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How to replace xLCD (MK4/MK3.9/MK3.5)



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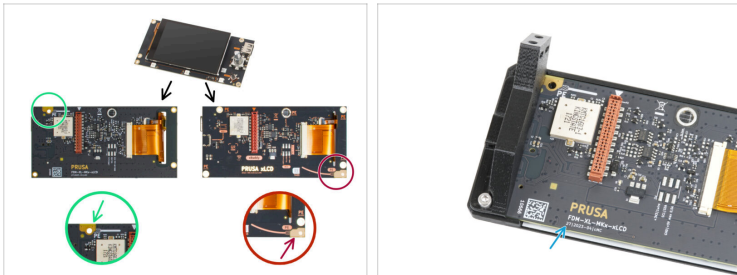
STEP 1 Introduction





- ◆ This guide will take you through the xLCD replacement on your Original Prusa MK4, MK3.9 or MK3.5.
- ◆ All necessary parts are available in our eshop prusa3d.com.
- ⓘ Note that you have to be logged in to have access to the spare parts section.


⚠ If you're using the **MK4** printer, it's essential to **determine which version of the xLCD** your printer has, before you start. Check the next step for more details.


STEP 2 MK4: xLCD versions (part 1)





 This step is relevant only for the **MK4** users. If you use the **MK3.5** or **MK3.9**, please skip to the preparation step.


 The xLCD version can be easily recognized by the location of the grounding connection (PE / FE) on the back of the PCB:

 **The newer version A** - the grounding point is located on the top left hole.

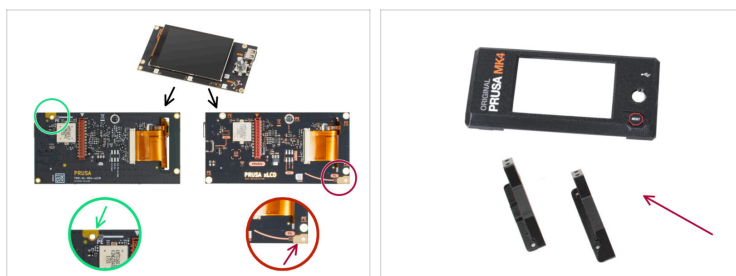
 (version number 26, 27 and **higher**)

 **The older version B** - the grounding point (marked PE) is located on the bottom right hole.

 (rev. 0.12.2, 0.12.3 etc.)

 The version numbers are printed on the PCB.

STEP 3 MK4: xLCD versions (part 2)



i Note: There is no functional difference between the xLCD boards. The only difference is the position of the grounding point, the fastener layout and compatible printed parts.

◆ If your printer uses the **newer version A**, you can continue to replace just the xLCD board itself.



The xLCD version A is the one you can get from the eshop.

◆ If your printer uses the **older version B**, you have to also replace the plastic parts, together with the xLCD itself.

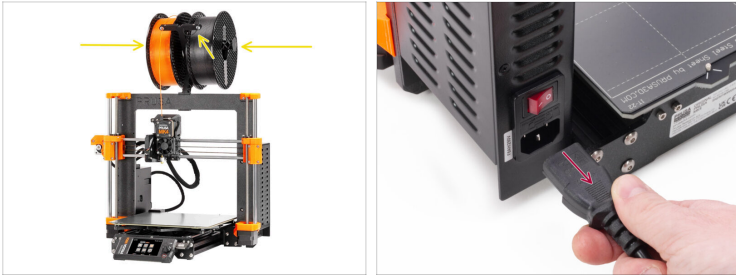


We recommend getting the xLCD - printed parts & fasteners package from the eshop.



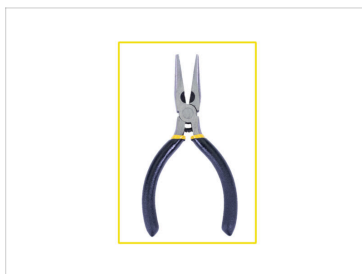
The printable parts are also available on [Printables.com](https://www.printables.com).

STEP 4 Preparation



- ◆ Unload filament from the printer and remove the spool holder.
- ◆ Power off your printer and disconnect it from the power.

STEP 5 Tools necessary for this chapter



● **For this chapter, please prepare:**

● 2.5mm ball-end Allen key

● T10 key (*depending on the fasteners used on your version of the xLCD*)



If you're upgrading the plastic parts on your **MK4** to the newer version, you might optionally also need these tools for removing the M3nS nuts:

● 1.5mm Allen key (optional, for removing the M3nS nuts)

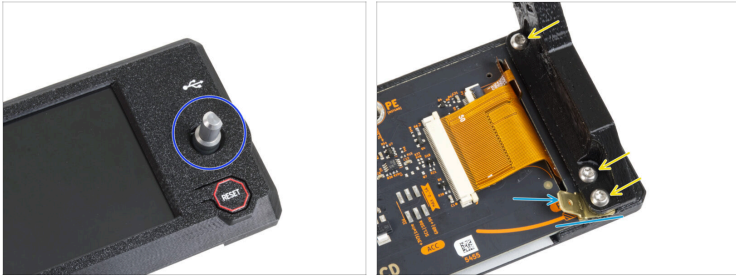
● Needle-nose pliers

STEP 6 Removing the xLCD



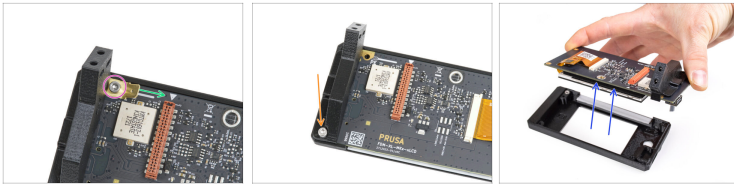
- ◆ Look from above. Remove the four M3x10 screws holding the xLCD assembly in place.
- ◆ Disconnect the Faston connector.
 - ⓘ Note that position of the connector might differ, depending on the xLCD version you have.
- ◆ Disconnect the xLCD cable.

STEP 7 xLCD Disassembly (part 1)



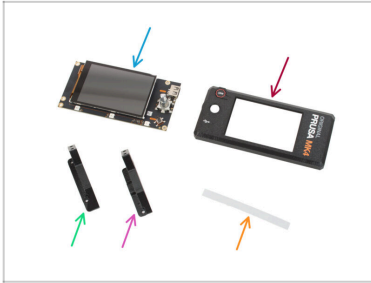
- ◆ Remove the xLCD knob by pulling it up.
- ◆ Remove the M3x8 screws holding the xLCD-support-left part.
 - ⓘ There might be two or three screws, depending on the xLCD version you have.
 - 🔑 You might need to use the 2.5mm Allen key or the T10 key, depending on the fasteners used on your version.
- Remove the xLCD-support-left plastic part.
- ◆ On the Version B, there is a fastener connector underneath the plastic part. Remove it.

STEP 8 xLCD Disassembly (part 2)



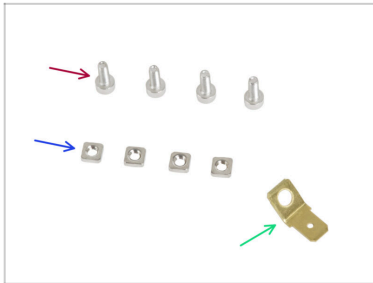
- ◆ Remove the M3x8 screw in the marked location.
 - ◆ On the version A, there is a faston connector held by the screw. Remove it.
- ◆ Remove the M3x8 screw holding the xLCD-support-right.
- ◆ Remove the xLCD together with the xLCD-support-right by lifting it up.
- ◆ Remove the xLCD-support-right plastic part.

STEP 9 Parts preparation (part 1)



- ◆ **For the following steps, please prepare:**
- ◆ xLCD (1x) *version A*
 - ⚠ **Remove the protective film from the xLCD screen.**
- ◆ xLCD-cover (1x) *compatible with the version A.*
- ◆ xLCD-support-left (1x) *compatible with the version A*
- ◆ xLCD-support-right (1x) *compatible with the version A*
- ◆ xReflector sticker set (1x) *from the spare parts package bundled with your printer*
- ⓘ The list continues in the next step...


STEP 10 Parts preparation (part 2)






- M3x8 screw (4x)
The ones you removed earlier, or the ones bundled to the "xLCD - printed parts & fasteners"
- M3nS nut (4x)
Needed only, if you're upgrading from the version B to the Version A. Use the ones from the spare parts package bundled with your printer.
- Faston connector 6.3x0.8 (1x) *the one you removed earlier.*

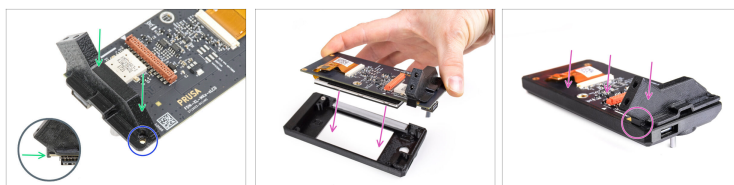
STEP 11 xLCD assembly (Version upgrade)



 This step is valid only if you're upgrading your xLCD from the version B to the version A.

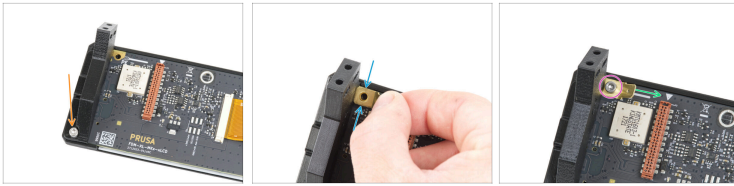
-  Insert two M3nS nuts into the new xLCD-support-left and xLCD-support-right parts.
-  Peel the xReflector strip off the protective layer and apply it into the marked area on the inside of the new xLCD cover.
-  Press the xReflector sticker strip all the way towards the xLCD-cover, so that it adheres properly.

STEP 12 Assembling the xLCD-support-right



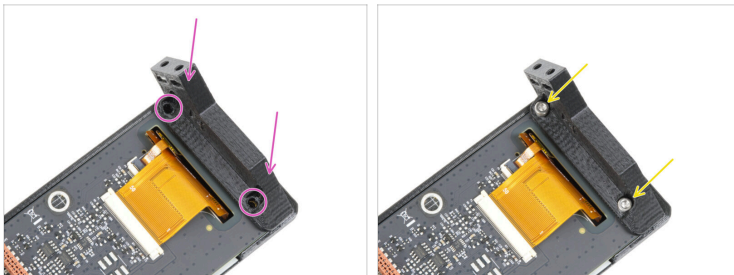
- ◆ Place the xLCD-support-right onto the USB-connector-side of the new xLCD board. Notice there is a small hook that goes around the circuit board.
 - ◆ Line up the hole in the plastic part with the hole in the xLCD board.
 - ◆ Insert the xLCD with the xLCD-support-right still hooked on, into the xLCD-cover. Note the recess for the xLCD-support-right in the xLCD-cover. The support must perfectly fit into the recess.
- ⓘ Make sure the hook on the xLCD-support-right holds onto the xLCD board now. Otherwise, you won't be able to attach it later.

STEP 13 Installing the Faston connector



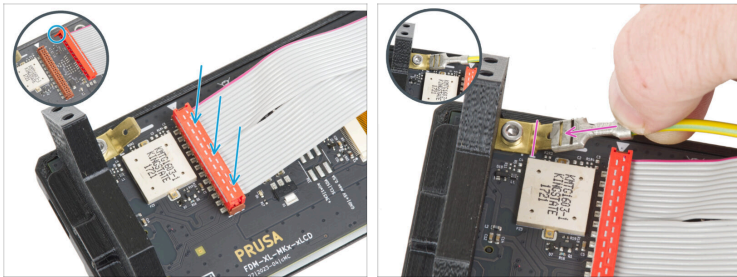
- Secure the xLCD-support-right and the xLCD board with the M3x8 screw.
- Place the Faston connector onto the top left hole in the xLCD.
- Orient Faston connector according to the picture. The bent part must point away from the xLCD-support printed part.
- Secure the Faston connector using the M3x8 screw, while maintaining its position.

STEP 14 Assembling the xLCD-support-left



- Attach the xLCD-support-left on the xLCD board and align it with two holes in the board.
- Secure both parts together with two M3x8 screws.

STEP 15 Connecting the cables



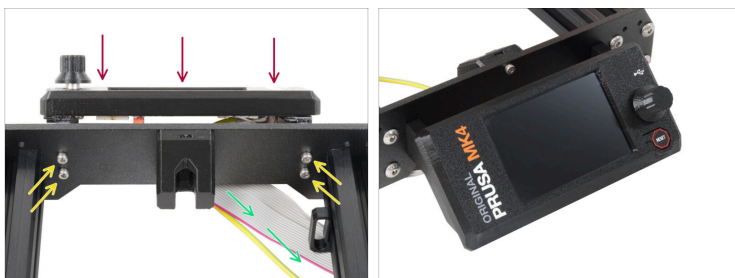
- ◆ Connect the xLCD cable to the xLCD board. Note the safety latch on the xLCD cable connector. It must point towards the triangle symbol on the board.
- ⚠ **Make sure the xLCD cable is connected in the same orientation as seen in the picture. Otherwise, your display won't work.**
- ◆ Attach the grounding cable to the Faston connector and push it all the way in.

STEP 16 Attaching the knob



- ◆ Attach the xLCD-knob onto the xLCD encoder shaft and push it all the way in.
- ⓘ Note that there is a flat part on the encoder shaft. There is a geometry on the inside of the knob that should align with the flat part to seat.

STEP 17 Attaching the xLCD assembly



- ◆ Attach the xLCD assembly onto the front plate of the printer's frame. The screws should fit through the openings and engage into the xLCD assembly.
- ◆ Guide the xLCD and PE cables under the front plate to the frame.
- ◆ Tighten up all four screws.

STEP 18 Finish



- ◆ Congratulations, it's done!
- ◆ Turn the printer on and test the xLCD functionality.
