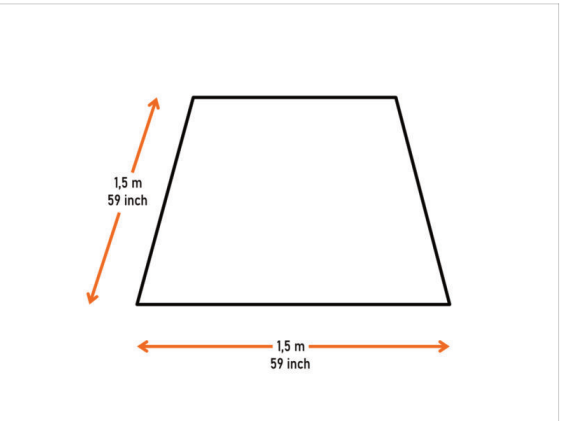
1. Introduction

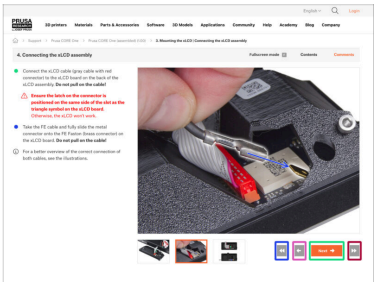
STEP 1 General information

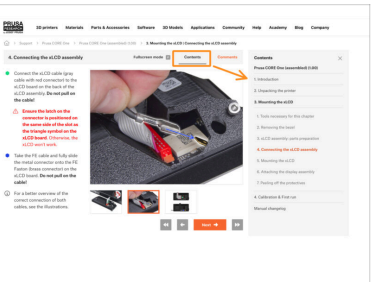


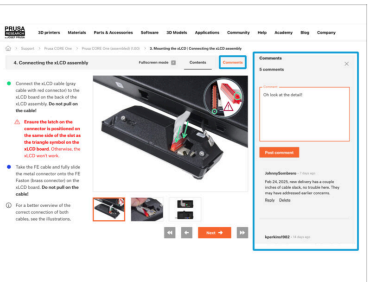
⚠ **The package with the printer is heavy!** Always ask another person for help with handling.

- For the assembly, prepare a clean workbench with a space of at least 1,5 m x 1,5 m (59 in x 59 in).
- We recommend having a bright light above your workbench. Some parts of the printer are dark, and inadequate light could make the assembly more difficult.

STEP 2 How to navigate through the manual

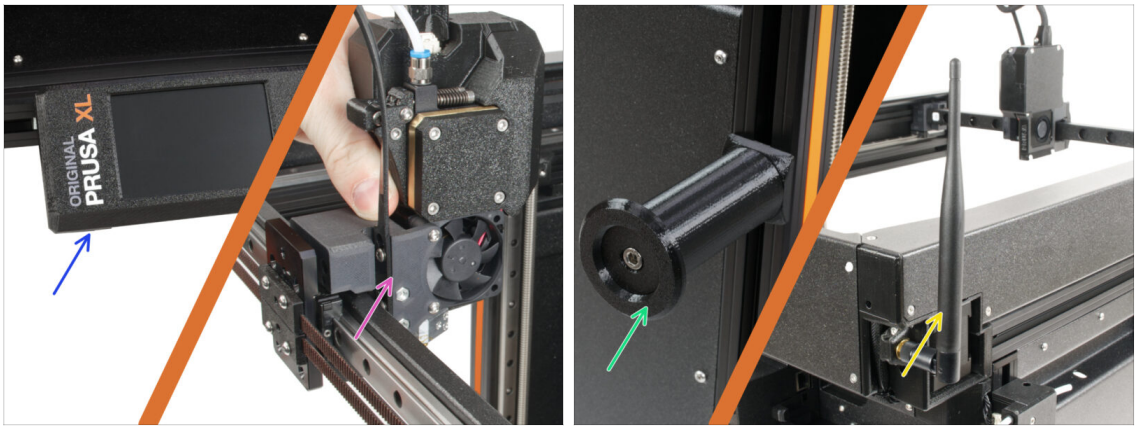






- Use the graphical navigation buttons in the bottom right corner or the arrow keys on your keyboard:
  - **Next button / Right arrow key** - Moves to the next image, or to the next step if it's the last image in the step.
  - **Left arrow button / Left arrow key** - Moves to the previous image, or to the previous step if it's the first image in the step.
  - **Play backward button / Up arrow key** - Moves to the previous step.
  - **Play forward (Next) button / Down arrow key** - Moves to the next step.
- Click on **Contents** to expand the full list of steps in this guide. This allows you to jump to any step regardless of the sequence.
- Click on **Comments** to open the discussion for a specific step and leave your feedback.

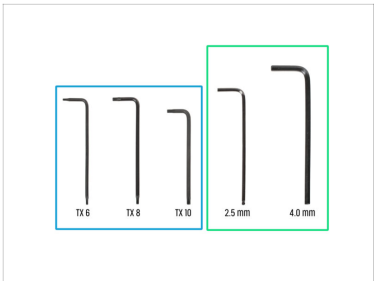
STEP 3 What awaits you during the unpacking



Because of transportation, some of the fragile parts must be safely packed separately in the printer package. This manual will take you through the installation of these parts on the printer.

- **These parts will be installed:**
  - LCD assembly
  - Single tool extruder assembly
  - Spool holder
  - Wi-Fi antenna

STEP 4 Tools in the package

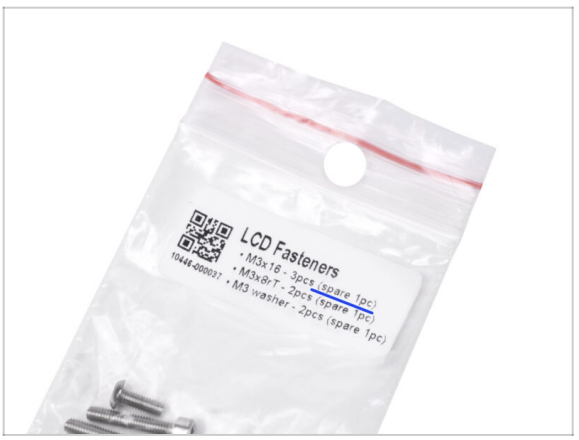


- **The package includes:**

ⓘ Some of the tools are intended primarily for regular printer maintenance. You won't need them for this manual. At the beginning of the assembly chapter is a list of the necessary tools.

- Torx key TX6, TX8, TX10
- Allen key 2.5 mm, 4.0 mm
- Wrench 13-16
- Universal wrench
- T10 screwdriver
- Philips PH2 screwdriver
- Needle-nose pliers
- The printer's package contains a lubricant, which is intended for maintenance. No need to apply it during the assembly. There is a dedicated online manual Regular printer maintenance.

STEP 5 Labels guide



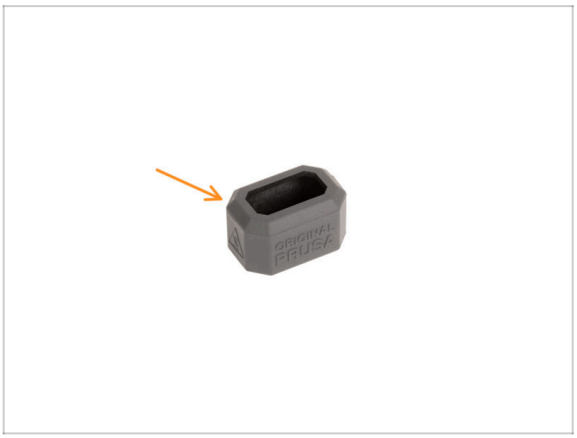
- All the boxes and bags including parts for the build are labeled.
- The LCD Fasteners bag includes an extra spare of each part contained in the bag. The amount of spare parts is written on the label. This number is included in the total number of each type of part.

STEP 6 Cheatsheet

- Your package contains a letter, on the back of which is a Cheatsheet with drawings of all the necessary fasteners.
- The fasteners drawings are 1:1 scale, so you can compare the size by placing the fastener on the paper to make sure you are using the correct type.

ⓘ You can download it from our site help.prusa3d.com/cheatsheet. Print it at 100 %, don't rescale it, otherwise, it won't work.

STEP 7 Prusa nextruder sock

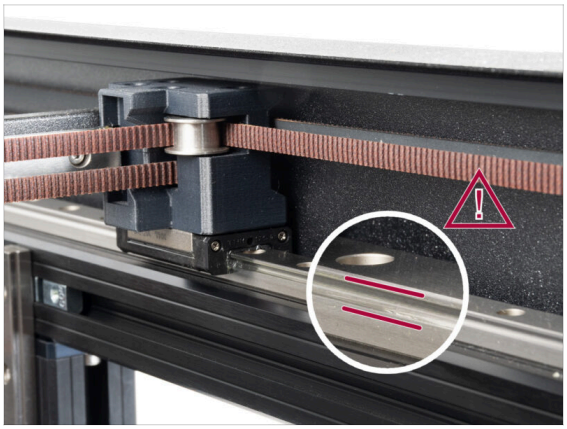


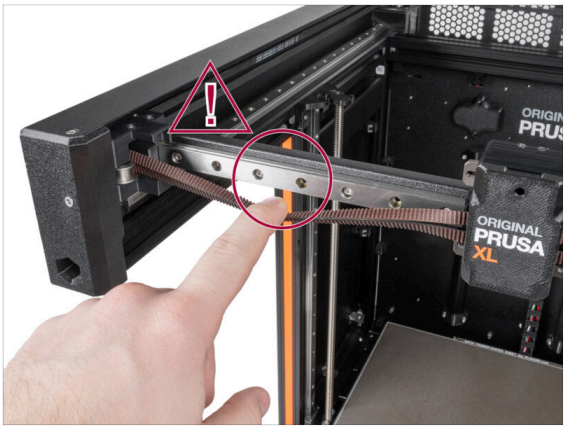
- A silicone nextruder sock is supplied with each Nextruder package.
- Installing the Prusa nextruder sock is recommended, but optional. We will provide details on how to install it later on in the guide.

ⓘ The main function of a silicone sock is to keep the temperature in the heater block stable, which improves the printer's performance.

ⓘ Also, it keeps your hotend clean from filament dirt and protects it in case the print detaches from the print surface.

STEP 8 CAUTION: Lubricant Handling

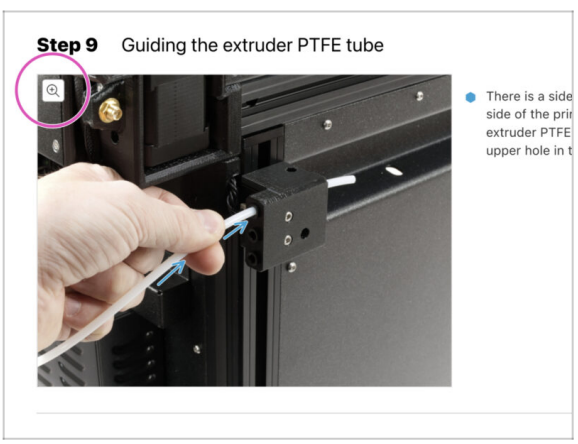




⚠ CAUTION: Avoid direct skin contact with the lubricant used for the linear rails in this printer. If a contact occurs, wash your hands immediately. Especially before eating, drinking, or touching your face.

- Lubricant accumulates in the printer's bearings, mainly in the linear rail channels.

STEP 9 View high resolution images



ⓘ When you browse the guide on help.prusa3d.com, you can view the original images in high resolution for clarity.

- Hover your cursor over the image and click the Magnifier button ("View original") in the top left corner.

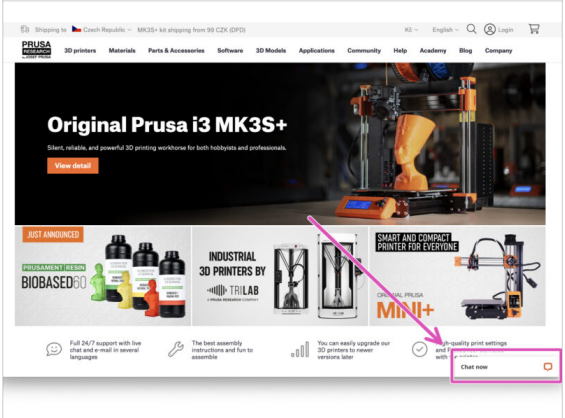
STEP 10 Unpacking the printer

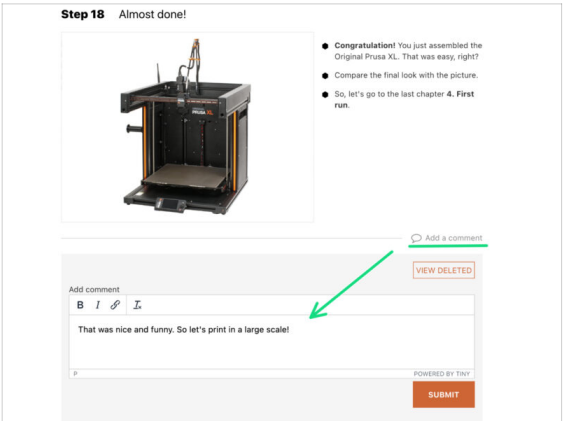
- There are two versions of the printer package. The first units shipped have the **Package A**. The later batches were shipped in the **Package B**.

  ⓘ The printer itself inside the box is the same. Only the packaging and the unboxing process differs.

- **Package version A** has adhesive labels on the box. If you have this version, continue to the chapter 2A. Printer Unboxing.
- **Package version B**. This version can be easily distinguished by having the image of a printer on the box. If you have this version, continue to the chapter 2B. Printer Unboxing.

STEP 11 We are here for you!

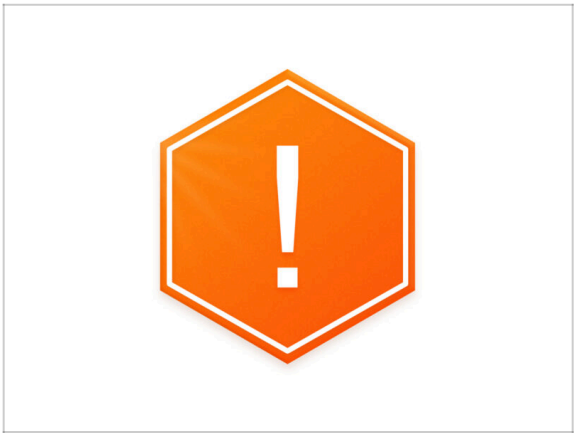




- Lost in the instructions? Missing screw or cracked printed part? **Let us know!**
- You can contact us using following channels:
  - Comments under each step.
  - Our 24/7 live chat at shop.prusa3d.com
  - Writing an email to info@prusa3d.com
- Are you ready to get started on the assembly? Let's move on to chapter 2. Printer unboxing.

2A. Printer Unboxing

STEP 1 Introduction



⚠ **The package with the printer is heavy!** Always ask the other person for help with handling.

⚠ **If children are involved, always supervise them to avoid injury.**

ⓘ **We recommend keeping all the packaging material** in case you decide to send the printer for service.

STEP 2 Opening the package

- Place the package on a stable place. **Make sure that the package is oriented top side up**. Note the arrows on the box.

ⓘ The box is equipped with two easy-to-tear zippers. They separate the box into two parts.

- Find the zippers on the edge of both long sides of the package.
- Peel off the entire tear strip to split the box.

STEP 3 Opening the package

ⓘ The zips are designed to build on each other, **no matter which one you start with.**

- Tear zippers on both sides to fully separate the box. One zipper opens two sides, the longer and the shorter side.
- Now, the top part is separated from the bottom part.
- Slide the top part to separate the box upwards by the handles.

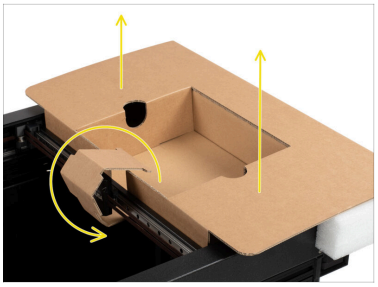
STEP 4 Removing the fixations

⚠ There are cardboard fixings that contain the parts necessary for the assembly. **Do not throw them out!**

- Take off the front top fixation with the parts inside and put it on the safe place. We will need these parts later on.

ⓘ Your printer may differ slightly from the one shown in the photos.
This does not affect the guide; the photos are for illustrative purposes only.

STEP 5 Removing the fixations


⚠ The cardboard fixings contain the parts necessary for the assembly. **Do not throw them out!**

- Take out included Prusament.
- The fixation is unlocked, remove the rear top fixation from the printer.
- Pull up the cardboard to unlock the bottom box from the main lower box part and take it off.

ⓘ If there is a test print on your print sheet, remove it by carefully lifting the corner of the print sheet where the print is located. Slightly bending the print sheet like this will make the print snap out from the surface.

STEP 6 Unpacking the printer

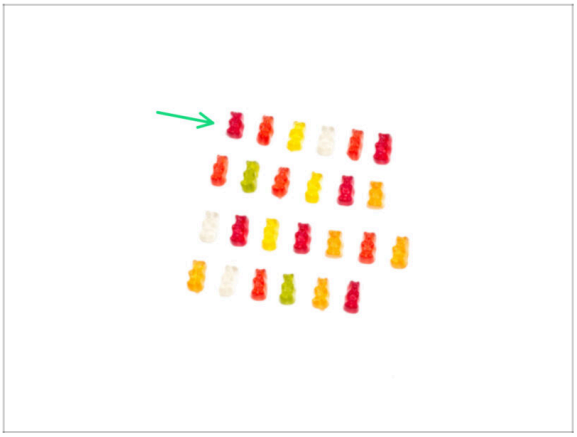
- **Use the side handles on both sides of the printer to handle.**

⚠ **Do not hold the printer by the top metal profiles!!!** Otherwise, you may warp the printer and damage the LED lighting inside the profiles.

⚠ Handle the printer in two persons.

- Hold the bottom box and pull out the printer. Place it in a designated area.

STEP 7 Haribo time



- Carefully and quietly open the bag with the Haribo gummy bears. A high level of noise might attract nearby predators!
- Take out some of the gummy bears and place them on a clean surface. Separate the sleuth into four rows as shown in the photo. Seal the bag and set it aside for now.
- Eat the first row: six gummy bears.

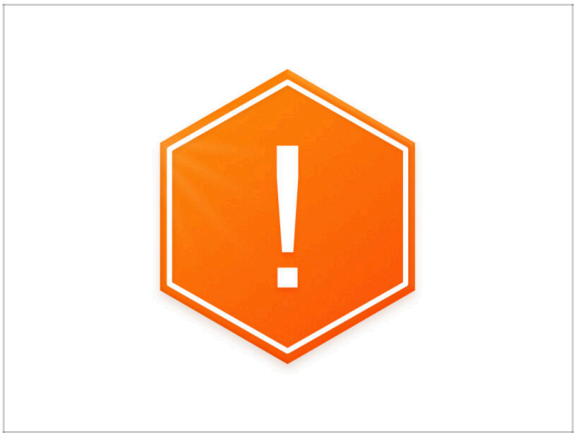
ⓘ Did you know that gummy bears were first created by a German candy maker named Hans Riegel in the 1920s?

STEP 8 Hooray! The printer is ready for the set up

- Good job! You just unpacked all the parts necessary for the printer set up.
- Now, go to chapter **3. Printer set up**.

2B. Printer Unboxing

STEP 1 Introduction

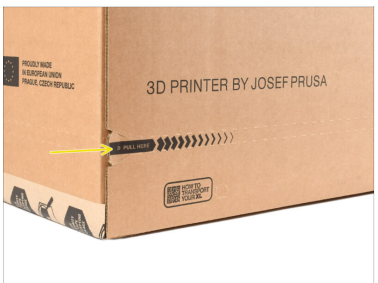


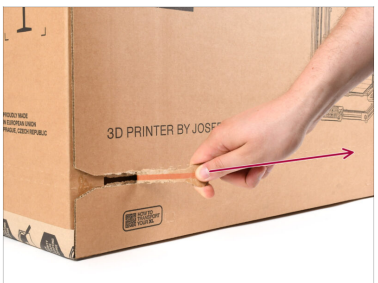
⚠ **The printer package is heavy!** Ask someone to help you out.

⚠ **If any children are helping you with the assembly, always supervise them to avoid injury.**

ⓘ **We recommend keeping all the packaging material** in case you decide to send the printer back for service.

STEP 2 Opening the package





- Place the package on a stable surface. **Make sure the package is oriented top side up**. See the transportation label.
- The package is equipped with a tear strip that splits the box in two parts.
- Peel off the entire tear strip to split the box.

STEP 3 Opening the package

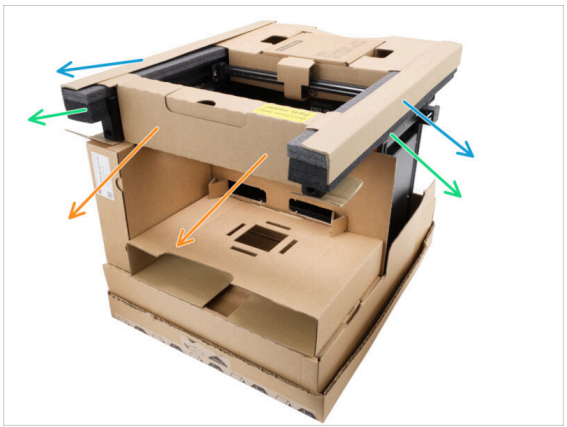
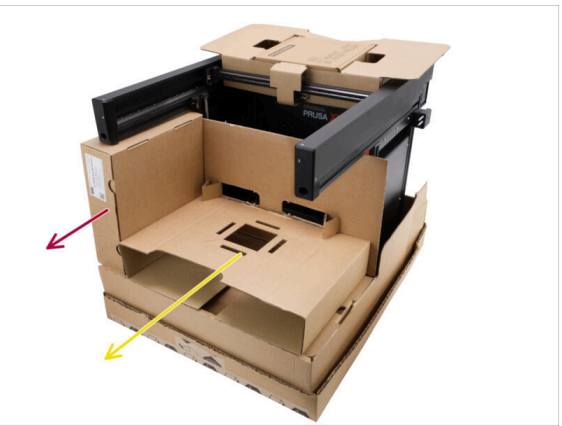
- Remove the top part of the box by lifting it up.

⚠ Inside, there are cardboard inserts that contain parts necessary for the assembly. **Do not throw them out!**

ⓘ Your printer may differ slightly from the one shown in the photos.
This does not affect the guide; the photos are for illustrative purposes only.

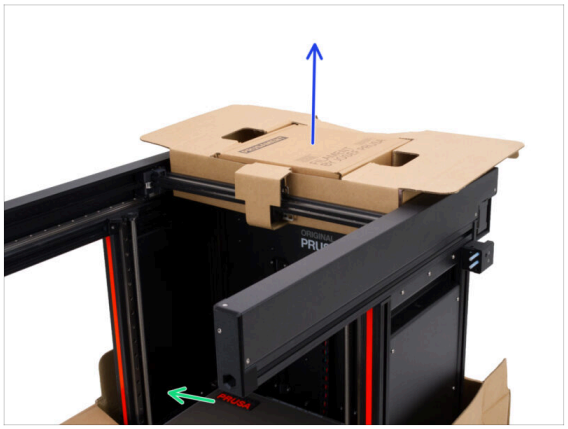
- Remove the Haribo gummy bears from the back of the box and put them aside. We will release them from captivity soon.
- Remove the welcome letter, which also contains the cheatsheet. **Do not dispose of the welcome letter !**

STEP 4 Removing the inserts

- Remove the top hardened cardboard protective fixations.
- Remove the top foam fixations.
- Remove the top front cardboard insert. There are various parts inside; be careful not to lose these when removing the cardboard insert.
- Remove the cardboard insert next to the nextruder box.
- Remove the nextruder box.

STEP 5 Removing the inserts



- Lift the two flaps on the side of the front cardboard insert, bend the vertical side down and remove the insert.
- Remove the box with Prusament on top.
- Remove the test print by carefully lifting the corner of the print sheet where the print is located. Slightly bending the print sheet like this will make the print snap out from the surface.

STEP 6 Removing the inserts

- There is a small cut-out in the top cardboard insert that locks it to the printer's frame. Pull it to unhook the insert.
- Unhook the protective cardboard strip that is wrapped around the X-axis.
- Printer parts are stored inside the top cardboard insert! Make sure not to lose them!
- Lift the whole insert and remove it.

STEP 7 Unpacking the printer

- **Use the side handles on the printer to lift it up.**
- Keep the bottom of the box in place by holding it down while you lift the printer up.

⚠ **Do not lift the printer by the top metal profiles!!!** Otherwise, you may warp the printer parts and damage the parts such as the LED lighting inside.

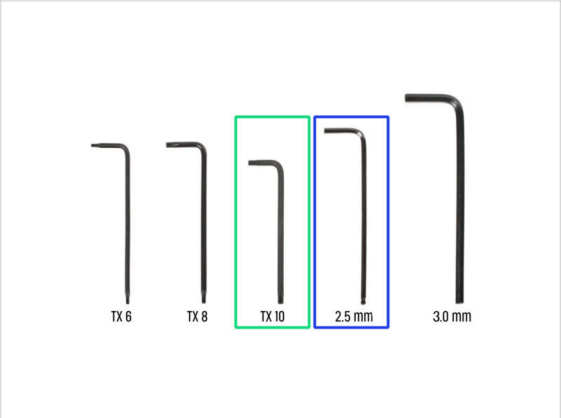
⚠ **Do not lift the printer alone**; ask someone to help you lift the printer by the handle on the side of the printer.

STEP 8 Printer is ready for setup

- Good job! The printer is ready for the next step:
- Visit chapter **3. Printer set up**.

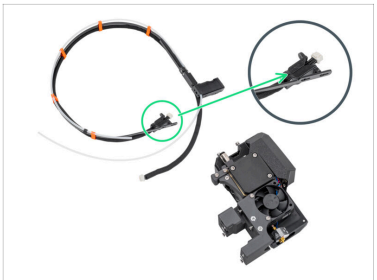
3. Printer set up

STEP 1 Tools necessary for this chapter



- **For this chapter, please prepare:**
- TX 10 Torx key
- 2.5mm Allen key
- Use a cardboard box as a heatbed protection during the setup. Use one of the Nextruder boxes that you received with your printer.

STEP 2 Nextruder cable bundle assembly info



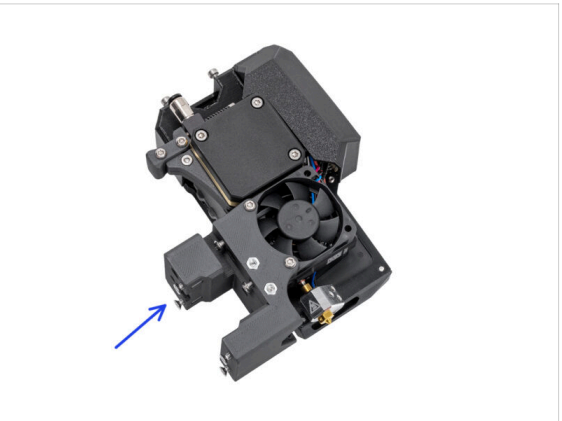
ⓘ Starting from April 2025, you may receive a new cable bundle.

- **Variant A:** The **cable bundle is disconnected from the Nextruder** and must be attached first. The **cable bundle connector will be secured with two screws.** Continue to the next step →

⚠ **Older versions,** there are two variants:

- **Variant B:** The **cable bundle is disconnected from the Nextruder** and must be attached first. There are **no holes** for screws on the cable bundle connector. Please go this step: **Variant B - Nextruder cable bundle assembly: parts preparation**
- **Variant C:** The **cable bundle is attached to the Nextruder** already. Please skip to this step: **Preparing the printer**

STEP 3 Variant A - Nextruder cable bundle assembly: parts preparation



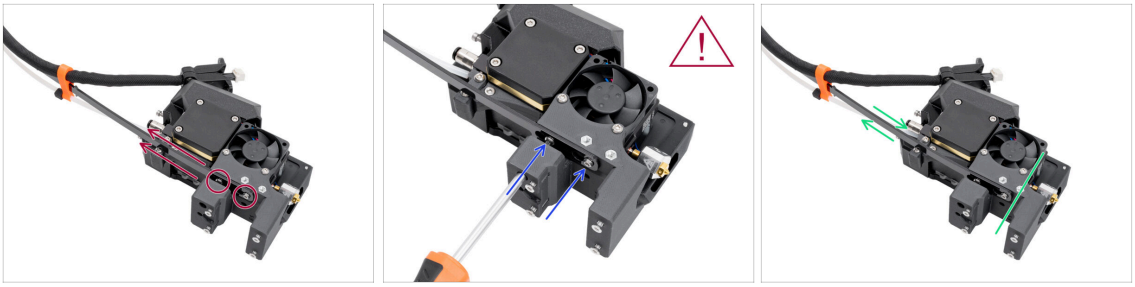
- **For the following steps, please prepare:**
  - Nextruder cable bundle (1x)
  - Nextruder (1x)

STEP 4 Variant A - Nextruder cable bundle assembly

- Using the T10 Torx screwdriver, loosen the two highlighted screws on the inside of the nextruder.
- Hook up the keyhole openings in the flexible plate of the cable bundle onto the screw heads.
- Make sure the part of the bundle with the cable and the connector is facing the top of the extruder, as seen in the picture.

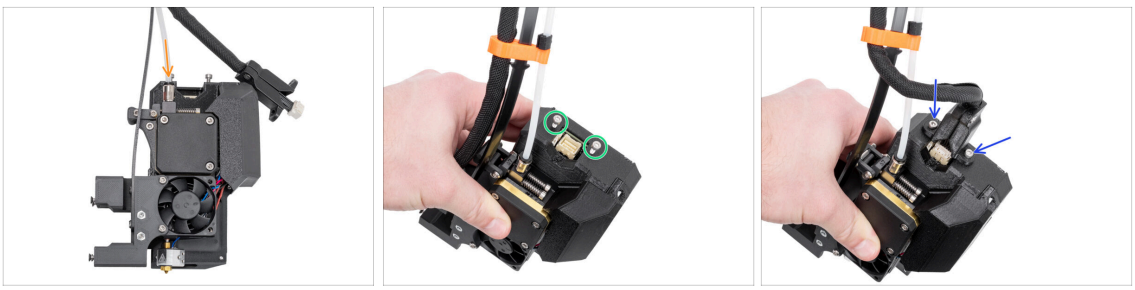
⚠ The cable bundle must be installed exactly the same way as in the picture; with the cable on top and the semi-transparent PTFE tube on the bottom.

STEP 5 Variant A - Nextruder cable bundle assembly



- Pull the flexible line up so that the screws engage into the narrower part of the keyhole openings.
- ⚠ Verify both screws have engaged.
- While the screws sit in the narrower parts of the openings, tighten them up using the T10 Torx screwdriver.
- Verify the flexible part of the cable bundle is held tight to the extruder body.

STEP 6 Variant A - Nextruder cable bundle assembly

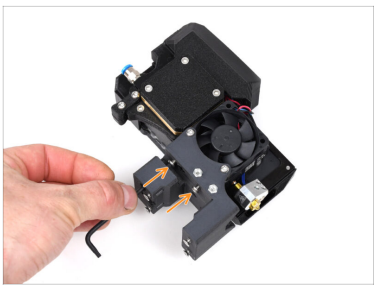


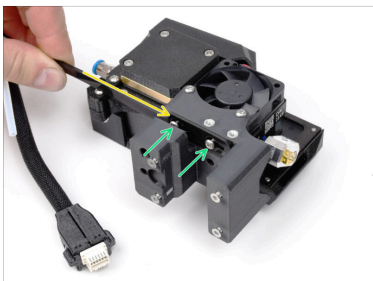
- Insert the semi-transparent PTFE tube into the Fitting M5-4 on the Nextruder. Push it all the way in.
- Remove two M3x10 screws from the top of the Nextruder.
- Attach the cable connector to the top of the Nextruder. Insert and secure two M3x10 screws using a 2.5 mm Allen key.
- Good! Your Nextruder is prepared for the next step.

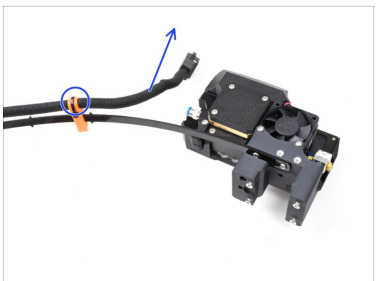
STEP 7 Variant B - Nextruder cable bundle assembly: parts preparation

- **For the following steps, please prepare:**
  - Nextruder cable bundle (1x)
  - Nextruder (1x)
- This is the end of the nextruder cable bundle we are going to attach to the Nextruder in the next step. It consists of a cable connector, a flexible plate and a semi-transparent PTFE tube.

STEP 8 Variant B - Nextruder cable bundle assembly



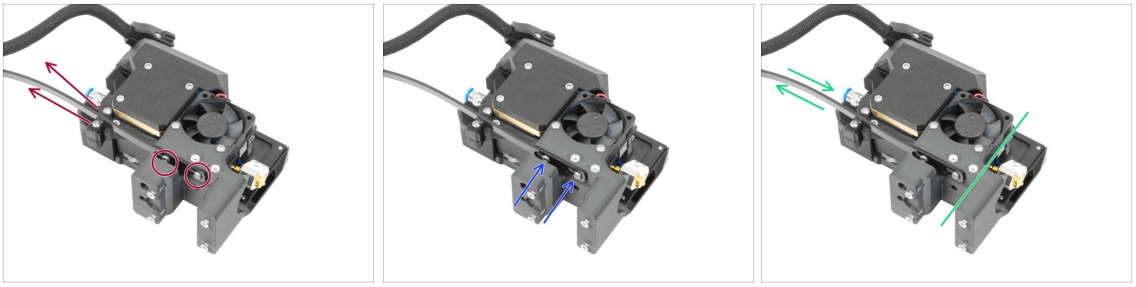




- Using the T10 key, loosen the marked two screws on the inside of the nextruder.
- Hook up the keyhole openings in the flexible plate of the cable bundle onto the screw heads.
- Using a T10 screwdriver, tighten marked two screws on the inside of the extruder.
- Make sure the part of the bundle with the cable and the connector is facing the top of the extruder, as seen in the picture.

⚠ The cable bundle must be installed exactly the same way as in the picture; with the cable on top and the semi-transparent PTFE tube on the bottom.

STEP 9 Variant B - Nextruder cable bundle assembly



- Pull the flexible line up so that the screws engage into the narrower part of the keyhole openings.
- ⚠ Verify both screws have engaged.
- While the screws sit in the narrower parts of the openings, tighten them up using the T10 key.
- Verify the flexible part of the cable bundle is held tight to the extruder body.

STEP 10 Variant B - Nextruder cable bundle assembly

- Attach the cable connector into the top of the nextruder.
- Insert the semi-transparent PTFE tube into the FESTO fitting on the nextruder. Push it all the way in.
- ⓘ Starting from September 2024, you may receive a new black Fitting M5-4. The assembly and functionality remain identical to the blue one.
- Good! Your nextruder is prepared for the next step.

STEP 11 Preparing the printer

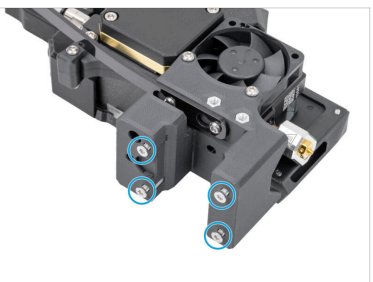
ⓘ From now on, the **setup is the same** both for **Variant A and Variant B**.

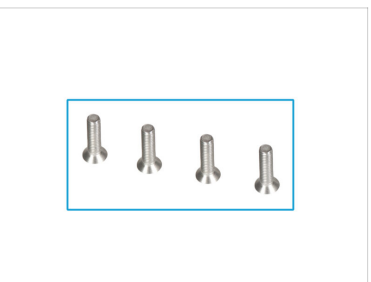
- Reminder: To handle the printer, **always grab the handles on both sides of the printer**. Do not lift the printer by the aluminum extrusions or the metal sheet profiles on top.

ⓘ In the following steps, we will work with tools and install the extruder above the heatbed. Protect the print surface against any possible damage. An empty Nextruder box can serve this purpose.

- Place the empty cardboard box approximately to the front center part of the heatbed.
- Manually move the X-axis assembly all the way to the front of the printer.
- Move the X-carriage approximately to the center of the X-axis.

STEP 12 Installing the extruder: parts preparation

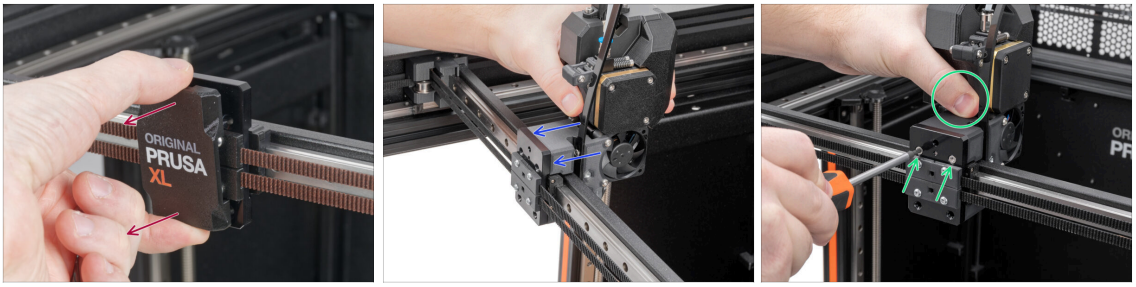




- **For the following steps, please prepare:**
- Single tool extruder assembly (1x)

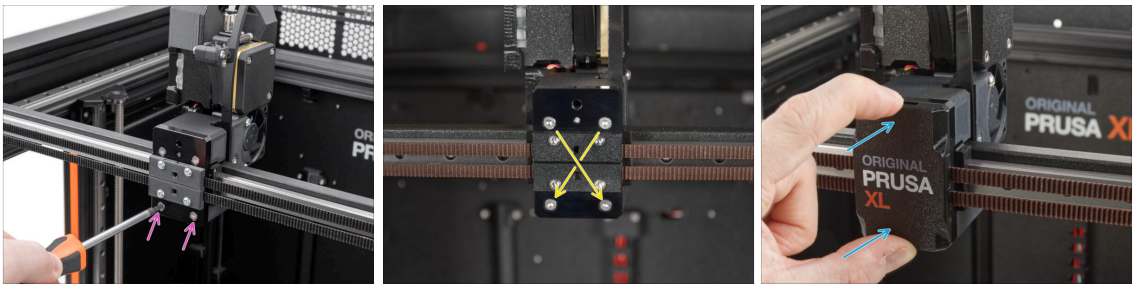
  ⓘ Due to the careful testing of each printer before it is shipped, there may be a small filament residue on the extruder nozzle.
- Remove four M3x12bT (countersunk) screws from the extruder body, and set them aside. You will need them in the next step.

STEP 13 Installing the extruder



- Remove the x-carriage-cover from the X-carriage.
- From the back of the X-carriage, attach the extruder assembly to the X-carriage. See the correct orientation of the extruder.
- Hold the extruder and secure it by inserting and tightening two M3x12bT screws into the top screw holes. **Do not fully tighten the screws at the moment!**

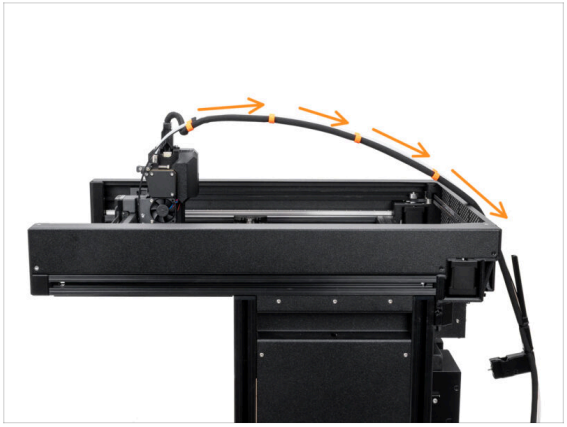
STEP 14 Securing the extruder

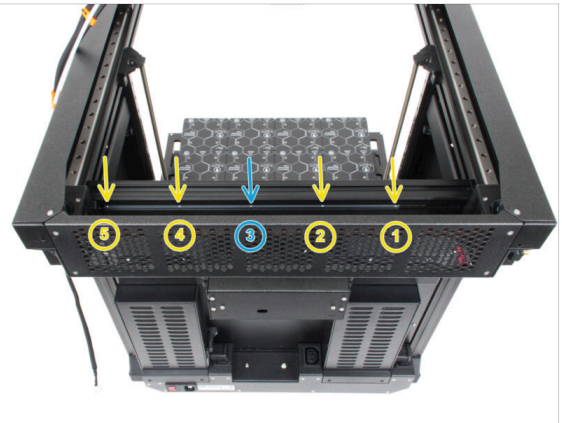


- Insert and tighten two M3x12bt screws to the lower holes in the X-carriage to secure the extruder assembly. **Do not fully tighten the screws at the moment!**
- Fully tighten all four screws **diagonally** to secure the extruder assembly.
- Snap the x-carriage-cover back onto the X-carriage. You must feel a slight "click" to ensure the cover fits on the part.

ⓘ Remove the Prusament cardboard box from the heatbed.

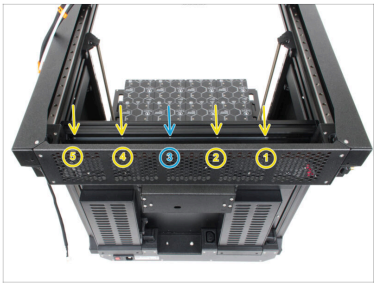
STEP 15 Guiding the extruder cable

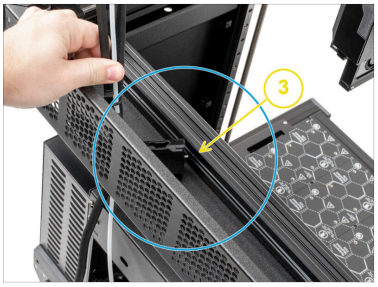


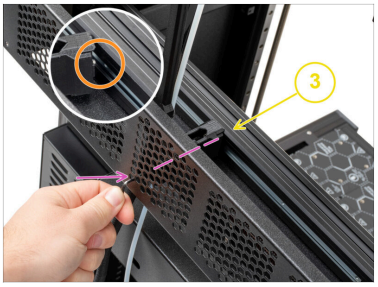


- Guide the extruder cable bundle with the PTFE tube freely over the printer to its rear side.
- Turn the printer around so that the PSU side is facing you.
- Locate the long metal profile (tch-mounting-insert) in the back of the top extrusion. It has five threaded openings in it.
- There is a screw in the long metal profile which is fixing the part during the transport. Using the Allen key, remove the screw from the profile. Keep it as a spare.

STEP 16 Attaching the Nextruder dock







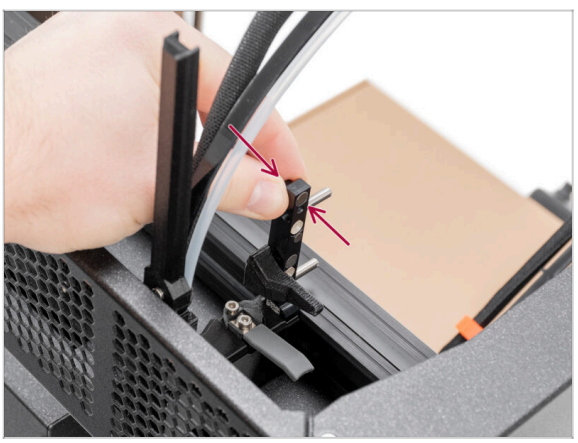
- Turn the printer around so that the PSU side is facing you.
- Locate the long metal profile (tch-mounting-insert) in the back of the top extrusion. It has five threaded openings in it.

  The metal profile has to be on the left side of the extrusion. If not. Move it to the left.
- Place the xl-dock-cable-router (the plastic part) between the rear metal sheet and the aluminum extrusion.

  The dock version in the photos is without the pre-installed nozzle seals. If your version has the nozzle seal, proceed in the same way.
- There is a screw protruding from the xl-dock-cable-router. The screw must be attached to the **third threaded opening** on the long metal profile. Look through the rear metal sheet to check if the cable holder is lined up with the correct opening.
- Push the 2.5 mm Allen key all the way through a hole (bottom left in the pattern) in the rear metal sheet as well as through the plastic part until you reach the screw. Tighten it up.

The dock is a press fit, so the screw needs to be tightened very hard.

STEP 17 Dock inspection

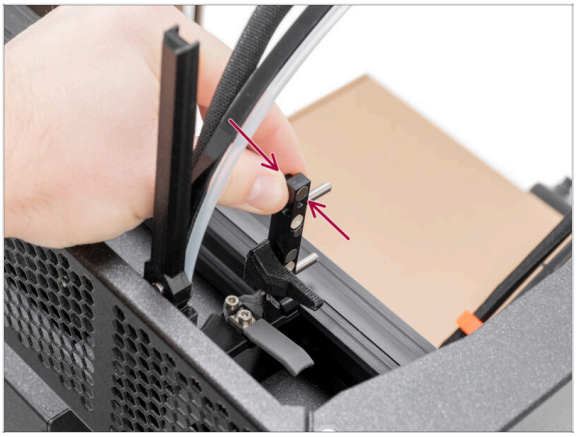


The dock version in the photos is with the pre-installed nozzle seal, the multi-head dock and is not located in the middle. **The photo is only for illustratory purposes. Process of inspecting the dock is the same for your version.**

Check that the docks are properly tightened. **The dock must not move.**

- Please watch the video in the next step for a better understanding →

STEP 18 Dock inspection: video



Note that the nextruder dock may differ from yours. However, the inspection process remains the same.

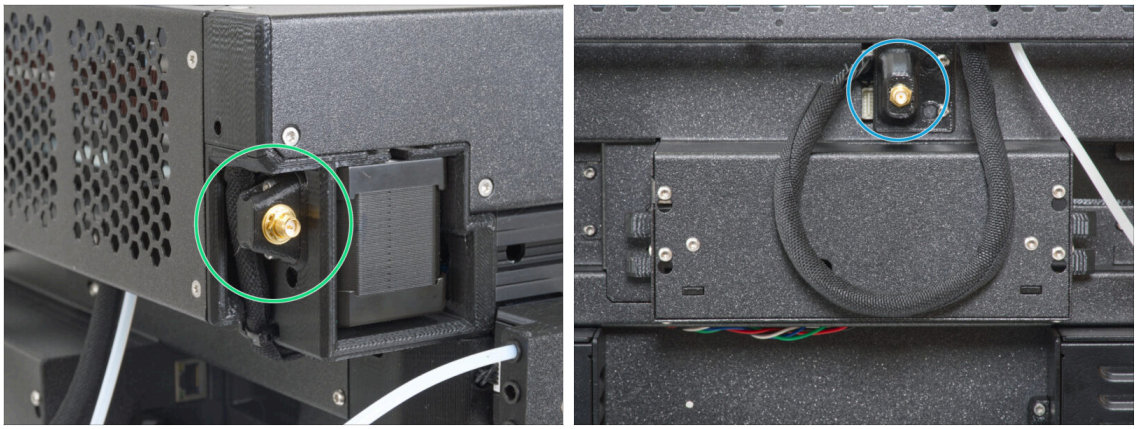
- The following instructions need to be done correctly and carefully. Achieve better understanding and successful assembly by watching the video alongside the guide.

Once the Nextruder dock is properly tightened, proceed to the next step →

STEP 19 Guiding the extruder PTFE tube

- Locate the side filament sensor on the side of the printer. Insert the free extruder PTFE tube as far as you can into the top hole of the filament sensor.
- Gently pull the PTFE tube back, this will push out the black collet in the side filament sensor and lock the tube.

STEP 20 Wi-Fi antenna holder versions

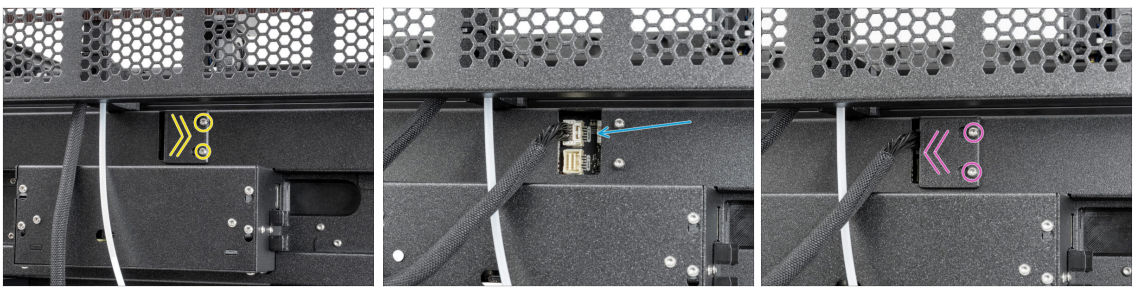


- Let's connect the Wi-Fi antenna now. There are two versions of this component. Identify which version of the Wi-Fi antenna your printer has.
- **Side version:** The antenna connector is prepared by the manufacturer, and the Wi-fi antenna holder is on the side.

  ⓘ **If you have the side version, continue to the next step in the guide:** Side version: Connecting the extruder cable
- **Back version:** The antenna connector has to be assembled, and the Wi-fi antenna will be mounted in the middle of the rear side of the printer.

  ⓘ **If you have the back version, skip to this step:** Back version: Wi-Fi antenna holder: parts preparation

STEP 21 Side version: Connecting the extruder cable



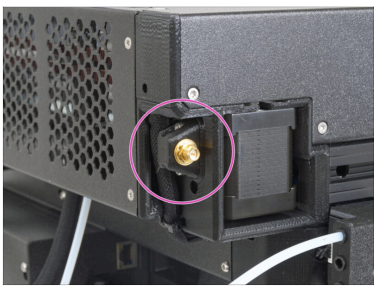
- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Loosen two screws on the cover slightly. No need to remove them completely. Push the cover to the right and remove it from the printer.
- Connect the extruder cable to the upper slot labeled DWARF 1.
- Attach the connector cover to the screws. Push it all the way to the right and tighten the screws.

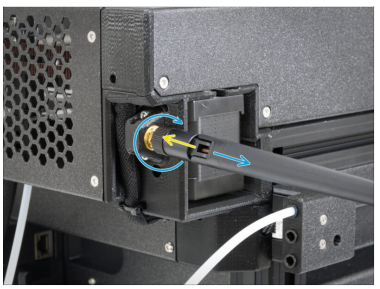
STEP 22 Side version: Installing the Wi-Fi antenna: parts preparation

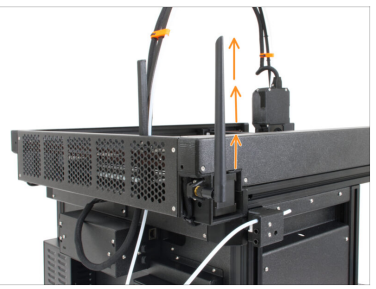
- **For the following steps, please prepare:**
- Wi-Fi antenna (1x)

  ⓘ The Original Prusa XL is shipped with two versions of the Wi-Fi antenna, each with a different shape. The functionality is the same.

STEP 23 Side version: Installing the Wi-Fi antenna

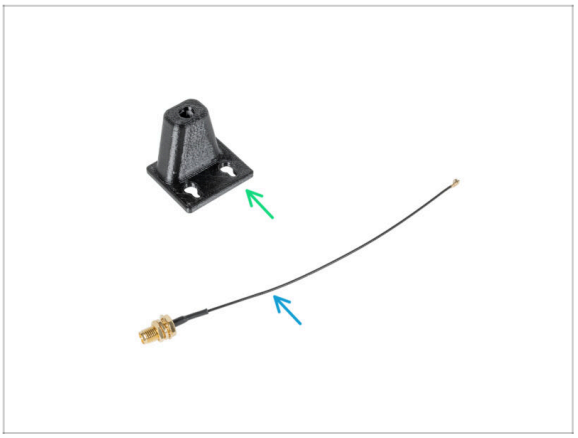






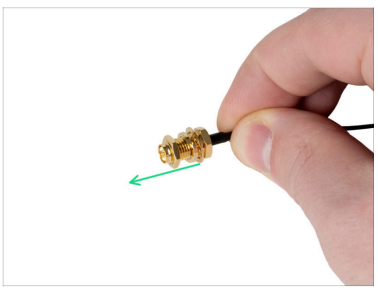
- Locate the Wi-Fi antenna connector on the right rear corner of the printer.
- The antenna can be rotated around and bent in two directions.
- We recommend pointing the antenna straight upwards.
- **Once the Wi-Fi antenna is installed, proceed to this step: Spoolholder assembly versions**

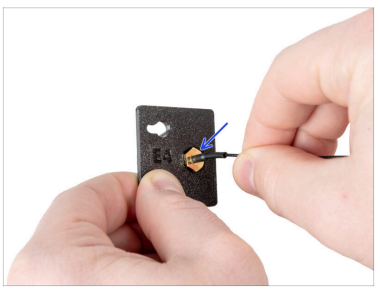
STEP 24 Back version: Wi-Fi antenna holder: parts preparation



- **For the following steps, please prepare:**
- Wi-Fi-antenna-holder version E3/E4 (1x)
- Antenna cable (1x)

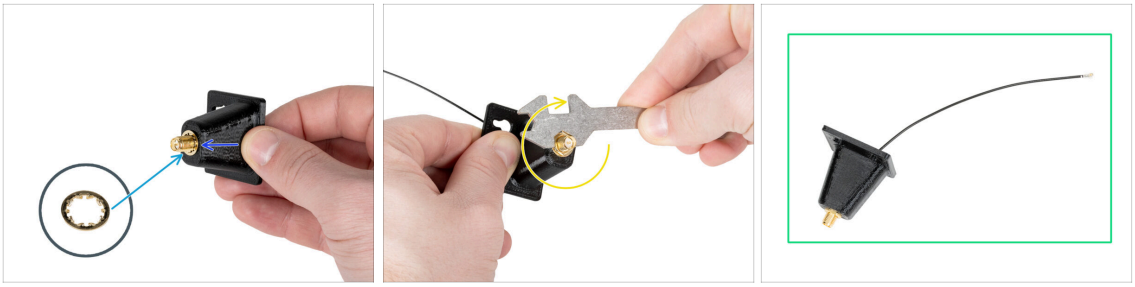
STEP 25 Back version: Installing the Wi-Fi antenna: antenna preparing





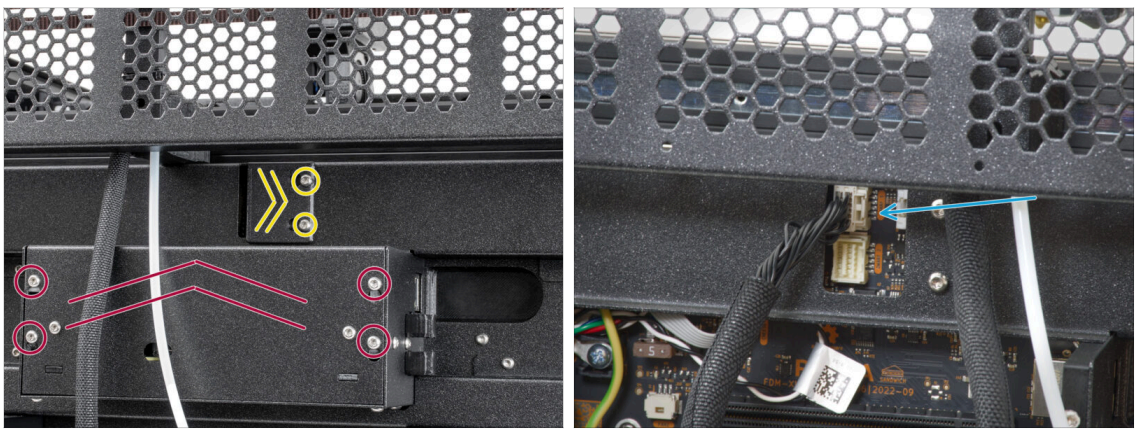
- Remove the nut with the washers from the antenna connector.
- The antenna connector is prepared.
- The latest version of the connector has a thicker washer. We do not need it anymore, and you can dispose of it.
- Insert the antenna connector into the same-shaped hole in the Wi-Fi-antenna-holder .

STEP 26 Back version: Installing the Wi-Fi antenna: antenna preparing



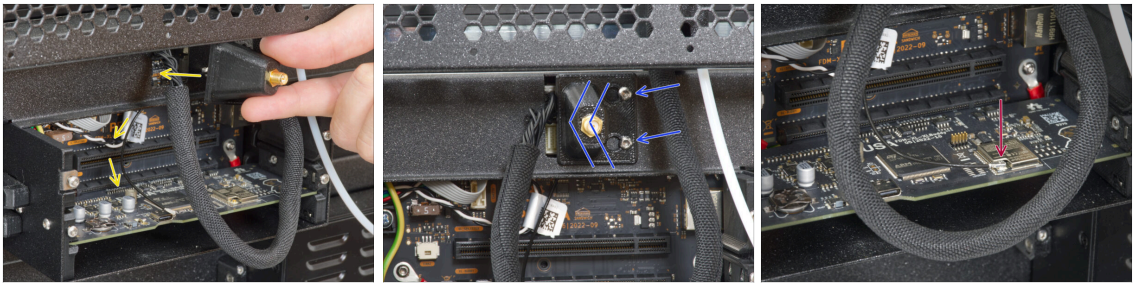
- Push the antenna connector through the Wi-Fi-antenna-holder.
- Insert the thinner washer back onto the connector.
- Using the universal wrench, tighten the nut on an antenna connector.
- Good job! The Wi-Fi antenna is prepared.

STEP 27 Back version: Connecting the extruder cable



- Locate the xl-rear-cable-management-plug (cover) on the rear of the printer.
- Loosen two screws on the cover slightly. No need to remove them completely. Slide the cover to the right and remove it from the printer.
- Loosen four screws securing the electronics cover. Remove the cover.
- Connect the first dock (from the right side) cable to the upper slot labeled DWARF 1.

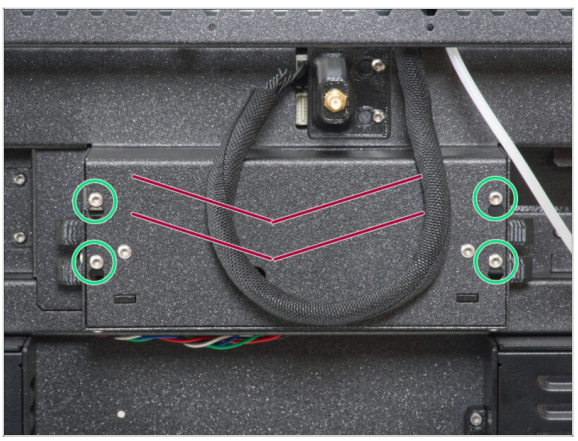
STEP 28 Back version: Installing the Wi-Fi antena holder



- Push the antenna cable through the opening in the cable cover (metal sheet) and guide it behind the cover to the electronics box.
- Attach the antenna-holder on the screws and slide the cover to the left. Tighten the screws.
- Gently, but firmly, connect the antenna cable with the antenna connector on the XL buddy board.

ⓘ Support the board from below with your finger while attaching the antenna cable to prevent damaging the board.

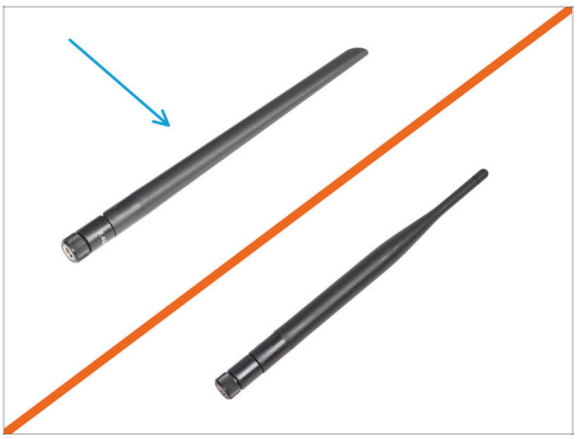
STEP 29 Back version: XL buddy box covering



⚠ Be carefull, do not pinch any cables!

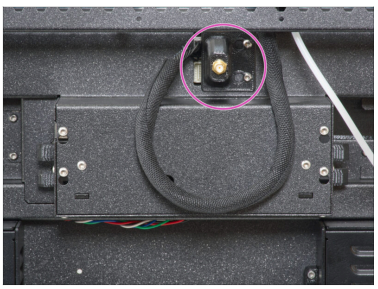
- Put the XL-buddy-box-cover back on the printer.
- With a T10 key tighten the four screws.

STEP 30 Back version: Installing the Wi-Fi antenna: parts preparation



- **For the following steps, please prepare:**
- Wi-Fi antenna (1x)
- The Original Prusa XL is shipped with two versions of the Wi-Fi antenna, each with a different shape. The functionality is the same.

STEP 31 Back version: Installing the Wi-Fi antenna



- Locate the Wi-Fi antenna connector in the middle of the printer.
- Screw the Wi-Fi antenna on the antenna connector. The antenna can be rotated around and bent in two directions.
- We recommend pointing the antenna straight upwards.
- Well done! With the Wi-Fi antenna installed, let's move on to the spoolholders in the next step →

STEP 32 Spoolholder assembly versions

Original Prusa XL comes with two versions of the spool holder. Each version has slightly different parts and different procedures.

- **Refer to the pictures to compare which parts you have, and then choose the instructions that match:**
  - **Printed spool holder**: Set of three printed parts. If you have this version, continue to the **Printed spool holder: parts preparation**
  - **Injection molded spool holder**: Set of two injection molded parts. If you have this version, continue to **Injection molded spool holder: parts preparation**

STEP 33 Printed spool holder: parts preparation

- **For the following steps, please prepare:**
- Spool-holder-slider (1x)
- Spool-holder-base (1x)
- Spool-holder-mount (1x)
- M5x85 screw (1x)
- M5nEs nut (1x)

STEP 34 Printed spool holder: adjusting the nut

- Carefully turn the printer so that the side with the Wi-Fi antenna and side filament sensor faces you.
- Insert the M5nEs nut into the front support extrusion (with the orange plastic cover). Insert the side with the spring (metal plate) first, then push the nut inside.
- The M5nEs nut is free to move, you can adjust the position as you want. But remember, the nut must be slightly pushed in to smoothly move. Anyway, we recommend approximately the same position as you can see in the picture.

STEP 35 Printed spool holder: Assembly

- Insert the spool-holder-base into the spool-holder-slider and push it through a little through the part.
- Attach the spool-holder to the spool-holder-mount.
- Insert the M5x85 screw into the spool-holder-assembly.

STEP 36 Printed spool holder: Mounting the assembly

- Attach the spool holder assembly to the M5nEs nut in the extrusion. Note that there is a protrusion on the spool-holder-mount, which must fit into the groove in the extrusion.
- Tighten the spool holder assembly.

⚠ **Do not use the spool holder as a handle!**

STEP 37 Injection molded spool holder: parts preparation

- For the following steps, please prepare:
- Spool-holder-slider (1x)
- Spool-holder-base (1x)
- M4x12 screw (1x)
- M4nEs nut (1x)

STEP 38 Injection molded spool holder: adjusting the nut

- Carefully turn the printer so that the side with the side filament sensor is facing you.
- Insert the M4nEs nut into the front support extrusion (with the orange plastic cover). Insert the side with the spring (metal plate) first, then push the nut inside.
- The M4nEs nut is free to move; you can adjust the position as you want. The nut must be slightly pushed in to smoothly move. Refer to the image to see the ideal position.

STEP 39 Injection molded spool holder: Assembly

- Locate pins two pins on the spool-holder-base and line them with the rails in the spool-holder-slider.
- Insert the spool-holder-base into the spool-holder-slider and push it through a little through the part.

STEP 40 Injection molded spool holder: Preparation



- Insert the M4x12 screw on the longer side of the 3mm Allen key.
- Insert the 3mm Allen key with the M4x12 screw through the assembled spool holder to the prepared hole in the spool-holder-base.
- The M4x12 screw has to protrude through the spool-holder-base.

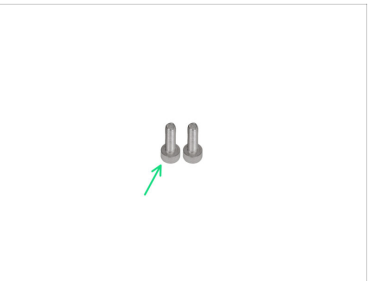
STEP 41 Injection molded spool holder: Mounting the spool holder assembly

- Attach the spool holder assembly to the M4nEs nut in the extrusion. Note that there is a protrusion on the spool-holder-mount, which must fit into the groove in the extrusion.
- Tighten the spool holder assembly.

⚠ **Do not use the spool holder as a handle to lift or move the printer!**

STEP 42 xLCD: parts preparation

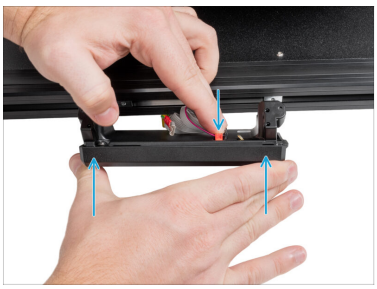




ⓘ **Starting from September 2024, you may receive a new injection-molded xLCD. Check the photos and identify your version.**

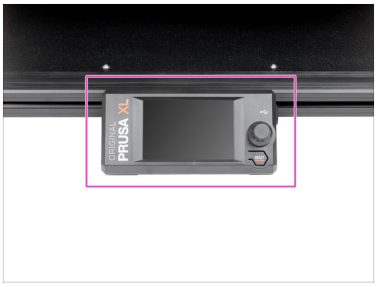
- If you have the injection-molded xLCD, proceed with this step and continue to the next step →
- **If you have the older printed version of the xLCD, continue to this step: Printed xLCD assembly versions**
- **For the following steps, please prepare:**
  - xLCD assembly (1x)
  - M3x10 screw (2x)

STEP 43 Injection molded xLCD: xLCD cables

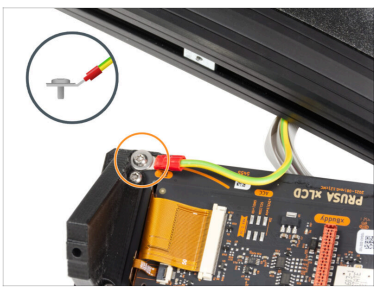

- Connect the xLCD cable to the slot on the xLCD board.
  - ⓘ There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the picture.
- Push the xLCD cable connector to fully connect to the xLCD. Hold the xLCD cover.
- Push the grounding connector fully into the PE faston.

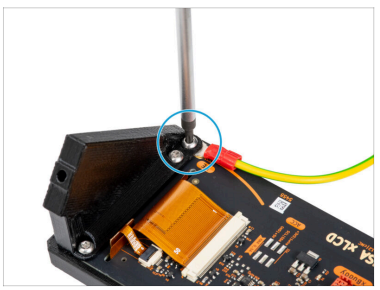
STEP 44 Injection molded xLCD: mounting the xLCD

- Align the xLCD assembly with the nuts in the front aluminum extrusion.
- Insert and tighten the M3x10 screw from the right side of the xLCD.
- Insert and tighten the M3x10 screw from the left side of the xLCD.
- The injection-molded xLCD is mounted and ready.
- **Proceed to this step: Reward yourself**

STEP 45 Printed xLCD assembly versions

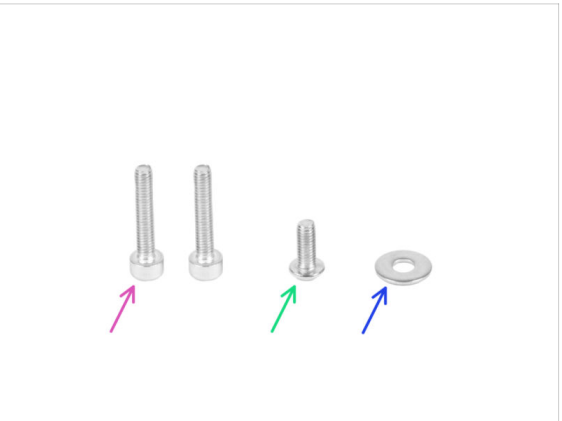





⚠ Take a look at the xLCD, there are three variants:

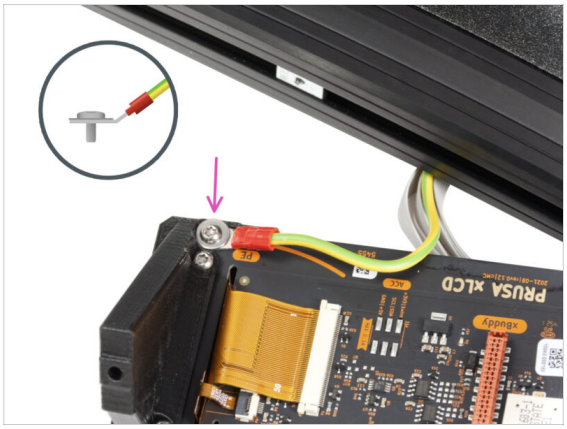
- **Version A: with an M3 washer under the screw.** If you have this version, proceed to the next step →
- **Version B: without the washer under the screw.** Proceed to this step: Version B: Parts preparation
- **Version C: faston on the top left.** Proceed to this step: **Version C: mounting the xLCD**

STEP 46 Version A: parts preparation



- **For the following steps, please prepare:**
- xLCD assembly (1x)
- M3x16 screw (2x)
- M3x8rT (1x)
- M3 washer (1x)

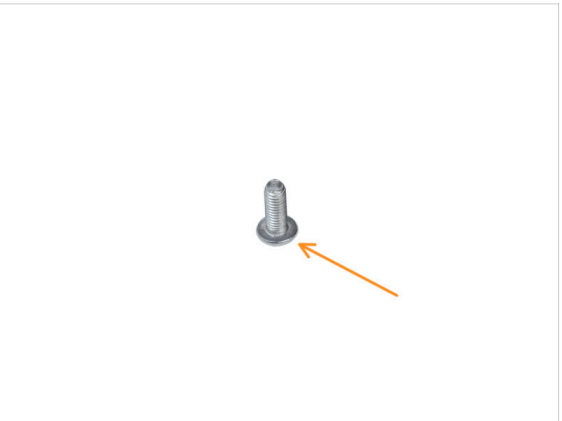
STEP 47 Version A: xLCD cables



- Carefully turn the printer so that the front side is facing you.
- From the front of the printer, place the xLCD assembly close to the lower front aluminum extrusion where the xLCD cables are.
- Using the M3x8rT screw and the M3 washer, connect the PE cable to the PE hole on the xLCD board. See the detail showing the correct position of the cable connector.
- Connect the xLCD cable to the slot on the xLCD board.
  - There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the detail.

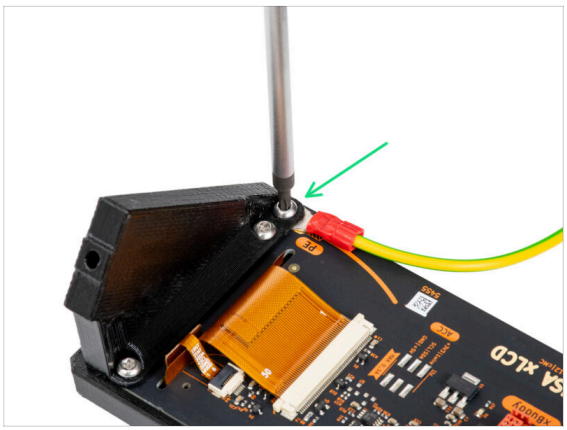
ⓘ **Once the xLCD is connected, proceed to this step: Mounting the xLCD**

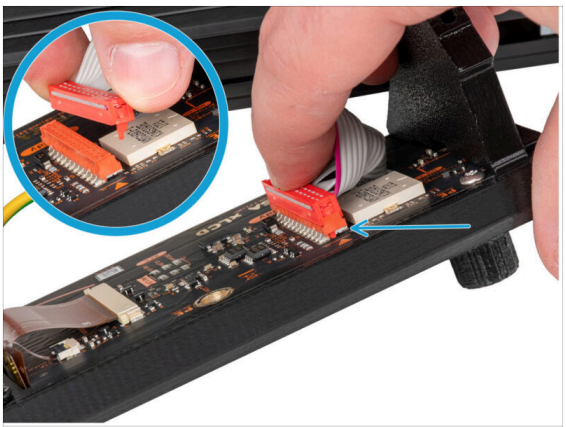
STEP 48 Version B: Parts preparation



- For the following steps, please prepare:
  - xLCD assembly (1x)
  - M3x8rT (1x)

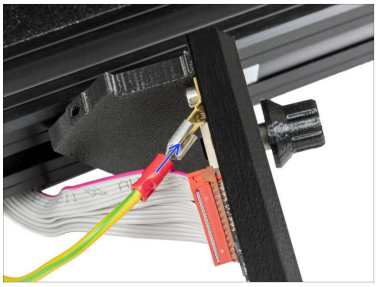
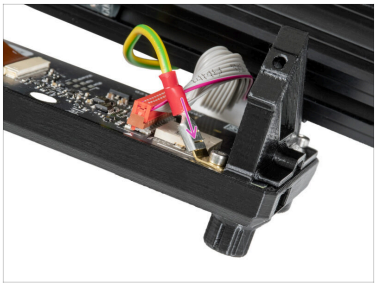
STEP 49 Version B: xLCD cables





- Carefully turn the printer so that the front side is facing you.
- From the front of the printer, place the xLCD assembly close to the lower front aluminum extrusion where the xLCD cables are.
- Using the M3x8rT screw, connect the PE cable to the PE hole on the xLCD board.
- Connect the xLCD cable to the slot on the xLCD board.
  - There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the detail.
- **Proceed to this step:** Mounting the xLCD

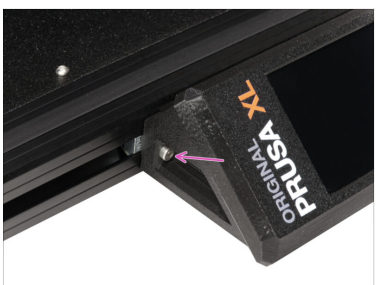
STEP 50 Version C: attaching the xLCD

- Carefully turn the printer so that the front side is facing you.
- From the front of the printer, place the xLCD assembly close to the lower front aluminum extrusion where the xLCD cables are.
- Connect the xLCD cable to the slot on the xLCD board.

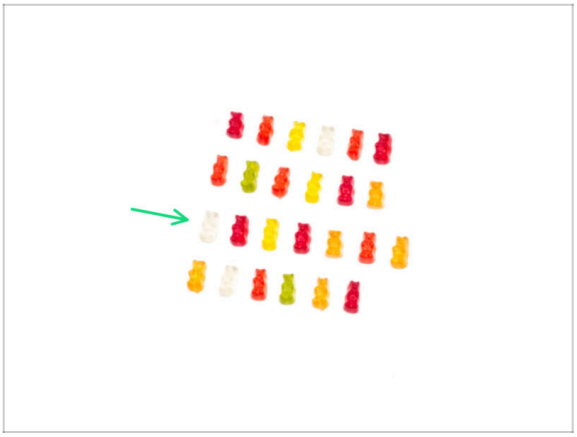
  ⓘ There is a latch on the xLCD cable connector, which must be facing the triangle symbol on the board. See the detail.
- Connect the grounding cable and connect it to the PE connector on the xLCD.
- Push the grounding connector fully into the PE faston.
- continue to the next step →

STEP 51 Mounting the xLCD



- Align the xLCD assembly with the nuts in the front aluminum extrusion.
- Insert and tighten the M3x16 screw from the left side of the xLCD.
- Insert and tighten the M3x16 screw from the right side of the xLCD.

STEP 52 Reward yourself



- Great job! Reward yourself with another row of gummy bears.
- Eat the third row: seven gummy bears.
- Did you know that the bright colors of gummy bears are achieved through the use of food coloring, which adds to their visual appeal?

STEP 53 Almost done!

- **Congratulation!** Your Original Prusa XL is ready to be fired up!
- Compare the final look with the picture.
- Now, let's go to the last chapter **4. First run**.

4. First run


ORIGINAL PRUSA XL
SELFTEST
08:17
Filament sensor test
Great! We need to start without the filament. Please make sure there is no filament in the tool and side filament sensors.
UNLOAD
CONTINUE
N/A
N/A
RESET
ORIGINAL PRUSA XL
SELFTEST
08:12
Loadcell Test
Tap nozzle in 1s
24°C
23°C
370.0
RESET

STEP 1 Before you start with Single-Tool

ⓘ This chapter shows a brief description of the wizard. Please note that the screenshots are illustrative and might differ from those in the firmware.

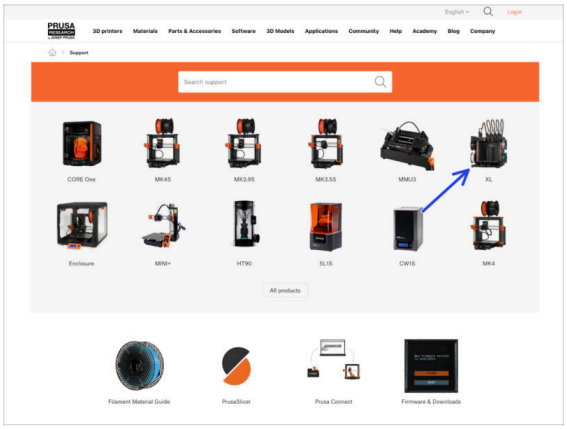
ⓘ Make sure you are running **Firmware 5.1.2 or newer**

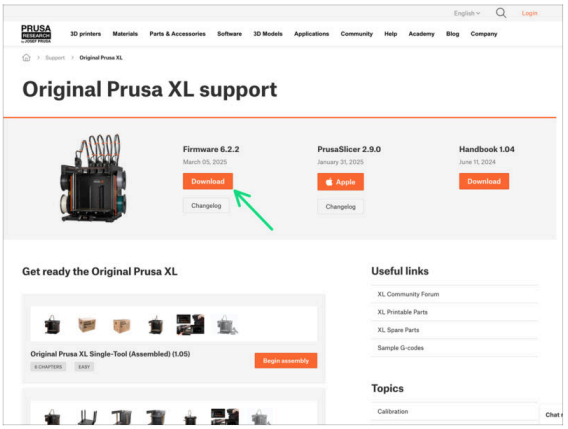
STEP 2 Preparing the printer

⚠ Make sure that the printer is placed in a stable place where no ambient vibrations are transmitted (for example, where other printers are printing).

- From the rear side of the printer, plug in the PSU cable.
- Turn the power switch ON (symbol "**I**").

STEP 3 Firmware update





ⓘ All shipped printer packages include a USB drive with the latest firmware. However, it is recommended to check and possibly upgrade the firmware version.

- Visit the help.prusa3d.com page.
- Navigate to the Prusa XL page.
- Save the firmware file (*.bbf) onto the bundled USB drive.

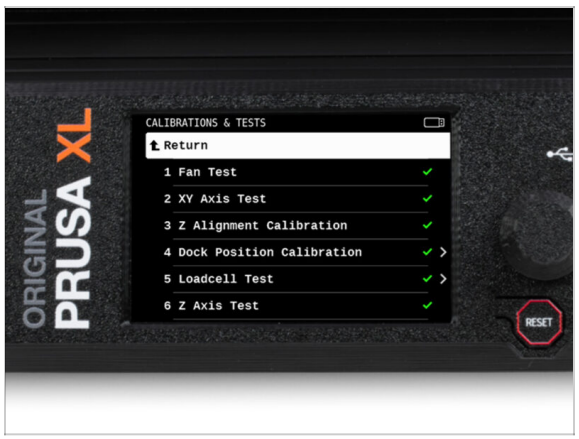
ⓘ Pro tip: To access Prusa XL homepage you can use the URL: prusa.io/XL

STEP 4 Wizard: Network and Prusa Connect setup

ⓘ After the printer starts up, the screen prompts for the printer test and setup wizard.

- The initial setup starts with the optional NETWORK SETUP, which also includes PRUSA CONNECT SETUP. Follow the instructions on the screen if you want your printer connected to Wi-Fi and Prusa Connect.

STEP 5 Wizard: Calibration tests



The wizard will test all important components of the printer. Some parts of the wizard require direct user interaction. Follow the instructions on the screen.

WARNING: Do not touch the printer during the wizard unless prompted! Some parts of the printer may be HOT and moving at high speed.

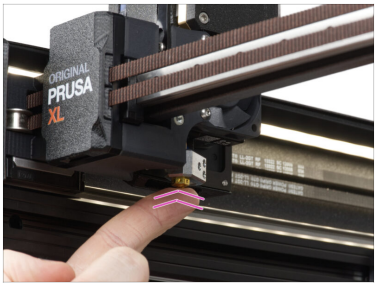
The wizard starts with these tests:

- Fan test
- X-axis and Y-axis test
- Z-axis alignment calibration

- **These first tests are fully automatic during the first calibration.**

While testing the axes, make sure that there is nothing in the printer that is obstructing the movement of the axes.

STEP 6 Wizard - Test Loadcell



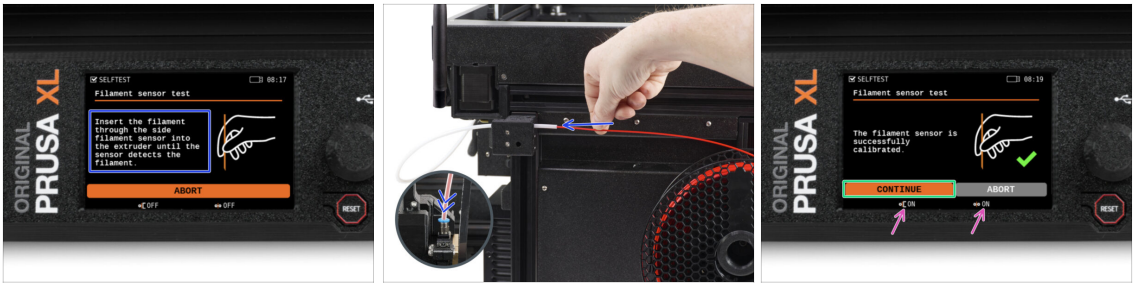
- The next step of the wizard will prompt you to touch the nozzle to test and calibrate the Loadcell. During this procedure, the parts of the printer are not heated, you can touch the parts of the printer. Click on **Continue**.
- **Do not touch the nozzle yet.** Wait until the countdown finishes and the printer notifies you with a sound and display prompt.
- Tap the nozzle gently but firmly. Do not use excessive force. In case the loadcell does not detect your touch, you will be prompted to repeat the step.

ⓘ After this step, proceed to the **Z Axis test** and the **Nozzle heater test,** respectively. These two tests are automatic and require minimal input.

STEP 7 Wizard - Calibrate Filament Sensors part 1

- During the calibration of the filament sensors, you will be prompted to use at least 130 cm of filament. Use the Prusament shipped with your printer and mount it on the spool holder.
- When you have prepared the filament, click on **YES**.
- Do not insert the filament into the side filament sensor and the tool head. If the side filament sensor is empty, click on **CONTINUE**.

STEP 8 Wizard - Calibrate Filament Sensors part 2



- Insert the filament into the side filament sensor through the PTFE tube. Push it in until it reaches the filament sensor in the extruder (you will feel a slight resistance).
- You can check the side filament sensor (left) and extruder filament sensor (right) status on the bottom bar on the screen.
- At the end of the test, you will be prompted to **remove the filament from the sensor.**
- The filament sensor is successfully calibrated and tested. Click on **CONTINUE**.

STEP 9 Wizard: Phase stepping

- **The last step is the phase stepping calibration**. This feature was introduced in firmware version 6.0.0. The calibration is automatic. Follow the instructions on the screen.

ⓘ You can find more information about the phase stepping via the following links:

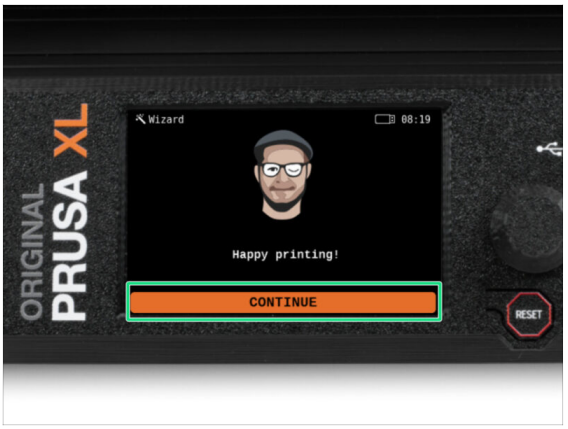
📌 **PHASE STEPPING GUIDE**: Necessary information about the phase stepping calibration.

📌 **PHASE STEPPING BLOG ARTICLE**: A more in-depth look at the phase stepping feature.

ⓘ The printer will move the first print head to the middle of the heatbed and move the tool diagonally for the X and Y axes at different speeds.

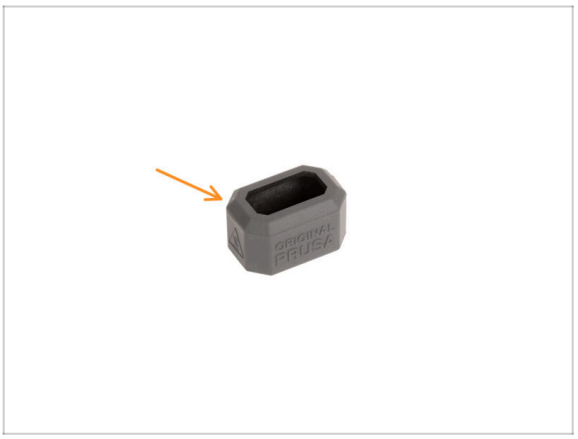
- After the printer completes the test, the screen will show by how much the motor vibrations were reduced.

STEP 10 It's done



- Manually remove the filament from the printer. And click on **CONTINUE**.
- **Well done! The printer is ready to print.** However, follow the instructions in this manual to the end.

STEP 11 Prusa nextruder sock (Optional)



- The nextruder sock helps to keep the temperature in the heater block stable. It also keeps your hotend clean from filament dirt and protects it in case the print detaches from the print surface.
- A silicone sock is supplied with each Nextruder package.
- **If you want to install the sock, we recommend doing it after the calibration.**

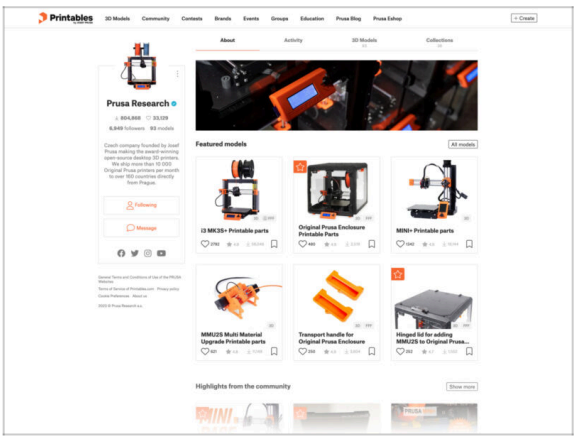
ⓘ How to install the sock - check the article.

STEP 12 Quick guide for your first prints

Now, please read the **3D Printing Handbook**, which is tailor-made for your printer and **follow the instructions to set up the printer properly**. The latest version is always available at **this link**.

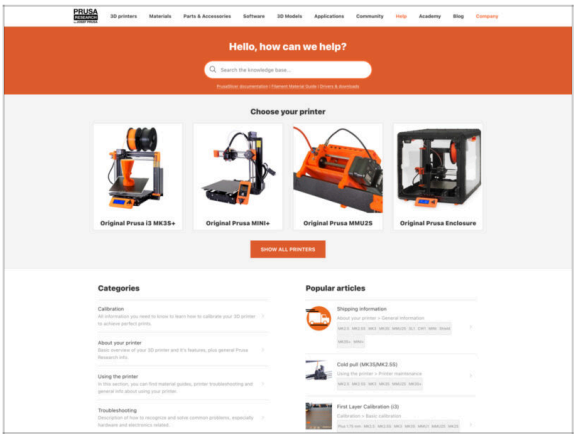
Read the chapters *Disclaimer* and *Safety instructions*.

STEP 13 Printable 3D models



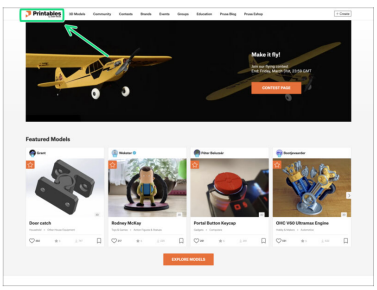
- **Congratulations! You should be ready to print by now ;-)**
- You can start by printing some of our test objects bundled on the included USB stick - you can check them out in this collection.

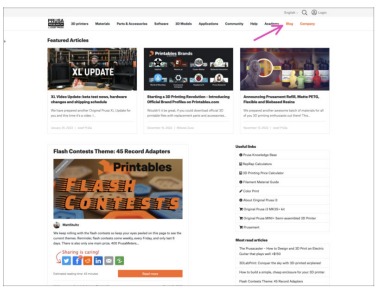
STEP 14 Prusa knowledge base

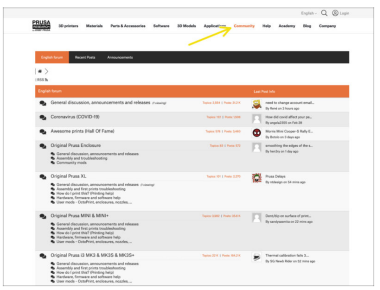


- If you encounter any problems at all, don't forget you can always check out our knowledge base at help.prusa3d.com
- We're adding new topics every day!

STEP 15 Join Printables!

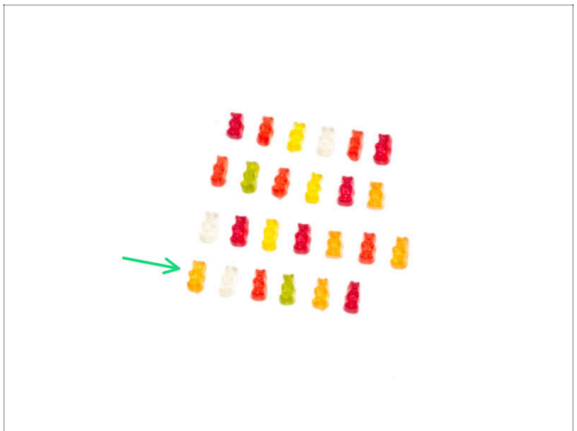






- **Don't forget to join the biggest Prusa community! Download the latest models in STL or G-code tailored for your printer. Register at Printables.com**
- Looking for inspiration on new projects? Check our blog for weekly updates.
- If you need help with the build, check out our forum with a great community :-)
- ⓘ All services share one account.

STEP 16 Haribo time!



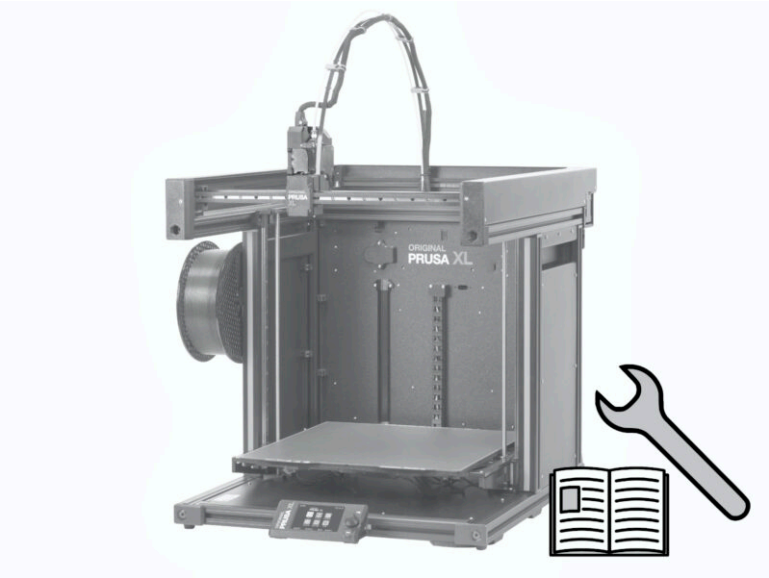
- **Congratulations! You did it.** The printer should already be up and running, and you can enjoy the last row of gummy bears: six gummy bears.

ⓘ **Disclaimer:** You have a lot of gummy bears left. **Do not eat all the leftover gummy bears all at once by yourself now!** As much as it sounds like fun, trust us... You do not want to **bear** the consequences.

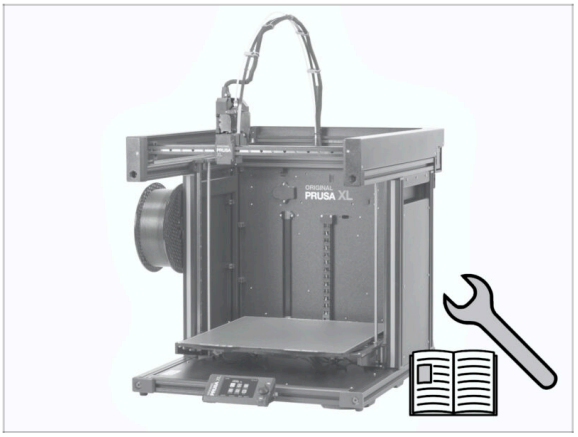
- We recommend re-sealing the bag and placing it near the printer while making sure to protect the Haribo from heat and moisture. You can have a few anytime your printer is heating up, or you are eagerly waiting for your project to finish printing.

ⓘ Did you know that gummy bears have a long shelf life? Typically lasting for up to two years if stored properly in a cool and dry place. But don't test that with our gummy bears.

Manual changelog

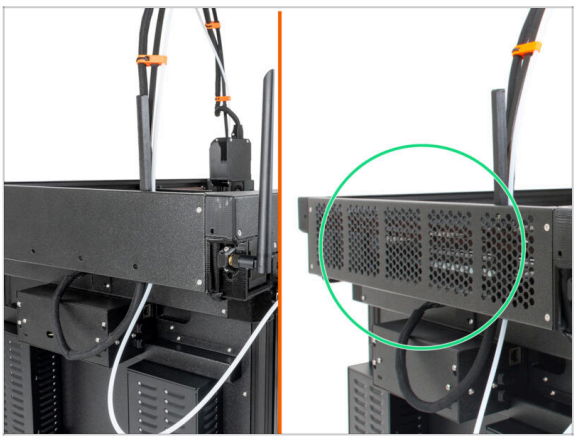


STEP 1 Version history



- **Versions of the Original Prusa XL semi-assembled (single tool) manual:**
- 06/2023 - Initial version 1.00
- 07/2023 - Updated to version 1.02
- 08/2023 - Updated to version 1.03
- 11/2023 - Updated to version 1.04
- 09/2024 - Updated to version 1.05
- 04/2025 - Updated to version 1.06

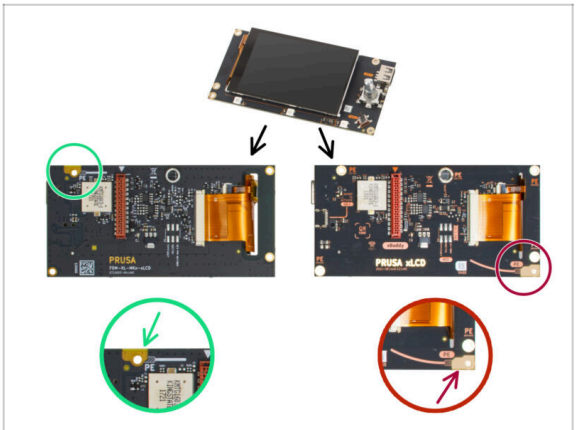
STEP 2 Changes to the manual (1)



- 06/2023 - The CoreXY cover
  - The CoreXY cover changed.

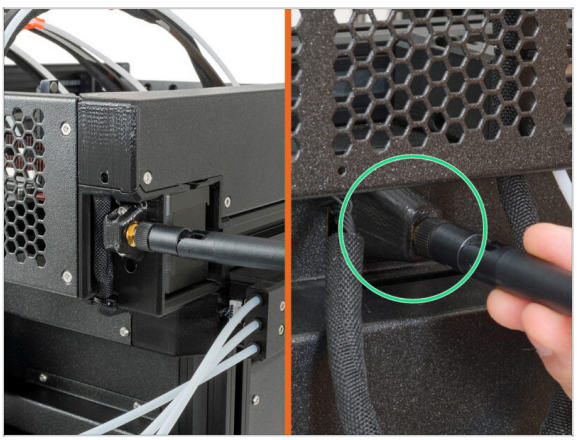
ⓘ Manual version 1.01

STEP 3 Changes to the manual (2)



- 07/2023 - xLCD assembly
  - Added instructions for the new xLCD.
- Manual version 1.02

STEP 4 Changes to the manual (3)



- 08/2023 - Antenna adapter
  - Added instructions for the new antenna adapter.
- Manual version 1.03

STEP 5 Changes to the manual (4)

- 11/2023 - Spoolholder
  - Added instructions for the new injection molded Spoolholder.
- Manual version 1.04

STEP 6 Changes to the manual (5)

- 09/2024 - xLCD
  - Added instructions for the new injection molded xLCD.
- Manual version 1.05

STEP 7 Changes to the manual (6)

- 04/2025 - Main cable connector cover
  - Added instructions for the new main cable connector cover.
- Manual version 1.06

Notes:

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