

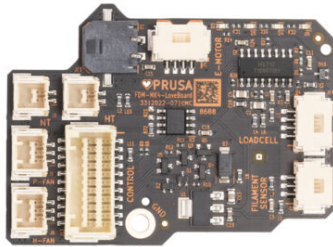
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# How to replace Loveboard (MK4S/MK4/MK3.9S/MK3.9)

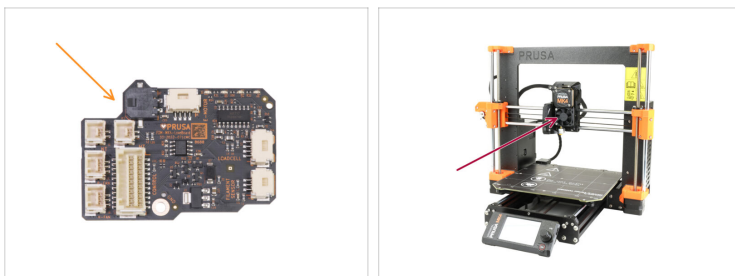


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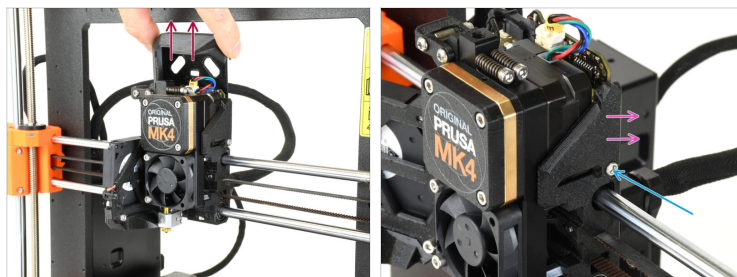


## STEP 1 Introduction



- In this guide, we will replace the Loveboard on your Original Prusa MK4S/MK4/MK3.9S/MK3.9 printer.
- ⓘ Some parts on the printer may vary depending on your model, but this will not disrupt the procedure.
- All necessary parts are available in our eshop [prusa3d.com](https://prusa3d.com).
- ⓘ Note that you have to be logged in to have access to the spare parts section.
- Before you start, make sure the extruder on your printer is in the middle of both the X and Z axes.
- Power off your printer and disconnect it from the power.

## STEP 2 Removing the covers



- ◆ Remove the top Loveboard-cover from the extruder by pulling it up.
- ◆ Loosen the M3x10 screw on the right side of the extruder.
- ◆ Remove the Loveboard-cover-right from the extruder.

## STEP 3 Disconnecting the cables



- ◆ Disconnect the Extruder motor cable, the Loadcell cable and the Filament sensor cable. Note there are safety latches on each of the connectors which must be pushed in to remove the connector.
  - ⚠ **Note there are safety latches on each of the connectors which must be pushed in, in order to remove the connector.**
- ◆ Disconnect the hotend heater and hotend thermistor cables.
- ◆ Disconnect the heatsink thermistor, heatsink fan and print fan cables.

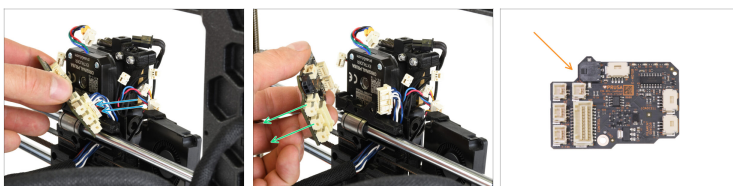
## STEP 4 Removing the rear cover



- ✦ Cut off the two zip-ties holding the extruder cable cover.
- ✦ Remove the top part of the extruder cable cover.
- ✦ Release the three screws holding the back cover. You can leave the screws inside the printed part. Remove the back cover.
- ⚠ **Note that after removing the rear cover, the extruder isn't held to the top smooth rod and might tip forward. Hold it by hand, while working on it.**
- ✦ Remove the M3x6 screw holding the Loveboard.

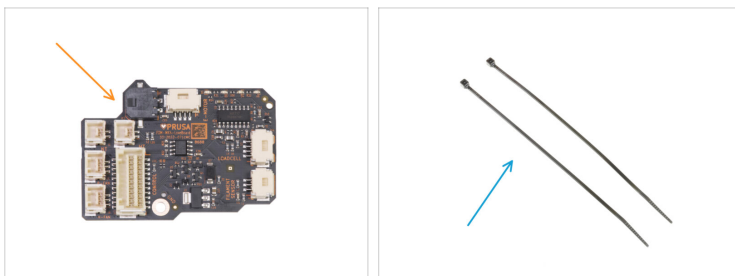
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## STEP 5 Loveboard removal



- ✦ Tilt the Loveboard backwards and detach the extruder main cable connector from the loveboard.
- ✦ Remove the Loveboard.
- ✦ Make sure to set the old Loveboard aside to avoid confusion with the new one.

## STEP 6 Loveboard parts preparation

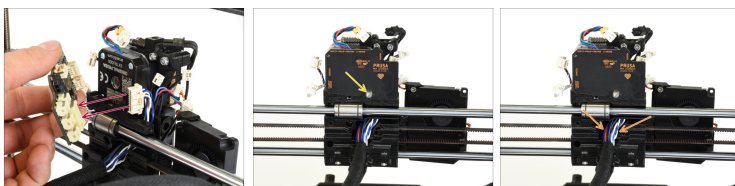


◆ For the following steps, please prepare:

- ◆ a replacement Loveboard (1x)
- ◆ Zip tie (2x)

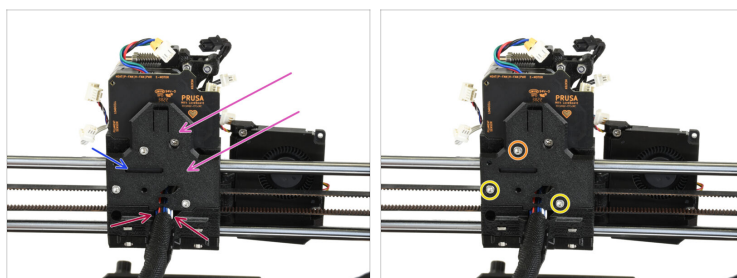
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## STEP 7 Loveboard installation



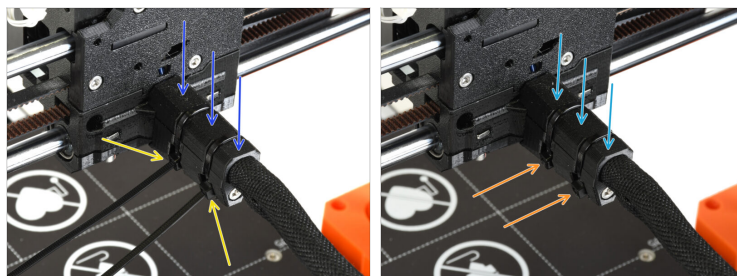
- ◆ Connect the extruder main cable into the Loveboard.
- ◆ Fix the Loveboard to the X-carriage using the M3x6 screw in the marked location.
- ◆ Make sure the extruder main cable is well organized in the opening below the top smooth rod - so that no cable will get pinched later on, after we re-attach the cover.

## STEP 8 Rear cover installation



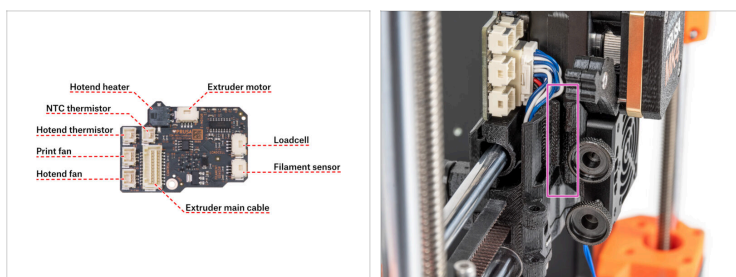
- ◆ Reinstall the rear cover back onto the extruder.
- ◆ Make sure none of the individual wires in the extruder main cable gets pinched.
- ◆ Make sure the rubber pad is in the correct location, behind the top linear bearing, as seen in the picture.
- ◆ Fix the cover in place using one M3x10 screw on top.
- ◆ Tighten up the two M3x18 screws on the bottom of the rear cover.

## STEP 9 Extruder cable cover installation



- ◆ Reinstall the cable top cover back onto the cable. Make sure the cable below is well organized and doesn't protrude out on the sides.
- ◆ Fix the cover in place using two zip-ties. Make sure the zip-tie ends are arranged in the dedicated pockets on the side of the cable holder, as seen in the picture.
- ◆ Tighten the zip-ties, while you push the cover towards the cable to compress the assembly.
- ◆ Using the needle-nose pliers, cut off the excess part of the zip-ties.

## STEP 10 Connecting the Loveboard (part 1)



- ◆ Now, we will have to connect all the cables into the corresponding plugs on the Loveboard.
- ⚠ **Some of the cables share the same connector. Proceed carefully to plug all the cables into the correct connector!**
- ◆ Note that all the cables from the Nextrunder on the left side of the print head must be guided through the dedicated channel in the X-carriage. If the cables are not well organized in the channel, you will have problems with closing the print-fan door later on.

## STEP 11 Connecting the heatsink thermistor



- Connect the Heatsink thermistor into the marked connector on the Loveboard.

⚠ **Make sure it is the correct cable coming from the heatsink, not the one coming from the nozzle heater!**

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## STEP 12 Connecting the fans



- Connect the heatsink fan cable into the dedicated connector on the bottom left of the Loveboard.
- Connect the print fan cable to the corresponding connector on the Loveboard

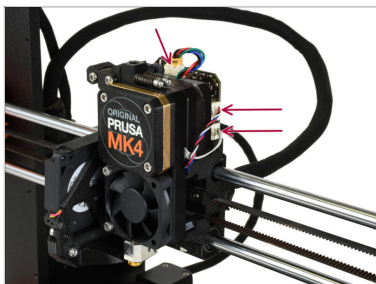
📌 Print fan is the fan on the swingy door on the left of the extruder.

## STEP 13 Connecting the heater and thermistor



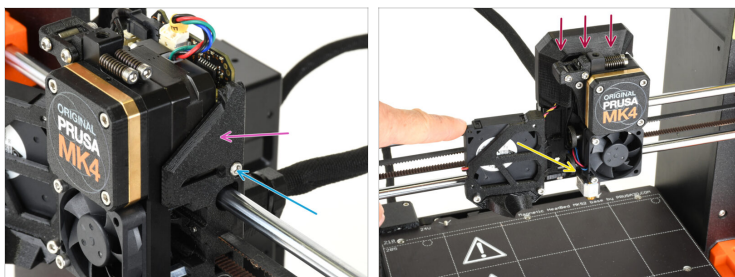
- Connect the hotend / nozzle thermistor cable into the corresponding connector.
- Connect the hotend heater into the corresponding connector on the top of the Loveboard.

## STEP 14 Connecting the remaining cables



- ◆ Finally, connect the remaining three cables into the Loveboard.
  - ◆ The Extruder motor cable on top.
  - ◆ The Loadcell cable into the right top connector.
  - ◆ The Hall Filament sensor into the right bottom connector.

## STEP 15 Re-attaching the covers



- ◆ Re-attach the Loveboard-right cover back onto the extruder. Make sure it covers all the cables below.
- ◆ Fix it in place using the M3x10 screw.
- ◆ Re-attach the top Loveboard cover. Make sure no cables are getting pinched below it.
- ◆ Close the print fan door.



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